Usenet Newsgroup Archive: rec.radio.amateur.antenna

2007-05 - 2007-07

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Date span: 2007-05-01 through 2007-07-31

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 4,104

Message records with no readable body available in the source text: 1

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 00:43:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8d1d339n4j7r1bsekvrv89j393j10pp11e@4ax.com>
Source record: 41901

On Mon, 30 Apr 2007 18:30:40 -0500, "amdx" <amdx@knology.net> wrote:

>Richard, I was starting to lean towards proximity effect possibly causing
>all of the affect we have been discussing, so I did some Googling. I kept
>find the
>same line " increased capacitance lowers Q" But, I think you agree that as
>I said
>above most efforts to reduce capacitance will also reduce proximity effect.

Hi Mike,

Yup.

> I ran across W8JI's page, he's usually pretty exacting in his wording, and
>he says,
>
>"Capacitance across any inductor carrying time-varying current increases
>circulating
>currents in the inductor, increasing loss while simultaneously reducing
>system bandwidth."

Tom is also given to non-sequiturs. He polishes his page off with a
list of them such as "Optimum form factor varies with application." As
they used to say, if you want to send a message, call Western Union.

> snip "Anything that increases capacitance will reduce component Q"
>
>He never mentions the correlation between interwinding capacitance and
>proximity effect

There is not much that can be taken to the bank about what is NOT
said.

The moral of this is standard Engineering practice: start with a goal
and design towards it.

73's
Richard Clark, KB7QHC

2. Re: GAP Challenger

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 01:59:25 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <133d7nuc89smq50@corp.supernews.com>
Source record: 41902

N8NOE wrote:
> I'm getting real serious about getting a Vertical here to use with the Alpha
> Delta DX-CC I have. Seems like Everyone uses the Titan, and the 80 inch
> Bottom I cant have. The Challenger will fit here, Any thing I should know?
> Or Staying with the price Range, another Antenna?.. So far Everything looks
> good on the GAP Antennas..
> Thanks, Jeff-N8NOE
>
Mr. Gapp himself uses the Challenger, an one mor I can't recaall.My
typing is really cool tonighth. I loved my Titan. I had a good
neighbor so he didn't mind me attaching it too my chain link fence onto
an 8ft.2.5" conduit. It hung over his garden but I swear that fence
really helped it out.

Butch KF5DE

3. Re: Effectiveness of decoupling radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 02:42:08 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <4OxZh.8833$Dq6.8346@edtnps82>
Source record: 41903

"Owen Duffy" <none@no.where> wrote in message
news:Xns99234F24CA9FCnonenowhere@61.9.191.5...
> "Frank" <ve6cb@spamfree.telus.net> wrote in news:u9qZh.14500$JF6.4868
> @edtnps90:
>
>> Owen, It may not be too critical, but would not the Sommerfeld/Norton
>> method improve accuracy?
>
> Hi Frank
>
> My understanding was that the MININEC ground model was the better to use
> if
> the model caused current to flow into ground (as mine does).
>
> The draft model is at
> http://www.vk1od.net/multibandunloadedvertical/13MVERT01.nec if you want
> to
> play with it.
>
> Owen

I was not thinking Owen. I forgot that some versions of NEC support the
MININEC
ground. I have loaded your program, but noticed my version of NEC does not
support a "GN" entry of "3" in the "I1" field. It thinks it is a
Sommerfeld/Norton
ground, but does not recognize the conductivity and permittivity fields.
About the
only way I could get the program to run is to extend "GW 10" below
round --
at a guess about 5 segments should be ok. I am also concerned about some
discontinuity with the large diameter change from GW 9 to GW 10. Also GW
1 to GW 2. Initially I will set all diameters to 1 mm, and see what I get
by
running the AVG test.

Frank

4. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 03:07:41 UTC
From: Bill Bowden <wrongaddress@att.net>
Message-ID: <1177988861.876208.151110@h2g2000hsg.googlegroups.com>
Source record: 41904

On Apr 29, 4:52 am, "amdx" <a...@knology.net> wrote:
> "Bill Bowden" <wrongaddr...@att.net> wrote in message
>
> news:1177821138.653191.285430@u30g2000hsc.googlegroups.com...> Does anyone know why the distributed winding capacitance of a loop
> > antenna, or any inductor, degrades the efficiency?
>
> > -Bill
>
> Hi Bill.
> I agree with your assertion that distributed winding capacitance
> degrades efficiency.
> My thoughts about this are ;
> Assume a 10 turn loop, between each turn there is a capacitance,
> so, you have a complete circuit, (L,C,R) there is current
> flowing through this circuit that is not flowing through the entire 10
> turn loop. (this happens in the other 9 turns also)
> I think these extra currents flowing that don't make the entire 10
> turn circuit increase the losses.
>
> Anyone care to run with that, or explain it more clearly, or shoot it
> down.
>
> Mike

I think you are right. Good explanation.

-Bill

5. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 03:42:20 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <cpSdnVrnruxFJ6vbnZ2dnUVZ_r2onZ2d@giganews.com>
Source record: 41906

```
Jimmie D wrote:
>
> Cecil Moore wrote:
> > Dave (from the UK) wrote:
> >> http://www.pmillett.com/Books/Kraus_antennas.pdf (7.9 MB)
> >
> > This is great, Dave. Everyone who wants to see the standing
> > wave phase shift up and down a 1/2WL antenna can look at
> > page 239. Kraus shows a ~3 degree phase shift all up and
> > down the antenna. EZNEC shows the same thing. Now how did
> > Roy use this current to determine the phase shift through
> > a loading coil if it cannot be used to determine the phase
> > shift through a wire?
> > --
> > 73, Cecil http://www.w5dxp.com
>
> A real shame you cant copy and paste text from a pdf file.
>
> Jimmie
>
You can, IF the document page(s) wasn't/weren't scanned as an image. For
text to be searchable, the scanning device would need to have "Optical
Character Recognition" capability.
Bryan WA7PRC
```

6. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 03:45:13 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <AlidnebGmqUYJqvbnZ2dnUVZ_rCsnZ2d@giganews.com>
Source record: 41907

Dave (from the UK) wrote:
> There is a scanned copy of a book you may find interesting:
>
> ----
> Antennas, John D. Kraus, Ph.D.., 1950, 553 pages
>
> This book is a college text and engineering reference on antennas. A
> pretty thorough theoretical treatment along with practical information
> on antenna design.
> -----
>
> See
>
> http://www.pmillett.com/Books/Kraus_antennas.pdf (7.9 MB)
>
> More books at
>
> http://www.pmillett.com/technical_books_online.htm
>
> Apparently the copyright has expired on these books, so they are not
> pirated. I actually own a copy of the Kraus book, but it is attractive
> to have a copy on my laptop.
>
>
> --
> Dave (from the UK)
>
> Please note my email address changes periodically to avoid spam.
> It is always of the form: month-year@althorne.org
> Hitting reply will work for a few months only - later set it manually.
>
> http://chessdb.sourceforge.net/ - a Free open-source Chess Database

Dave,
That is a most welcome collection, and very worthy of bookmarking. Thank
you!
73,
Bryan WA7PRC

7. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 03:50:56 UTC
From: "P.Gregory" <hoonz@bigpond.com>
Message-ID: <AOyZh.31950$M.6909@news-server.bigpond.net.au>
Source record: 41905

OCR = Optical Charactor Recognition

recognises charactors in a graphics file/picture and can pull them
out.....P

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:accZh.3018$HX7.605@newssvr19.news.prodigy.net...
> Dave (from the UK) wrote:
>> http://www.pmillett.com/Books/Kraus_antennas.pdf (7.9 MB)
>
> This is great, Dave. Everyone who wants to see the standing
> wave phase shift up and down a 1/2WL antenna can look at
> page 239. Kraus shows a ~3 degree phase shift all up and
> down the antenna. EZNEC shows the same thing. Now how did
> Roy use this current to determine the phase shift through
> a loading coil if it cannot be used to determine the phase
> shift through a wire?
> --
> 73, Cecil http://www.w5dxp.com

8. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 05:13:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133dj3necfi1mf6@corp.supernews.com>
Source record: 41908

K7ITM wrote:
> More from my research (which is probably at an end at this point):
>
> Bell, "Fundamentals of Electric Circuits," calls a phasor a rotating
> vector, period.
>
> IEEE Standard Dictionary of Electrical and Electronic Terms has
> entries for both non-rotating and rotating definintions.
>
> Christiansen, "Electronic Engineers' Handbook," defines a phasor
> clearly as a non-rotating quantity.
>
> This has been educational. Clearly there are people in both camps.
> I'm obviously in the non-rotating camp, and it seems to be one with a
> high population. I'll be careful to ask when someone writes of
> phasors and their definition is not clear from the context, at least
> if the distinction between the two definitions matters in that case.

I still haven't had the time to post the quotes. But I did look over Van Valkenburg carefully, and he very clearly describes the quantity including exp(jwt) as a phasor, and a page or two later describes the term without the time-varying term as a phasor. So he uses both definitions -- but I can't find anywhere that he actually defines exactly what a phasor is. I got that text because it's one of the most widely used circuits texts. Pearson and Maler, I have left over from college -- I took classes from both of them, and we know how that works.

I'm happy to call a phasor a rotating vector or, better yet, a description of a rotating vector (the description consisting of phase and amplitude). This way, I can have my rotation without needing to have the phasor itself rotate. The important thing, as I see it, is to realize that:

-- It results from a substitution of a complex time-varying quantity for a real time-varying quantity;
-- The time-varying part of the complex quantity is not used in calculations because it cancels; and
-- The fact that the complex quantity is time-varying is essential to the method and solution.

but I guess it's up to the individual to decide whether he wants to declare that time-varying part (exp(jwt)) to be part of the "phasor" or something just attached to it.

Thanks, this has been stimulating and educational. I'll still try to get those quotes down.

Roy Lewallen, W7EL

9. Re: Effectiveness of decoupling radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 05:14:51 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99239B1D53D9Dnonenowhere@61.9.191.5>
Source record: 41909

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in
news:4OxZh.8833$Dq6.8346@edtnps82:

>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns99234F24CA9FCnonenowhere@61.9.191.5...
>> "Frank" <ve6cb@spamfree.telus.net> wrote in news:u9qZh.14500$JF6.4868
>> @edtnps90:
>>
>>> Owen, It may not be too critical, but would not the
>>> Sommerfeld/Norton method improve accuracy?
>>
>> Hi Frank
>>
>> My understanding was that the MININEC ground model was the better to
>> use if
>> the model caused current to flow into ground (as mine does).
>>
>> The draft model is at
>> http://www.vk1od.net/multibandunloadedvertical/13MVERT01.nec if you
>> want to
>> play with it.
>>
>> Owen
>
> I was not thinking Owen. I forgot that some versions of NEC support
> the MININEC
> ground. I have loaded your program, but noticed my version of NEC
> does not support a "GN" entry of "3" in the "I1" field. It thinks it
> is a Sommerfeld/Norton
> ground, but does not recognize the conductivity and permittivity
> fields. About the
> only way I could get the program to run is to extend "GW 10" below
> round --
> at a guess about 5 segments should be ok. I am also concerned about
> some discontinuity with the large diameter change from GW 9 to GW 10.
> Also GW 1 to GW 2. Initially I will set all diameters to 1 mm, and
> see what I get by
> running the AVG test.

Hi Frank,

I built the models in 4NEC2 and EZNEC, both using the MININEC ground
feature.

My guess is that the radials are far enough clear of the ground that NEC-2 should be adequate for modelling, but it would be interested to see what results you get from NEC-4.

Re extending wire 10, don't forget it is loaded, so you need to deal with that.

Owen

10. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 11:01:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <u6FZh.20448$Um6.10977@newssvr12.news.prodigy.net>
Source record: 41910

Roy Lewallen wrote:
> but I guess it's up to the individual to decide whether he wants to
> declare that time-varying part (exp(jwt)) to be part of the "phasor" or
> something just attached to it.

Here's a quote from "Optics", by Hecht:
"Because both phasors rotate together at a rate w,
we can simply freeze them at t=0 and not worry
about their time dependence, which makes them a
lot easier to draw."

This is what EZNEC does - freeze the feedpoint
current at t=0 to 1 amp at zero degrees. The
current reported by EZNEC at loads is then
referenced to that feedpoint current phasor.

The fact remains that the phase of the total
current in a standing wave antenna, like a 1/2WL
dipole or a loaded mobile antenna, cannot be used
to measure the phase shift in a wire, much less
be used to measure the phase shift in a loading
coil.
--
73, Cecil http://www.w5dxp.com

11. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 11:32:54 UTC
From: amdx <amdx@knology.net>
Message-ID: <c5a89$46372567$18d6b40c$22519@KNOLOGY.NET>
Source record: 41911

"Bill Bowden" <wrongaddress@att.net> wrote in message
news:1177988861.876208.151110@h2g2000hsg.googlegroups.com...
> On Apr 29, 4:52 am, "amdx" <a...@knology.net> wrote:
>> "Bill Bowden" <wrongaddr...@att.net> wrote in message
>>
>> news:1177821138.653191.285430@u30g2000hsc.googlegroups.com...> Does
>> anyone know why the distributed winding capacitance of a loop
>> > antenna, or any inductor, degrades the efficiency?
>>
>> > -Bill
>>
>> Hi Bill.
>> I agree with your assertion that distributed winding capacitance
>> degrades efficiency.
>> My thoughts about this are ;
>> Assume a 10 turn loop, between each turn there is a capacitance,
>> so, you have a complete circuit, (L,C,R) there is current
>> flowing through this circuit that is not flowing through the entire 10
>> turn loop. (this happens in the other 9 turns also)
>> I think these extra currents flowing that don't make the entire 10
>> turn circuit increase the losses.
>>
>> Anyone care to run with that, or explain it more clearly, or shoot it
>> down.
>>
>> Mike
>
>
> I think you are right. Good explanation.
>
> -Bill
>
Well Bill, That has been the theory I've been thinking with for 8 or 9
years now. However, if as Richard suggests the phenomena is caused
by proximity effect, the techniques I used to lower interwinding capacitance
and raise Q, would be the same I'd use to reduce proximity efect and raise
Q.
If there are circuilating currents caused by interwinding capacitance, it
seems
they would cause the proximity effect to be even stronger and pinch down the
current flow area even more and raise losses.

A question for all,
Does a basketweave winding reduce proximity effect?

Mike

12. Re: EZNEC Example of Short Vertical w/ Matching Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 14:07:01 UTC
From: Frank <ve6cb@spamfree.telus.net>
Message-ID: <9QHZh.10169$Dq6.4685@edtnps82>
Source record: 41912

"Owen Duffy" <none@no.where> wrote in message
news:Xns992358EAF8F8nonenowhere@61.9.191.5...
> "Frank" <ve6cb@spamfree.telus.net> wrote in
> news:0hqZh.14503$JF6.1620@edtnps90:
>
> ...
>> In any case, whatever you do, it is unlikely that a single element
>> will achieve
>> a match. Unless you are very lucky you will need a two element
>> network. For example a shunt L, series C, or Series L, shunt L, or
>> series L, shunt C will achieve a match for virtually any capacitive
>> load. A Smith Chart is ideal for such analysis.
>
> But one of those reactances can be supplied by detuning the loaded
> antenna,
> the second typically by a shunt coil.
>
> For example, if the R component at the base at resonance is say 20 ohms
> (radiation resistance, equivalent coil resistance and equivalent ground
> resistance), detuning the radiator + loading for about 25 ohms of
> capacitive
> reactance will allow a shunt coil of about 2uH to form an L match at
> 3.6MHz.
>
> Owen

True, I was forgetting the loading coil.

Frank

13. Re: EZNEC Example of Short Vertical w/ Matching Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 16:20:19 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <1178035058.134870@newsreg.cos.agilent.com>
Source record: 41913

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:133beamdgirtpcd@corp.supernews.com...

> A source and load placed on the same segment are always connected in
> series.

Aha! Thanks, Roy, for clearing this up. No wonder I couldn't get it to work right. I had placed the source and the load on the same segment and thought, 'Hey, cool, maybe they'll be in parallel,' but obviously I was wrong about that.

And thanks to everybody else for their helpful suggestions.

Regards,

Al W6LX

14. Re: Which modeler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 17:49:10 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1178041750.663872.203020@c35g2000hsg.googlegroups.com>
Source record: 41914
Body handling: HTML body converted to readable text

On 28 apr, 21:50, Brian Howie wrote:
> In message <1177706137.965768.132...@n15g2000prd.googlegroups.com>,
> weaver5...@mypacks.net writes
>
> Arie will be along in a minute to tell you anyway ;-p
>
> 73 Brian GM4DIJ
> --
> Brian Howie

Hmm, it took a bit more than a minute...

I noticed RDW had a budget of some 450 dollars. If I were him I would
get me a Nec4 license.

Arie.

15. Re: Turning fiberglass

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-01 22:49:08 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <23gf339sin2p0ei7lku56np8qordbl4adc@4ax.com>
Source record: 41915

On Sat, 28 Apr 2007 16:53:00 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:

>
>"Roger (K8RI)" <validaddress@my.com> wrote in message
>news:jia733hkqcivsubpbiuaba1ue70fbts75g@4ax.com...
>> On Wed, 25 Apr 2007 00:22:16 -0400, "Jimmie D"
>> <GFENDER@carolina.rr.com> wrote:
>>
>>>I want to make some fiberglass antenna parts that would probably most
>>>easily
>>>be make by turning fiberglass rod in my lathe. Ive never done this before
>>>and was wonder how rough fiberglass would be on the tools/lathe. I have a
>>>piece of 1- 1/4 inch fiberglass rod I want to turn down to fit the inside
>>>diameter of a piece of 1-1/4 inch tubing. Im thinking get a piece of
>>>square
>>>stock and make a diposable cutting tool for this.
>>>
>>
>> I do a lot of fiberglass work. Building a 335 MPH airplane. The two
>> most important points are the dust is quite hazardous which pretty
>> much mandates wearing a good mask and not the little disposable paper
>> or cloth ones. The filter needs to be very fine. As has already been
>> said, you want to keep the dust off you and your clothes. The other is
>> the dust is abrasive and you do not want it to spread. I use a "whole
>> shop" fan with a large filter set close to the work so the draft
>> carries the dust right into the filter. You also need to protect the
>> ways and moving parts on the lathe. Good bits have already been
>> discussed.
>>
>> Remember that the resin is sensitive to UV light and unprotected with
>> degrade rapidly. Also the glass fibers are easily damaged by water
>> (which was a surprise to me) so the finished piece needs a good coat
>> of paint, or varnish to provided protection from both UV and moisture.
>>
>>>Jimmie
>>>
>Thanks Roger, probably didnt do it right then, I used some old high speed
>steel tools and duct taped the shop vac to the tool holder. I was just

If the hose is in the right location the ol' Shop Vac should have done
a pretty good job at getting most of the dust, although I'd still
recomend a dust mask.<:-)) I have a dust collector in the shop that
uses a 5" hose. (5th photo from the top
http://www.rogerhalstead.com/G3_files/G3-6_files/glasair6.htm)

>cutting down a fibeglass rod join two pieces of Al tubing together. It
>really dulled the heck out of the tool. but I got it done. I was thinking of

Yah, the stuff is like trying to cut an abrasive wheel with a cutting
bit. <:-))

>mixing up a little resin to seal the raw edges and give it a coat of
>automotive acrylic enamel to finish it off. I work with fiberglass encased
>antennas I find they wil last seemingly forever if you keep them painted.

I've found the same. The original finish on the ones I've had here has
tended to be quite fragile and turns to dust in just a couple of years
which makes them very messy to handle. I prefer a two part acrylic or
cyanolic paint, but the plain old so called "epoxy" in a spray can
seems to work well. I only use white as the colors seem to get hot
enough to cause the resin to soften.

Roger (K8RI)

>
>Jimmie
>

16. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 03:42:26 UTC
From: richardharrison@webtv.net
Message-ID: <19937-463808A2-953@storefull-3252.bay.webtv.net>
Source record: 41916

Bill Bowden wrote:
"Does anyone know why the distributed winding capacitance of a loop antenna, or any inductor, degrades the efficiency?"

I`ll speculate that current to build the magnetic field and the current required to charge the stray capacitance of the inductor occur at different times. The magnetic field is the source of self-inductance of the coil, but the displacemnt current in the stray capactance is gratuitous and only adds loss to the coil.

Best regards, Richard Harrison, KB5WZI

17. Re: 3,7 to 4,5meter diameter disch

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 03:59:55 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <01UZh.295309$6P2.126652@newsfe16.phx>
Source record: 41917

"Euro-Motors" <euromotors@village.uunet.be> wrote in message
news:BLudnSvPE-B2cqnbnZ2dnUVZ8tKsnZ2d@scarlet.biz...
> Hello i am looking for a dish steerable in both ways vertical and
horizontal
> second hand
> hard to find guess
> anybody?
> regards
> willy

A few of these are/were made for customers who intended to simply aim their big dishes and leave them. The type of mount you described is called an AZ/EL mount, short for azimuth / elevation, which are separately settable, usually by means of hand cranks but sometimes motors. They may or may not have built-in calibration scales. Your best source would be the phone company, cable company or TV station. As more and more entities get fiber optic connections, their dishes are becoming available for sale (or even giveaway). Many small AZ/EL mounts are sold, but most are for small dishes only (0.8 -1.5 meter) and these would be too flimsy for your dish. A subset of the AZ/EL dish is the "ring mount" or "patio mount." These are essentially for portable use. I cannot see one of these for a dish over about 2 meters.

The other type mount is called a polar mount, because it pivots on an axis that's parallel to an imaginary line connecting the poles; it couples azimuth and elevation changes together as it tracks a smooth arc. Most people bought them because they intended to change satellites often -- homes, bars, restaurants.

I only have the polar mount in use here, but I offer up these names that I might simplify your search.

It is not unreasonable to build your own AZ/EL mount out of wood. I did it for a 1.5 meter dish with only a few 3/4-inch pine planks. (Bigger dish -- bigger lumber.)

Good Luck.

18. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 04:25:17 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <OoUZh.229961$115.200832@newsfe10.phx>
Source record: 41918

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:4635615b$0$17381$4c368faf@roadrunner.com...

Everyone who wants to see the standing
> > wave phase shift up and down a 1/2WL antenna can look at
> > page 239. >

> A real shame you cant copy and paste text from a pdf file.

If your needs are modest, you can, at least in Windows.

(1) Get the desired text as large as you can on the screen.
(2) Press the <Print Scrn> key
(3) Open the "Paint" program
(4) Click <File> <New><Edit><Paste>
(5) Trim and resize as desired, using the few available features in Paint.
(Too much increase will start to show jaggies, as this is a primitive
process.)

Admittedly, the result is not editable, but it might work for you.

19. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 09:04:58 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46385432$0$8923$4c368faf@roadrunner.com>
Source record: 41919

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:OoUZh.229961$115.200832@newsfe10.phx...
>
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> news:4635615b$0$17381$4c368faf@roadrunner.com...
>
> Everyone who wants to see the standing
>> > wave phase shift up and down a 1/2WL antenna can look at
>> > page 239. >
>
>> A real shame you cant copy and paste text from a pdf file.
>
> If your needs are modest, you can, at least in Windows.
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> (1) Get the desired text as large as you can on the screen.
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> (5) Trim and resize as desired, using the few available features in Paint.
> (Too much increase will start to show jaggies, as this is a primitive
> process.)
>
> Admittedly, the result is not editable, but it might work for you.
>
>
>
>

I was thinking in terms of posting excerpts on the newsgroup. Binaries are
frowned upon here

Jimmie

20. Re: 3,7 to 4,5meter diameter disch

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 09:16:27 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463856d2$0$1382$4c368faf@roadrunner.com>
Source record: 41920

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:01UZh.295309$6P2.126652@newsfe16.phx...
>
> "Euro-Motors" <euromotors@village.uunet.be> wrote in message
> news:BLudnSvPE-B2cqnbnZ2dnUVZ8tKsnZ2d@scarlet.biz...
>> Hello i am looking for a dish steerable in both ways vertical and
> horizontal
>> second hand
>> hard to find guess
>> anybody?
>> regards
>> willy
>
> A few of these are/were made for customers who intended to simply aim
> their
> big dishes and leave them. The type of mount you described is called an
> AZ/EL mount, short for azimuth / elevation, which are separately settable,
> usually by means of hand cranks but sometimes motors. They may or may not
> have built-in calibration scales. Your best source would be the phone
> company, cable company or TV station. As more and more entities get fiber
> optic connections, their dishes are becoming available for sale (or even
> giveaway). Many small AZ/EL mounts are sold, but most are for small
> dishes
> only (0.8 -1.5 meter) and these would be too flimsy for your dish. A
> subset
> of the AZ/EL dish is the "ring mount" or "patio mount." These are
> essentially for portable use. I cannot see one of these for a dish over
> about 2 meters.
>
> The other type mount is called a polar mount, because it pivots on an axis
> that's parallel to an imaginary line connecting the poles; it couples
> azimuth and elevation changes together as it tracks a smooth arc. Most
> people bought them because they intended to change satellites often --
> homes, bars, restaurants.
>
> I only have the polar mount in use here, but I offer up these names that I
> might simplify your search.
>
> It is not unreasonable to build your own AZ/EL mount out of wood. I did
> it
> for a 1.5 meter dish with only a few 3/4-inch pine planks. (Bigger
> dish --
> bigger lumber.)
>

> Good Luck.
>
>

I am familar with someone using a TVRO antenna is this manner, azimuth rotation was enabled by slidng another piece of tubing over the mast. More information I dont have.

Jimmie

21. Re: 3,7 to 4,5meter diameter disch

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 09:36:45 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46385b95$0$4650$4c368faf@roadrunner.com>
Source record: 41921

```
"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:463856d2$0$1382$4c368faf@roadrunner.com...
>
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
> news:01UZh.295309$6P2.126652@newsfe16.phx...
>>
>> "Euro-Motors" <euromotors@village.uunet.be> wrote in message
>> news:BLudnSvPE-B2cqnbnZ2dnUVZ8tKsnZ2d@scarlet.biz...
>>> Hello i am looking for a dish steerable in both ways vertical and
>> horizontal
>>> second hand
>>> hard to find guess
>>> anybody?
>>> regards
>>> willy
>>
>> A few of these are/were made for customers who intended to simply aim
>> their
>> big dishes and leave them. The type of mount you described is called an
>> AZ/EL mount, short for azimuth / elevation, which are separately
>> settable,
>> usually by means of hand cranks but sometimes motors. They may or may
>> not
>> have built-in calibration scales. Your best source would be the phone
>> company, cable company or TV station. As more and more entities get
>> fiber
>> optic connections, their dishes are becoming available for sale (or even
>> giveaway). Many small AZ/EL mounts are sold, but most are for small
>> dishes
>> only (0.8 -1.5 meter) and these would be too flimsy for your dish. A
>> subset
>> of the AZ/EL dish is the "ring mount" or "patio mount." These are
>> essentially for portable use. I cannot see one of these for a dish over
>> about 2 meters.
>>
>> The other type mount is called a polar mount, because it pivots on an
>> axis
>> that's parallel to an imaginary line connecting the poles; it couples
>> azimuth and elevation changes together as it tracks a smooth arc. Most
>> people bought them because they intended to change satellites often --
>> homes, bars, restaurants.
>>
>> I only have the polar mount in use here, but I offer up these names that
>> I
```

>> might simplify your search.
>>
>> It is not unreasonable to build your own AZ/EL mount out of wood. I did
>> it
>> for a 1.5 meter dish with only a few 3/4-inch pine planks. (Bigger
>> dish --
>> bigger lumber.)
>>
>> Good Luck.
>>
>>
>
> I am familar with someone using a TVRO antenna is this manner, azimuth
> rotation was enabled by slidng another piece of tubing over the mast. More
> information I dont have.
>
> Jimmie
>

I think he only had a few degrees of rotation and he used a linear actuator
to turn it. Im not sure of what he was using it for, maybe TV. I had assumed
that it was something else at the time because of the modification

22. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 11:13:01 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0205070713010001@jbw-mac.itd.nrl.navy.mil>
Source record: 41922

In article <133cup7ocitahae@corp.supernews.com>, Roy Lewallen
<w7el@eznec.com> wrote:

> The problems you're encountering are the result of trying to
> oversimplify electromagnetic theory by reducing it to conceptual models
> which are far from adequate. Your basic conceptual models are faulty, so
> any conclusions you draw from using these models will eventually lead to
> contradictions. That same problem has, in fact, been the cause of a huge
> number of argumentative postings on this newsgroup.
>
<snip>

Well stated, Roy. I suspect the majority of hams are not degreed EEs that have delved into elementary electromagnetic theory (It was the least popular EE course when I was an undergrad.) Of course you don't need an in-depth understanding to get on the air. The problem, as you point out, arises when folks start going beyond the "practical" and hobby aspects (e.g. beyond the scope of the ARRL handbooks) by providing explanations of phenomena that are not supported by electromagnetic theory as embodied in Maxell's equations.

Then there's a university EE professor who should know the theory and ends up supporting misguided concepts like the crossed-field antenna (CFA).
Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

23. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 11:31:23 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1178105483.892965.324900@n59g2000hsh.googlegroups.com>
Source record: 41923

> Then there's a university EE professor who should know the theory and ends
> up supporting misguided concepts like the crossed-field antenna (CFA).
> Sincerely, and 73s from N4GGO,

And then there is our fractal boy - who thankfully has morphed into
shilling gullible governmental and commercial purchasing agents..

denny

24. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 13:14:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <S80_h.2261$RX.32@newssvr11.news.prodigy.net>
Source record: 41924

Jimmie D wrote:
> I was thinking in terms of posting excerpts on the newsgroup. Binaries are
> frowned upon here

OCR software could be used for ASCII text but without the
equations and graphics, excerpts are of limited usefulness.
Here's how I solved the quoting problem:

http://www.w5dxp.com/krausdip.jpg

http://www.qsl.net offers free web pages to amateur radio
operators.
--
73, Cecil http://www.w5dxp.com

25. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 13:23:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bh0_h.2841$tp5.1943@newssvr23.news.prodigy.net>
Source record: 41925

J. B. Wood wrote:
> Then there's a university EE professor who should know the theory and ends
> up supporting misguided concepts like the crossed-field antenna (CFA).

Then there are the people on this newsgroup who presuppose
that the lumped circuit model is adequate for analyzing 75m
Texas Bugcatcher coils.
--
73, Cecil http://www.w5dxp.com

26. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 13:33:40 UTC
From: "P.Gregory" <hoonz@bigpond.com>
Message-ID: <Uq0_h.32765$M.28626@news-server.bigpond.net.au>
Source record: 41926

The Elite rising still aye , as a hobby or not , what i know is if there is enough spark no matter what , it sparks no matter what..... Quantify that... and that is a sarcastik knock ... Great minds that no know of the Alien...

Positive about being Negative

P.

"J. B. Wood" <wood@itd.nrl.navy.mil> wrote in message news:wood-0205070713010001@jbw-mac.itd.nrl.navy.mil...
> In article <133cup7ocitahae@corp.supernews.com>, Roy Lewallen
> <w7el@eznec.com> wrote:
>
>> The problems you're encountering are the result of trying to
>> oversimplify electromagnetic theory by reducing it to conceptual
>> models
>> which are far from adequate. Your basic conceptual models are faulty,
>> so
>> any conclusions you draw from using these models will eventually lead
>> to
>> contradictions. That same problem has, in fact, been the cause of a
>> huge
>> number of argumentative postings on this newsgroup.
>>
> <snip>
>
> Well stated, Roy. I suspect the majority of hams are not degreed EEs
> that
> have delved into elementary electromagnetic theory (It was the least
> popular EE course when I was an undergrad.) Of course you don't need
> an
> in-depth understanding to get on the air. The problem, as you point
> out,
> arises when folks start going beyond the "practical" and hobby aspects
> (e.g. beyond the scope of the ARRL handbooks) by providing
> explanations of
> phenomena that are not supported by electromagnetic theory as embodied
> in
> Maxell's equations.
>
> Then there's a university EE professor who should know the theory and
> ends
> up supporting misguided concepts like the crossed-field antenna (CFA).
> Sincerely, and 73s from N4GGO,

>
> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

27. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 14:40:35 UTC
From: richardharrison@webtv.net
Message-ID: <11112-4638A2E3-26@storefull-3256.bay.webtv.net>
Source record: 41827

Distributed capacitance may affect single-turn coils differently from multiturn-coils. And those vary as their length to diameter ratio varies.

Mike wrote:
"Anything that increases capacitance will reduce component Q. I believe he was quoting W8JI.

Mike also wrote:
"What do you think?"

In 1999 Tom Bruhns was experimenting, trying to find the relationship between coil Q and parasitic C. He picked up reports that helical resonators weere superior to short coaxial resonators. Tom also wrote: "Reg (Edwards,RJE) then thinks the internal coil capacitance is just femanding extra extra coil current and loss as the result of its cyclic charge and discharge."

Reg seems to have had a nice explanation for coil loss from parasitic capacitance.

Best regards, Richard Harrison, KB5WZI

28. Re: Effectiveness of decoupling radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 15:57:58 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <ay2_h.21$Vi6.12@edtnps82>
Source record: 41828

> I built the models in 4NEC2 and EZNEC, both using the MININEC ground
> feature.
>
> My guess is that the radials are far enough clear of the ground that NEC-
> 2 should be adequate for modelling, but it would be interested to see
> what results you get from NEC-4.
>
> Re extending wire 10, don't forget it is loaded, so you need to deal with
> that.
>
> Owen

Owen, GNEC reports the following. Note I have taken the ratio
of the current magnitudes without regard to the phase relationship.
I can send you a zipped copy of the NEC output file if you are
interested.

Freq TAG 10 TAG 1 Ratio
ABS SEG 169 SEG 1
(MHz) (mA) (mA) (dB)
3.8 1.43 6.5 13
7.1 0.59 5.4 19.2
10.1 0.25 1.0 12
14.1 0.036 3.4 39.5

Large currents in the 3.8 MHz radials are evident
on 30 m. I have removed the loading from TAG 10,
and EK is not required in NEC 4. Also I show
TAG 10 at extending 3 m below ground. Probably
not realistic, but I am always confusing meters with
feet!

Frank

29. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 18:41:44 UTC
From: amdx <amdx@knology.net>
Message-ID: <7f89f$4638db69$18d6b40c$25796@KNOLOGY.NET>
Source record: 41829

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:11112-4638A2E3-26@storefull-3256.bay.webtv.net...
> Distributed capacitance may affect single-turn coils differently from
> multiturn-coils. And those vary as their length to diameter ratio
> varies.
>
> Mike wrote:
> "Anything that increases capacitance will reduce component Q. I believe
> he was quoting W8JI.
>
> Mike also wrote:
> "What do you think?"
>
> In 1999 Tom Bruhns was experimenting, trying to find the relationship
> between coil Q and parasitic C. He picked up reports that helical
> resonators weere superior to short coaxial resonators. Tom also wrote:
> "Reg (Edwards,RJE) then thinks the internal coil capacitance is just
> femanding extra extra coil current and loss as the result of its cyclic
> charge and discharge."
>
> Reg seems to have had a nice explanation for coil loss from parasitic
> capacitance.

Do you know where this explanation might be found?

Thanks, Mike

30. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 20:22:09 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Pp6_h.21$UU.3@newssvr19.news.prodigy.net>
Source record: 41830

amdx wrote:
> Do you know where this explanation might be found?

From "Current through coils", March 5, 2006 2:47pm
Looks like Reg originated this thread.

"Every coil has length. Both L and C are distributed. Therefore the
coil behaves as a transmission line. There are standing waves. Current
and voltage both vary with length."

And on March 9:

"The whole thing could be summarised in one short sentence -

'Coils are distributed transmission lines.'

The same general equations apply to coils of all dimensions, for any
number of turns, at all frequencies, in all applications. There's no
need to unnecessarily complicate things by artificially dividing them
into lumped and other varieties."
--
73, Cecil http://www.w5dxp.com

31. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 21:11:43 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99254931AF1C9nonenowhere@61.9.191.5>
Source record: 41831

Bill Bowden <wrongaddress@att.net> wrote in news:1177821138.653191.285430
@u30g2000hsc.googlegroups.com:

> Does anyone know why the distributed winding capacitance of a loop
> antenna, or any inductor, degrades the efficiency?
>
> It would seem that a loop antenna with 100pF of winding capacitance in
> parallel with a external capacitor of 200pF would resonate at the
> same frequency as a antenna with no winding capacitance and a external
> capacitor of 300pF,but apparently that's not the case.
>
> The best explanation I got was that winding capacitance represents
> 'low Q' and a external tuning capacitor represents ' High Q'
>
> What is the difference between high and low Q, and why should a loop
> antenna with no winding capacitance perform any better than one with
> 50% of the total capacitance in the windings? Where is the energy
> loss?

Bill,

Some thoughts about inductor loss and self capacitance:

Consider and ideal coil (ie lossless, no distributed capacitance) in
series with a small ideal resistor to represent its loss, the combination
having high Q. Connect it to a constant voltage source at some frequency
and observe that the current lags the voltage by almost 90 deg.

Now shunt that combination coil+resistor with a small lossless capacitor,
and note that the current in the capacitor will be small in magnitude,
and leading the applied voltage by 90 degrees.

The effect of the capacitor is to reduce the total current, and not
change its phase slightly. So the combination of coil & series
resistance, & shunt capacitance draws less current and at slightly lower
(lagging) phase, so it appears to be a smaller but lossier inductor.

The discussion above is about conditions below the self resonance of the
total combination.

Now, real inductors might be represented by a simple circuit as dealt
with above, but it is an approximation only. A better representation of
real inductors is more complex and highly dependent on the frequency,
geometry and materials.

An example of the influence of these factors is that a ferrite cored
inductor usually needs less turns (and less capacitance) than an air

cored inductor of the same inductance; a bifilar split transformer winding on a toroid increases the self capacitance compared to a normal winding, albeit with higher flux leakage; close spaced windings reduce the number of turns needed, and resistance due to decreased wire length however proximity effect increases the resistance per turn. Design is about finding an optimal solution to these effects for the intended usage.

Distributed capacitance is not of itself necessarily lossless, the materials in which the electric field alternates might not be ideal dielectrics, and so a further loss is contributed by dielectric losses.

Operation of coils approaching their self resonance increases the loss due to this effect.

Owen

32. Re: Effectiveness of decoupling radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 21:22:33 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99254B07B530Dnonenowhere@61.9.191.5>
Source record: 41833

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in
news:ay2_h.21$Vi6.12@edtnps82:

>> I built the models in 4NEC2 and EZNEC, both using the MININEC ground
>> feature.
>>
>> My guess is that the radials are far enough clear of the ground that
>> NEC- 2 should be adequate for modelling, but it would be interested
>> to see what results you get from NEC-4.
>>
>> Re extending wire 10, don't forget it is loaded, so you need to deal
>> with that.
>>
>> Owen
>
> Owen, GNEC reports the following. Note I have taken the ratio
> of the current magnitudes without regard to the phase relationship.
> I can send you a zipped copy of the NEC output file if you are
> interested.
>
> Freq TAG 10 TAG 1 Ratio
> ABS SEG 169 SEG 1
> (MHz) (mA) (mA) (dB)
> 3.8 1.43 6.5 13
> 7.1 0.59 5.4 19.2
> 10.1 0.25 1.0 12
> 14.1 0.036 3.4 39.5
>
> Large currents in the 3.8 MHz radials are evident
> on 30 m. I have removed the loading from TAG 10,
> and EK is not required in NEC 4. Also I show
> TAG 10 at extending 3 m below ground. Probably
> not realistic, but I am always confusing meters with
> feet!

Hi Frank,

A plot of this current ratio shows very steep slope around the design
frequencies.

A plot of my model results is at
http://www.vk1od.net/multibandunloadedvertical/new_pa1.gif .

Ratio of mast current to radiator current at junction:

(MHz) NEC-4(dB) NEC-2
3.8 -13 -14.6
7.1 -19.2 -17.6
10.1 -12 -9.9
14.1 -39.5 -38.3

Note that for the NEC-2 model, these were not the optimal frequencies.

Owen

33. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 21:23:06 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0205071723060001@jbw-mac.itd.nrl.navy.mil>
Source record: 41832

In article <1178129165.331895.3380@y80g2000hsf.googlegroups.com>, art <aunwin@insightbb.com> wrote:

> Hmmmmm!
>
> Then how do you account for the broad rejection from
> "EE"s of Gaussian antennas that comply and are
> supported by electromagnetic theory as embodied
> in Maxwells equations ?
> As you put your address as the "Naval Research
> Laboratory" where would you place the responsability
> for rejection?
> Personaly I would place it in the syndrome of
>
> " Not invented at my place"

Well, you're entitled to your opinion, Art. I have no experience with "Gaussian antennas." If these antennas have been the subject of, say IEEE papers my guess would be that they are worthy of investigation. In the case of the CFA, cold fusion or anything else for that matter, extraordinary claims require extraordinary evidence. IOW anyone can believe anything they want. The problem is in getting others to believe it. And when it comes to skeptical scientists/physicists/engineers that ain't easy. However, the truth more often than not emerges at some point. Sincerely,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

34. Why are hi-Z transmission lines low loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 22:16:02 UTC
From: Chris Jewell <chrisj@puffin.com>
Message-ID: <swwszqc1nh.fsf@horned.puffin.com>
Source record: 41834

Someone asked in a Technician license class *why* 450 ohm window line has much lower loss than an equal length of 50 ohm coax does at the same frequency. The instructor knew that it is true, but could not say why. I have an idea about the answer, and would like to know how I'm doing. I'm one of those hams who is NOT a EE, so I'm trying to work this out based on high school physics, which at least back in 1964, covered AC but not RF.

I observe that at higher Z, the voltage is higher while the current is lower for a given power level. Ohmic losses are proportional to the square of the current. This is the same reason that long distance power transmission is done at high voltage.

For example, 100 W through 50 ohms is 1.4A @ 70V, while 100W through 450 ohms is 0.47A @ 212V. That is, 9 times the impedance results in 1/3 the current, which results in 1/9 the ohmic loss through the resistance of the transmission line.

I expect that we also need to account for the difference in R resulting from different conductor diameter and skin effect, and probably difference in the dialectrics, neither of which I yet know how to calculate. Apart from those factors, is my explanation based on the current vs. impendance:

1. Basically correct?

2. On the right track, but oversimplified, and thus not much use?

3. Completely out in left field?

Thank you.

--
73 DE KW6H Chris Jewell chrisj@puffin.com Gualala CA USA

35. Re: Why are hi-Z transmission lines low loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 22:39:16 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99255808D580Enonenowhere@61.9.191.5>
Source record: 41835

Chris Jewell <chrisj@puffin.com> wrote in
news:swwszqc1nh.fsf@horned.puffin.com:

> Someone asked in a Technician license class *why* 450 ohm window line
> has much lower loss than an equal length of 50 ohm coax does at the
> same frequency. The instructor knew that it is true, but could not
> say why. I have an idea about the answer, and would like to know how
> I'm doing. I'm one of those hams who is NOT a EE, so I'm trying to
> work this out based on high school physics, which at least back in
> 1964, covered AC but not RF.
>
> I observe that at higher Z, the voltage is higher while the current is
> lower for a given power level. Ohmic losses are proportional to the
> square of the current. This is the same reason that long distance
> power transmission is done at high voltage.
>
> For example, 100 W through 50 ohms is 1.4A @ 70V, while 100W through
> 450 ohms is 0.47A @ 212V. That is, 9 times the impedance results in
> 1/3 the current, which results in 1/9 the ohmic loss through the
> resistance of the transmission line.
>
> I expect that we also need to account for the difference in R
> resulting from different conductor diameter and skin effect, and
> probably difference in the dialectrics, neither of which I yet know
> how to calculate. Apart from those factors, is my explanation based
> on the current vs. impendance:
>
> 1. Basically correct?
>
> 2. On the right track, but oversimplified, and thus not much use?
>
> 3. Completely out in left field?
>
> Thank you.
>

Chris,

Your explanation is basically correct if your statements depend on the
assumption that both transmission lines are of the same type and
constructed of the same conductors.

In a practical balanced line, most of the loss at HF is in ohmic loss,
the heat generated when current flows through the conductors, and your
workup applies.

In most practical coaxial lines, most of the loss at HF is in ohmic loss, the heat generated when current flows through the conductors. It turns out that most of that loss is in the centre conductor (the RF resistance of the inside of the outer conductor is typically lower than the RF resistance of the outer of the inner conductor).

So, back to your unstated assumption of same type and same conductors, when you make the appropriate corrections for coaxial and balanced line types, then what you have said applies. Having said that, balanced lines with extremely close spacing (Zo less than about 100 ohms) suffer from an additional mechanism affecting effective conductor resistance, it is the proximity effect that causes current to not flow evenly in the skin as it would for larger spacings.

The mechanism as you have stated it is broadly correct, but it needs to include a statement of assumptions, and liberal use of words like "most" to cover the exceptions. It is easier to make the general statement that "for the same conductors, an air spaced two wire balanced line of 600 ohms characteristic impedance will have close to half the loss of such a line of 300 ohms", and your explanation applies.

Owen

, and your workup applies

36. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 22:45:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9925590F9478Cnonenowhere@61.9.191.5>
Source record: 41837

Owen Duffy <none@no.where> wrote in
news:Xns99254931AF1C9nonenowhere@61.9.191.5:

...
> Some thoughts about inductor loss and self capacitance:
>
> Consider and ideal coil (ie lossless, no distributed capacitance) in
> series with a small ideal resistor to represent its loss, the
> combination having high Q. Connect it to a constant voltage source at
> some frequency and observe that the current lags the voltage by almost
> 90 deg.
>
> Now shunt that combination coil+resistor with a small lossless
> capacitor, and note that the current in the capacitor will be small in
> magnitude, and leading the applied voltage by 90 degrees.
>
> The effect of the capacitor is to reduce the total current, and not
> change its phase slightly. So the combination of coil & series
> resistance, & shunt capacitance draws less current and at slightly
> lower (lagging) phase, so it appears to be a smaller but lossier
> inductor.

A workup at 10MHz of some numbers for a 10uH inductance in series with 10
ohms loss resistance gives Z=10+j628, Q is 62.8.

When this is shunted by a 2pf ideal capacitor, the impedance is now 11.8
+j682, Q is 58, apparent inductance is 10.9uH in series with 11.8 ohms of
resistance.

The small shunt capacitor has increased the apparent inductance, and
decreased the Q.

Where has this newfound loss come from? The current in the coil's loss
resistance is higher than the current from the source, so whilst the two
terminal equivalent has a higher impedance, the higher internal current
is generating larger loss from the smaller resistance. This is the
"circulating current" people are talking about.

Owen

Note

37. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 22:47:54 UTC
From: Keith Dysart <kd1@sympatico.ca>
Message-ID: <1178146074.477503.35780@h2g2000hsg.googlegroups.com>
Source record: 41836

On May 2, 5:23 pm, w...@itd.nrl.navy.mil (J. B. Wood) wrote:
> In the
> case of the CFA, cold fusion or anything else for that matter,
> extraordinary claims require extraordinary evidence.

Most of us would be happy with just ordinary evidence:
bigfoot - a specimen, or some bones. Just the normal stuff.
paranormal - just a repeatable controlled experiment
cold fusion - just a repeatable controlled experiment
CFA - the same

Not anecdote, however. That never counts.

...Keith

38. Re: Why are hi-Z transmission lines low loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-02 23:12:54 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1178147574.168640.18390@n76g2000hsh.googlegroups.com>
Source record: 41838

On May 2, 3:16 pm, Chris Jewell <chr...@puffin.com> wrote:
> Someone asked in a Technician license class *why* 450 ohm window line
> has much lower loss than an equal length of 50 ohm coax does at the
> same frequency. The instructor knew that it is true, but could not
> say why. I have an idea about the answer, and would like to know how
> I'm doing. I'm one of those hams who is NOT a EE, so I'm trying to
> work this out based on high school physics, which at least back in
> 1964, covered AC but not RF.
>
> I observe that at higher Z, the voltage is higher while the current is
> lower for a given power level. Ohmic losses are proportional to the
> square of the current. This is the same reason that long distance
> power transmission is done at high voltage.
>
> For example, 100 W through 50 ohms is 1.4A @ 70V, while 100W through
> 450 ohms is 0.47A @ 212V. That is, 9 times the impedance results in
> 1/3 the current, which results in 1/9 the ohmic loss through the
> resistance of the transmission line.
>
> I expect that we also need to account for the difference in R
> resulting from different conductor diameter and skin effect, and
> probably difference in the dialectrics, neither of which I yet know
> how to calculate. Apart from those factors, is my explanation based
> on the current vs. impendance:
>
> 1. Basically correct?
>
> 2. On the right track, but oversimplified, and thus not much use?
>
> 3. Completely out in left field?
>
> Thank you.
>
> --
> 73 DE KW6H Chris Jewell chr...@puffin.com Gualala CA USA

Owen seems to have covered it pretty well. Here are a few more
related observations:

To a pretty good approximation, the matched-line loss in dB/100 feet
is given by:

A100 = 4.34*Rt/Zo + 2.78*f*sqrt(r.d.c.)*Fp

where A100 is loss, dB/100ft
Rt is the RF resistance of the conductors in ohms/100 feet (see
below)
Zo is the nominal line impedance, ohms
f is the operating frequency, MHz
r.d.c. is the relative dielectric constant of the dielectric between
the conductors
Fp is the dielectric's power factor at frequency f

Rt for round copper conductors is given for coax by
Rt = 0.1*(1/d + 1/D)*sqrt(f)
where d and D are the inner conductor diameter and the inside diameter
of the
outer conductor, both in inches
and for two-wire balanced line,
Rt = 0.2*sqrt(f)/d
where d is the diameter of either conductor, inches. That doesn't
account for the proximity effect Owen mentioned.

Conductor loss is increased by stranding and by brading. Smooth solid
conductors give lowest loss in almost all circumstances.

It turns out that if there is negligible loss in the dielectric, the
coaxial line loss for a given D will be minimized for D/d = 3.59,
independent of the dielectric you put in. If it's air dielectric, the
impedance for minimum loss is about 76 ohms, but if you fill the line
with solid polyethylene, the impedance is a little above 50 ohms. In
cases where the power handling capacity of the line is limited by
power dissipation and not by arc-over (which is almost certainly true
unless you're dealing with short, high-power pulses), the lowest line
loss will give you very close to the coolest conductors, so if you use
solid-dielectric coax, 50 ohms is a good value with respect to line
loss. The loss-vs-impedance has a rather broad peak, though, so it's
not critical.

If the line is operating into a load not close to the Zo of the line,
there is additional loss. In a qualitative way, you can see that by
realizing that standing waves create areas of high current, and as you
noted, the loss goes up as the square of the current. The squared
effect means that the low loss in the areas of low current don't
cancel out the high loss in the areas of high current. To be accurate
about it, you need to integrate the net current squared times the
resistance per unit length, along the length of the line.

Cheers,
Tom

39. Re: Why are hi-Z transmission lines low loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 00:49:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Ska_h.50$zj3.43@newssvr23.news.prodigy.net>
Source record: 41839

Chris Jewell wrote:
> 1. Basically correct?

In addition to the obviously lower matched line losses, a
high-Z line has an additional advantage - lower average
SWRs with non-resonant antennas. For instance, a 5000 ohm
full-wave dipole will have an SWR of 100:1 using 50 ohm coax.
It will have an SWR of 8.3:1 using 600 ohm open-wire line.
--
73, Cecil http://www.w5dxp.com

40. Re: Why are hi-Z transmission lines low loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 01:04:24 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178154264.701045.187060@u30g2000hsc.googlegroups.com>
Source record: 41840

On 2 May, 15:16, Chris Jewell <chr...@puffin.com> wrote:
> Someone asked in a Technician license class *why* 450 ohm window line
> has much lower loss than an equal length of 50 ohm coax does at the
> same frequency. The instructor knew that it is true, but could not
> say why. I have an idea about the answer, and would like to know how
> I'm doing. I'm one of those hams who is NOT a EE, so I'm trying to
> work this out based on high school physics, which at least back in
> 1964, covered AC but not RF.
>
> I observe that at higher Z, the voltage is higher while the current is
> lower for a given power level. Ohmic losses are proportional to the
> square of the current. This is the same reason that long distance
> power transmission is done at high voltage.
>
> For example, 100 W through 50 ohms is 1.4A @ 70V, while 100W through
> 450 ohms is 0.47A @ 212V. That is, 9 times the impedance results in
> 1/3 the current, which results in 1/9 the ohmic loss through the
> resistance of the transmission line.
>
> I expect that we also need to account for the difference in R
> resulting from different conductor diameter and skin effect, and
> probably difference in the dialectrics, neither of which I yet know
> how to calculate. Apart from those factors, is my explanation based
> on the current vs. impendance:
>
> 1. Basically correct?
>
> 2. On the right track, but oversimplified, and thus not much use?
>
> 3. Completely out in left field?
>
> Thank you.
>
> --
> 73 DE KW6H Chris Jewell chr...@puffin.com Gualala CA USA

I think you did pretty good Chris, Basically it is correct, it is of
use and not out in left field.Tecnician level did you say?
Problem is that you asked what the time is whereas they wanted
you to pose the question how to make a watch.
Art

41. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 01:22:58 UTC
From: "Dave (from the UK)" <see-my-signature@southminster-branch-line.org.uk>
Message-ID: <46393975@212.67.96.135>
Source record: 41841

Danny Richardson wrote:

> You can, but in the case where a book is scanned the pages are handled
> as graphics and not text. To do so all pages would have to be
> processed using OCR software after scanning which is a major pain and
> very time consuming.
>
> Danny, K6MHE
>

I used the OCR software in Adobe Acrobat (version 8 came on my laptop).
Of all the free programs that came on my laptop, that is by far the most
useful one. Many are not worth the disk space they take up.

Acrobat 8 did a pretty good job of the OCR. It increased the file size
dramatically from about 8 to 17 MB, but it seems to have converted it to
text OK. A search on "maxwell" showed 20 references and each line of
text the search found looked fine, with no misspellings.

You can download a free 30 day trial of Acrobat 8 (I use the standard,
not pro version). Give it a try - I think you will be impressed.

--
Dave (from the UK)

Please note my email address changes periodically to avoid spam.
It is always of the form: month-year@althorne.org
Hitting reply will work for a few months only - later set it manually.

http://chessdb.sourceforge.net/ - a Free open-source Chess Database

42. Re: 3,7 to 4,5meter diameter disch

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 04:34:36 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <xDd_h.216708$ZA5.45363@newsfe15.phx>
Source record: 41842

```
"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:46385b95$0$4650$4c368faf@roadrunner.com...
>
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> news:463856d2$0$1382$4c368faf@roadrunner.com...
> >
> > "Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
> > news:01UZh.295309$6P2.126652@newsfe16.phx...
> >>
> >> "Euro-Motors" <euromotors@village.uunet.be> wrote in message
> >> news:BLudnSvPE-B2cqnbnZ2dnUVZ8tKsnZ2d@scarlet.biz...
> >>> Hello i am looking for a dish steerable in both ways vertical and
> >> horizontal
> >>> second hand
> >>> hard to find guess
> >>> anybody?
> >>> regards
> >>> willy
> >>
> >> A few of these are/were made for customers who intended to simply aim
> >> their
> >> big dishes and leave them. The type of mount you described is called
an
> >> AZ/EL mount, short for azimuth / elevation, which are separately
> >> settable,
> >> usually by means of hand cranks but sometimes motors. They may or may
> >> not
> >> have built-in calibration scales. Your best source would be the phone
> >> company, cable company or TV station. As more and more entities get
> >> fiber
> >> optic connections, their dishes are becoming available for sale (or
even
> >> giveaway). Many small AZ/EL mounts are sold, but most are for small
> >> dishes
> >> only (0.8 -1.5 meter) and these would be too flimsy for your dish. A
> >> subset
> >> of the AZ/EL dish is the "ring mount" or "patio mount." These are
> >> essentially for portable use. I cannot see one of these for a dish
over
> >> about 2 meters.
> >>
> >> The other type mount is called a polar mount, because it pivots on an
> >> axis
> >> that's parallel to an imaginary line connecting the poles; it couples
```

> >> azimuth and elevation changes together as it tracks a smooth arc. Most
> >> people bought them because they intended to change satellites often --
> >> homes, bars, restaurants.
> >>
> >> I only have the polar mount in use here, but I offer up these names
that
> >> I
> >> might simplify your search.
> >>
> >> It is not unreasonable to build your own AZ/EL mount out of wood. I
did
> >> it
> >> for a 1.5 meter dish with only a few 3/4-inch pine planks. (Bigger
> >> dish --
> >> bigger lumber.)
> >>
> >> Good Luck.
> >>
> >>
> >
> > I am familar with someone using a TVRO antenna is this manner, azimuth
> > rotation was enabled by slidng another piece of tubing over the mast.
More
> > information I dont have.
> >
> > Jimmie
> >
>
> I think he only had a few degrees of rotation and he used a linear
actuator
> to turn it. Im not sure of what he was using it for, maybe TV. I had
assumed
> that it was something else at the time because of the modification
>

I used another method. I regret I don't have any pictures to link but I
will try to describe what I did:

I took two pine planks of a size that would make nice shelves, joined them
at one end with a hinge and laid them flat. Call them #1 & #2

I bolted the dish to the top plank (#1) so it was facing the sky. By
propping up the top plank (#1) using a toothed rod, I could set the
elevation to any value I wanted. I used a homemade inclinometer to set the
elevation whenever I changed satellites. (Plank #2 stayed flat on the
ground all the time.) I experimented with calibrating the toothed rod
itself but I was never happy with it. The inclinometer was perfect every
time.

I placed a third plank (#3) on the ground under the hinged end of plank 2.
With plank #1 temporarily raised very high, I drilled a single hole through

both planks #2 and #3 as they lay flat on the ground and inserted a bolt through the hole. A nut on the bolt made the connection snug but not tight.

I put casters under plank #2 at the end opposite the hinge. The hinged planks (#1 & #2) pivoted around the bolt for the azimuth setting. Plank #3 never moved after being placed.

For azimuth calibration I determined where the edge of my sidewalk was with regard to true south. I made a photocopy of a protractor and taped it to Plank #3. I attached a paper-clip pointer from the end of plank #2 to read out the azimuth. This was not entirely satisfactory. Parallax error was a bitch. I could get it close but usually have to tweak it in on a station.

This bizarre arrangement is not an entirely original idea; it's actually an adaptation of the ring mount, using some material I had on hand. I had the full arc, minus blockage from my neighbor's nut tree

There is no reason you couldn't use a lazy susan or an old swivel chair base to vary the azimuth. A see-saw arrangement could vary the elevation, eliminating the hinge and one plank. Remember, I just used what I had.

Good luck.

43. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 12:54:14 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <HmtWHxB2tdOGFwhY@g3ohx.demon.co.uk>
Source record: 41843

```
In message <Xns9925590F9478Cnonenowhere@61.9.191.5>, Owen Duffy
<none@no.where> writes
>Owen Duffy <none@no.where> wrote in
>news:Xns99254931AF1C9nonenowhere@61.9.191.5:
>
>...
>> Some thoughts about inductor loss and self capacitance:
>>
>> Consider and ideal coil (ie lossless, no distributed capacitance) in
>> series with a small ideal resistor to represent its loss, the
>> combination having high Q. Connect it to a constant voltage source at
>> some frequency and observe that the current lags the voltage by almost
>> 90 deg.
>>
>> Now shunt that combination coil+resistor with a small lossless
>> capacitor, and note that the current in the capacitor will be small in
>> magnitude, and leading the applied voltage by 90 degrees.
>>
>> The effect of the capacitor is to reduce the total current, and not
>> change its phase slightly. So the combination of coil & series
>> resistance, & shunt capacitance draws less current and at slightly
>> lower (lagging) phase, so it appears to be a smaller but lossier
>> inductor.
>
>A workup at 10MHz of some numbers for a 10uH inductance in series with 10
>ohms loss resistance gives Z=10+j628, Q is 62.8.
>
>When this is shunted by a 2pf ideal capacitor, the impedance is now 11.8
>+j682, Q is 58, apparent inductance is 10.9uH in series with 11.8 ohms of
>resistance.
>
>The small shunt capacitor has increased the apparent inductance, and
>decreased the Q.
>
>Where has this newfound loss come from? The current in the coil's loss
>resistance is higher than the current from the source, so whilst the two
>terminal equivalent has a higher impedance, the higher internal current
>is generating larger loss from the smaller resistance. This is the
>"circulating current" people are talking about.
>
>Owen
>
>Note
```

Just out of interest, if you increased the inductance to 10.9uH by
increasing the number of turns, what effect would it have on the Q?
Ian.
--

44. MFJ-259

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 16:01:43 UTC
From: JB MacDonald <k1jzp@comcast.net>
Message-ID: <t_qdnTi8c8P5mqfbnZ2dneKdnZydnZ2d@comcast.com>
Source record: 41844

MFJ-259
Dropped from the roof LCD display broken (all black}. Dos any one know
what the description of the lcd is, or manufacturer P/n ? I like to by
from a supplier not MFJ there replacement parts are very expensive .
ie. meter $60 found one on line $3.00 MFJ #50-247-3
TNX JB K1JZP

45. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 17:36:07 UTC
From: nm5k@wt.net
Message-ID: <1178213767.589527.143810@u30g2000hsc.googlegroups.com>
Source record: 41845

On May 2, 7:23 am, Cecil Moore <nos...@w5dxp.com> wrote:
> J. B. Wood wrote:
> > Then there's a university EE professor who should know the theory and ends
> > up supporting misguided concepts like the crossed-field antenna (CFA).
>
> Then there are the people on this newsgroup who presuppose
> that the lumped circuit model is adequate for analyzing 75m
> Texas Bugcatcher coils.
> --
> 73, Cecil http://www.w5dxp.com

Well, it is, as far as designing the antenna. What advantage would
knowing about any current "taper" give you? None that I can see.
The design of the antenna will still end up the same, either way
you go about it. The loading coil will still be at the same height,
which is more a practical and mechanical problem, rather
than considering any taper of current across the coil.
To me, this is one of those things that might be handy to consider,
maybe more for designing very complex loaded antennas, ??
but not the run of the mill bugcatcher.
Even with complex arrays, I'm not sure if it would help you too much.
I'd be surprised if any increase of gain from applying this knowledge
would exceed 1 db. Than I'd have to ask...How *would* you apply
this knowledge.
I'm not trying to be a party pooper, but I don't see much advantage
in considering current taper across a short lumped coil. I'm
still going to mount my coils in the same places, which is generally
as high as I can get them. I'm more worried about current distribution
across the whole whip, than I am the short coil alone.
MK

46. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 17:41:59 UTC
From: nm5k@wt.net
Message-ID: <1178214119.374269.205980@n76g2000hsh.googlegroups.com>
Source record: 41846

On May 2, 12:06 pm, art <aun...@insightbb.com> wrote:
> On 2 May, 04:13, w...@itd.nrl.navy.mil (J. B. Wood) wrote:
>
>

>
> Then how do you account for the broad rejection from
> "EE"s of Gaussian antennas that comply and are
> supported by electromagnetic theory as embodied
> in Maxwells equations ?

It's fairly simple from my point of view.. You talk a bunch of jibber-
jabber
that really doesn't make a whole lot of sense, and you seem to refuse
to want to build and test an actual antenna.
Talk is cheap to me. I want to see one in the air, live, and working.
Compare it to a known reference like a 1/2 dipole and let the chips
fall where they may. Then you have something to actually talk about.
MK

47. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 17:55:45 UTC
From: richardharrison@webtv.net
Message-ID: <29171-463A2221-30@storefull-3257.bay.webtv.net>
Source record: 41847

Cecil, W5DXP wrote:
"Here`s a quote from "Optics" by Hecht:
"Because bith phasors rotate together at a rate w, we can simply freeze them at t=0 and not worry about their time dependence, which makes them a lot easier to draw."

Raymond B. Yarbrough writes in the 5th ed. of "Electrical Engineering Reference Manual" on page 1-1:
"A complex number can also be represented as a two-dimensional vector in a complex plane. Thus, the complex number can be written in polar or phasor form as

a+jb=c on an angle phi

c=square root of a squared + b squared

phi = arctan (b/a) "

On page 3-15 Yarborugh wrote:
In electric circuits involving sinusoids it is more convenient to deal with RMS values of voltage and current rather than with peak values, and with angles in degrees rather than with radians (Angles in the exponential form must be in radians for mathematical calculations.)

Thus, an alternative representation, which is called the effective value phasor notation has evolved."

Best regards, Richard Harrison, KB5WZI

48. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 18:27:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8Qp_h.18534$Kd3.14621@newssvr27.news.prodigy.net>
Source record: 41848

nm5k@wt.net wrote:
> What advantage would
> knowing about any current "taper" give you?

The advantage of understanding reality. In the
following example:

Source------------A-//////////-B----------------
wire coil wire

The current at A is measured to be zero. The current
at B is measured to be one amp. Does it mean that
there is an unknown source of energy magically entering
the coil from the outside world? Of course not. It
just means that we are dealing with standing-wave
current and we cannot even tell which way its phasor
is rotating.

It just means that the forward traveling current and
reflected traveling current are of equal magnitude and
opposite phase at point A. They are not of opposite
phase at point B. The traveling wave phase shift through
the coil explains everything.

No need for any lumped circuit magic. No need for
a magic source of extra energy. A distributed
network analysis is all one needs.
--
73, Cecil, w5dxp.com

49. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 19:05:55 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1dbs2rtg1@news.service.uci.edu>
Source record: 41849

Charles M. Close in "The Analysis of Linear Circuits" has this
footnote in a section called Representing Sinusoidal Function of Time:

"Although directed lines are commonly called vectors, this terminology
is avoided in this application. In field theory, quantities that have
an orientation in three-dimensional space and that are sinusoidal
functions of time are encountered. The term "vector" then refers to
the spacial orientation, and the term "rotating phasor" to the
exponential terms [Fe^jwt and its complex conjugate]. Since both
phasors and vectors are complex quantities, phasors are added and
subtracted in the same way as vectors."

According to the text, since the two complex functions of t in
exponential form can be graphically represented as directed lines, and
since each is the conjugate of the other, they are called
counter-rotating phasors. They each make w/2pi revolutions per second
and have an angular frequency of w radians per second.

ac6xg

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "Here`s a quote from "Optics" by Hecht:
> "Because bith phasors rotate together at a rate w, we can simply freeze
> them at t=0 and not worry about their time dependence, which makes them
> a lot easier to draw."
>
> Raymond B. Yarbrough writes in the 5th ed. of "Electrical Engineering
> Reference Manual" on page 1-1:
> "A complex number can also be represented as a two-dimensional vector
> in a complex plane. Thus, the complex number can be written in polar or
> phasor form as
>
> a+jb=c on an angle phi
>
> c=square root of a squared + b squared
>
> phi = arctan (b/a) "
>
> On page 3-15 Yarborugh wrote:
> In electric circuits involving sinusoids it is more convenient to deal
> with RMS values of voltage and current rather than with peak values, and
> with angles in degrees rather than with radians (Angles in the
> exponential form must be in radians for mathematical calculations.)
>

> Thus, an alternative representation, which is called the effective value
> phasor notation has evolved."
>
> Best regards, Richard Harrison, KB5WZI
>

50. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 19:49:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <w1r_h.16$TE7.8@nlpi070.nbdc.sbc.com>
Source record: 41850

Jim Kelley wrote:
> According to the text, since the two complex functions of t in
> exponential form can be graphically represented as directed lines, and
> since each is the conjugate of the other, they are called
> counter-rotating phasors.

Is it talking about forward and reflected currents?
If the forward and reflected currents are of equal
magnitudes, which direction does the standing-wave
current phasor rotate?
--
73, Cecil http://www.w5dxp.com

51. Re: MFJ-259

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 20:25:02 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <133kh9d5rt1ejb0@corp.supernews.com>
Source record: 41851

JB MacDonald wrote:
>
> MFJ-259
> Dropped from the roof LCD display broken (all black}. Dos any one know
> what the description of the lcd is, or manufacturer P/n ? I like to by
> from a supplier not MFJ there replacement parts are very expensive .
> ie. meter $60 found one on line $3.00 MFJ #50-247-3
> TNX JB K1JZP
many years ago I broke the display on my 259. I located the display
supplier but they would not sell me one. They claimed they had a
exclusive contract with MFJ. I sent the unit in and MFJ repaired the
display. I don't remember what it cost then.
Check with MFJ as to repair costs.

Dave WD9BDZ

52. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 20:29:42 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178224182.150683.181420@c35g2000hsg.googlegroups.com>
Source record: 41852

On 3 May, 11:27, Cecil Moore <nos...@w5dxp.com> wrote:
> n...@wt.net wrote:
> > What advantage would
> > knowing about any current "taper" give you?
>
> The advantage of understanding reality. In the
> following example:
>
> Source------------A-//////////-B----------------
> wire coil wire
>
> The current at A is measured to be zero. The current
> at B is measured to be one amp. Does it mean that
> there is an unknown source of energy magically entering
> the coil from the outside world? Of course not. It
> just means that we are dealing with standing-wave
> current and we cannot even tell which way its phasor
> is rotating.
>
> It just means that the forward traveling current and
> reflected traveling current are of equal magnitude and
> opposite phase at point A. They are not of opposite
> phase at point B. The traveling wave phase shift through
> the coil explains everything.
>
> No need for any lumped circuit magic. No need for
> a magic source of extra energy. A distributed
> network analysis is all one needs.
> --
> 73, Cecil, w5dxp.com

Cecil, can't you make one and send it to him or better still send
him a picture ?. Words and sentences are not his forte

53. Re: Distributed capacitance effects Q?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 20:34:16 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992642D7EDF8Bnonenowhere@61.9.191.5>
Source record: 41754

Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote in
news:HmtWHxB2tdOGFwhY@g3ohx.demon.co.uk:

...
> Just out of interest, if you increased the inductance to 10.9uH by
> increasing the number of turns, what effect would it have on the Q?
> Ian.

Ian, that depends on the type of coil.

A very simple view (eg if a toroidal core was used) would be that it would take a (10.9/10)^0.5 increase in turns (4.4%), inductive reactance would increase by 9% and R would increase by 4.4%, Q would increase by 4.4%.

I don't really understand the relevance of the questions.

Owen

54. Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 20:43:19 UTC
From: Spam Collector <spam-collector@artair.com>
Message-ID: <slrnf3kibd.ks2.spam-collector@k6.artair.com>
Source record: 41853

While reading about antennas, I've been unable to find
answers to what I thought would be basic questions.
Most of what I've read seems to concentrate on narrow-
bandwith antennas, and even at that seems to concentrate
on what happens when lengths become shorter and ignores
the effects of longer lengths (for definitions of 'longer'
meaning 'much longer, as in many wavelengths longer).
The question is how various low-band antenna types
will perform at higher bands. For example, if I were
to run a wire around my property (about 300 x 500 feet),
giving me about 1600' of antenna length, I could run it
as a folded random wire (fed from one end), a loop (fed
from a corner or the middle of one side), or as a dipole
(if fed like the loop but cut on the oposite side).
What are the performance differences between the
three configurations, and is there a upper frequency
limit for practical use of them? For example, would it
work on say 2m or 70cm, where the antenna would be
hundreds of wavelengths long?

Thanks for any insight,
Frank
KE5MJZ

55. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 20:48:56 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <YUr_h.1550$Vi6.1356@edtnps82>
Source record: 41854

"art" <aunwin@insightbb.com> wrote in message
news:1178211314.436289.255210@y80g2000hsf.googlegroups.com...
> The following is an example of a gaussian array except that
> only element height has been subjected to variation and not all
> dimensions
> A gaussian array is aimed towards resonant elements in cluster form.
>
> Freq Gain dbi F/B F/B ave Zr Zi Swr Toa
> BW
> 14.15 14.6 25.9 25.2 27.1 -5.7 1.34 12
> 63
> 14.2 14.6 29 28.2 27.5 -1.9 1.25 11
> 63
> 14.25 14.6 30.6 30.6 27.8 1.9 1.24 11
> 63
> 14.3 14.6 28.2 28 28 5.7 1.31 11
> 63
> 14.35 14.6 25.2 28.2 28.2 9.6 1.73 11
> 63
>
> Dimensions
> Cartesian, inches. Elements 1.3 in dia tapered
>
> X Y Z
> 273.3 164.1 820
> 25.1 203.3 1079
> 171.1 202.1 582
> 321.6 178.4 1036.5
> 2.1 206.5 701.2
> 153.5 194.5 1038.1
>
>
> Gaussian arrays are based on adding a unit of time to
> Gaussian law of statics which allows for trensformation from
> a Conservative field to a Non Coservative field with
> conformance to Maxwell laws. Elements are
> in cluster form where each element is aimed at resonance
> as is the array is in its entirety. Element positions are not
> constrained with respect to position or shape.
> See Pointings Vector for similarities
> Art

NEC 4.1 Computes at 14.25 MHz:

Gain 6.3 dBi
F/B ratio 4.2 dB
TOA 11 deg.
Zin 107.9 + j 245.3

Code used as follows:

```
CM Gaussian Array
CE
GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 2 21 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
RP 0 181 1 1000 -90 90 1 1
EN
```

Where the coordinates are in inches. Please verify that
I have interpreted the coordinates correctly. I have
assumed the driven element is "GW 2", and fed in the
center. I have also used non tapered 0.13" diameter
6063-T832 aluminum alloy. Segment tapering is
allowed, but these dimensions have not been
specified. Our results appear to be significantly different.

73,

Frank

56. Re: with the punce

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:07:25 UTC
From: an_old_friend <morkie@mork.nutup>
Message-ID: <463a42b6$0$16353$88260bb3@free.teranews.com>
Source record: 41855
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

```
with the punce gotcha he wonders why I simple don't bother to ty impoving
my spelling do u hav anyting cognet two say?

--
Posted via a free Usenet account from http://www.teranews.com
```

57. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:09:12 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1dj3c$4gc$1@news.service.uci.edu>
Source record: 41856

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> According to the text, since the two complex functions of t in
>> exponential form can be graphically represented as directed lines, and
>> since each is the conjugate of the other, they are called
>> counter-rotating phasors.
>
>
> Is it talking about forward and reflected currents?

It's talking about electromagnetic wave functions, so it applies to
actual electromagnetic waves.

> If the forward and reflected currents are of equal
> magnitudes, which direction does the standing-wave
> current phasor rotate?

A clue might have been in one of the parts you deleted said that
phasors add just like vectors. A standing 'wave' is not as much a
wave as it is an interference pattern. It is an amplitude as a
function of position, not as a function of time. The phasor for a
standing wave would then rotate as a function of position; the
direction of rotation would depend on the direction you're moving
along the transmission line.

73, Jim AC6XG

58. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:14:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1djcg$4r2$1@news.service.uci.edu>
Source record: 41858

Cecil Moore wrote:

> nm5k@wt.net wrote:
>
>> What advantage would
>> knowing about any current "taper" give you?
>
>
> The advantage of understanding reality. In the
> following example:
>
> Source------------A-//////////-B----------------
> wire coil wire
>
> The current at A is measured to be zero. The current
> at B is measured to be one amp. Does it mean that
> there is an unknown source of energy magically entering
> the coil from the outside world? Of course not. It
> just means that we are dealing with standing-wave
> current and we cannot even tell which way its phasor
> is rotating.

The only thing GIVEN was the magnitude of the standing wave current.

A directional coupler would obviously produce a different reading at
those points.

> It just means that the forward traveling current and
> reflected traveling current are of equal magnitude and
> opposite phase at point A. They are not of opposite
> phase at point B. The traveling wave phase shift through
> the coil explains everything.

So the only thing which remains to be explained is the "traveling wave
phase shift through the coil".

> No need for any lumped circuit magic. No need for
> a magic source of extra energy. A distributed
> network analysis is all one needs.

The difference between the item marked "coil" in your drawing, and a
lump, is that one is marked "coil".

73, Jim AC6XG

59. stop the fraud if you can Dloyd

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:17:18 UTC
From: Mark@kb9rqz.org
Message-ID: <kakk33lb2lpd8u36jvq04h360kmguhfdl0@4ax.com>
Source record: 41857
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

On Thu, 3 May 2007 17:07:25 -0400, "an_old_friend" <morkie@mork.nutup>
wrote:

>
stop the fraud if you can Dloyd

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woghger you are a Congress all in your own head

http://khkb9rqz.blogspot.com

--
Posted via a free Usenet account from http://www.teranews.com

60. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:21:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7ns_h.6856$2v1.2226@newssvr14.news.prodigy.net>
Source record: 41859

Jim Kelley wrote:
> The phasor for a standing wave would then
> rotate as a function of position; the direction of rotation would depend
> on the direction you're moving along the transmission line.

What if I'm not moving - just sitting still at a point?
--
73, Cecil http://www.w5dxp.com

61. Re: Rotational speed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 21:33:05 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1dkg2$5ml$1@news.service.uci.edu>
Source record: 41860

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> The phasor for a standing wave would then rotate as a function of
>> position; the direction of rotation would depend on the direction
>> you're moving along the transmission line.
>
>
> What if I'm not moving - just sitting still at a point?

In that case then I believe it's referred to as a sitting wave. :-)

Now I have one for you: which direction is the wind blowing when
there is no wind?

73, Jim AC6XG

62. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 22:19:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8rnk33ln301ja7fl4pop3sjp2gp4hgg5dj@4ax.com>
Source record: 41861

On 03 May 2007 20:43:19 GMT, Spam Collector
<spam-collector@artair.com> wrote:

>While reading about antennas, I've been unable to find
>answers to what I thought would be basic questions.
>Most of what I've read seems to concentrate on narrow-
>bandwith antennas, and even at that seems to concentrate
>on what happens when lengths become shorter and ignores
>the effects of longer lengths (for definitions of 'longer'
>meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
>will perform at higher bands. For example, if I were
>to run a wire around my property (about 300 x 500 feet),
>giving me about 1600' of antenna length, I could run it
>as a folded random wire (fed from one end), a loop (fed
>from a corner or the middle of one side), or as a dipole
>(if fed like the loop but cut on the oposite side).
> What are the performance differences between the
>three configurations, and is there a upper frequency
>limit for practical use of them? For example, would it
>work on say 2m or 70cm, where the antenna would be
>hundreds of wavelengths long?

Hi Frank,

Your question encompasses a lot of territory (beyond the literal 300 x
500 feet).

You could get every question answered and still not be informed. An
other approach would be to download EZNEC and (even with the
limitation of 20 segments) model this and just see what happens.
Within its limitations this modeler will reveal many insights AND
allow you to vary things to suit those outcomes.

73's
Richard Clark, KB7QHC

63. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 23:19:16 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178234356.039652.81950@q75g2000hsh.googlegroups.com>
Source record: 41862

On 3 May, 13:43, Spam Collector <spam-collec...@artair.com> wrote:
> While reading about antennas, I've been unable to find
> answers to what I thought would be basic questions.
> Most of what I've read seems to concentrate on narrow-
> bandwith antennas, and even at that seems to concentrate
> on what happens when lengths become shorter and ignores
> the effects of longer lengths (for definitions of 'longer'
> meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
> will perform at higher bands. For example, if I were
> to run a wire around my property (about 300 x 500 feet),
> giving me about 1600' of antenna length, I could run it
> as a folded random wire (fed from one end), a loop (fed
> from a corner or the middle of one side), or as a dipole
> (if fed like the loop but cut on the oposite side).
> What are the performance differences between the
> three configurations, and is there a upper frequency
> limit for practical use of them? For example, would it
> work on say 2m or 70cm, where the antenna would be
> hundreds of wavelengths long?
>
> Thanks for any insight,
> Frank
> KE5MJZ

Frank, all of your antennas will work for receiving in one way or
another, the real problem is matching your radio to the antenna
whether it is for receive or transmitting the latter being the most
important. Cofiguration of the antenna determines the matching ability
as well as the directivety. The bottom line is where do you wish to
communicate to and then design accordingly which means determining
first the frequency, then the direction and then attaining a suitable
match between the radio and the antenna. If you are only concerned
with receiving then most of those requirements fall by the wayside in
terms of operational importance. The main excitement that antennas
bring is when you introduce skywave type of deflections of radio
paths, even the simplest of antenna arrangements provides unexpected
surprises that tittilates your imagination such you become more
adventurous about your desires and where you are aware that your
transmitter could easily fail if you did not take protective measures
which requires good matching between the antenna and your radio.
Regards
Art

64. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-03 23:53:30 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178236410.918992.179560@y5g2000hsa.googlegroups.com>
Source record: 41863

On 3 May, 13:43, Spam Collector <spam-collec...@artair.com> wrote:
> While reading about antennas, I've been unable to find
> answers to what I thought would be basic questions.
> Most of what I've read seems to concentrate on narrow-
> bandwith antennas, and even at that seems to concentrate
> on what happens when lengths become shorter and ignores
> the effects of longer lengths (for definitions of 'longer'
> meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
> will perform at higher bands. For example, if I were
> to run a wire around my property (about 300 x 500 feet),
> giving me about 1600' of antenna length, I could run it
> as a folded random wire (fed from one end), a loop (fed
> from a corner or the middle of one side), or as a dipole
> (if fed like the loop but cut on the oposite side).
> What are the performance differences between the
> three configurations, and is there a upper frequency
> limit for practical use of them? For example, would it
> work on say 2m or 70cm, where the antenna would be
> hundreds of wavelengths long?
>
> Thanks for any insight,
> Frank
> KE5MJZ

Frank, I did not adress your comment with respect to antennas of
narrow bandwidth. For receiving you have relatively unlimited
bandwidth because the antenna match is for extremely small power
transfer, the signal may become weaker but no damage is going to
occur. For transmitting it is a whole new ball game since the matching
syystem will have to transfer power in the order of a few watts or
even a kilowatt which is O.K. for a light bulb which is enclosed but
you really don't want the wires inside your transmitter to glow!
This is where matching the connection becomes important because tho
you can match the radio connection easily the antenna makes it harder
as you stray from the initial matching frequency such that wire
connections could easily glow and fail. Unfortunately it is very
difficult to design a antenna that will remain a close match to your
radio, this is just a fact of life. Usually you have to design an
antenna for a narrow band of frequencies which means more than one. In
your case where you have long wires it is possible to insert a black
box
that will provide a useable match across a large band of frequencies
but the other side of the coin is that antenna directivety is lost

since directivity is directly related to frequency.
As with all things there is no free lunch but it will sure provide a
lot of fun when playing with antennas and talking to the World.
Art
Art

65. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 00:27:42 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178238462.220121.147480@n59g2000hsh.googlegroups.com>
Source record: 41864

On 3 May, 13:48, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1178211314.436289.255210@y80g2000hsf.googlegroups.com...
>
>
>
>
>
> > The following is an example of a gaussian array except that
> > only element height has been subjected to variation and not all
> > dimensions
> > A gaussian array is aimed towards resonant elements in cluster form.
>
> > Freq Gain dbi F/B F/B ave Zr Zi Swr Toa
> > BW
> > 14.15 14.6 25.9 25.2 27.1 -5.7 1.34 12
> > 63
> > 14.2 14.6 29 28.2 27.5 -1.9 1.25 11
> > 63
> > 14.25 14.6 30.6 30.6 27.8 1.9 1.24 11
> > 63
> > 14.3 14.6 28.2 28 28 5.7 1.31 11
> > 63
> > 14.35 14.6 25.2 28.2 28.2 9.6 1.73 11
> > 63
>
> > Dimensions
> > Cartesian, inches. Elements 1.3 in dia tapered
>
> > X Y Z
> > 273.3 164.1 820
> > 25.1 203.3 1079
> > 171.1 202.1 582
> > 321.6 178.4 1036.5
> > 2.1 206.5 701.2
> > 153.5 194.5 1038.1
>
> > Gaussian arrays are based on adding a unit of time to
> > Gaussian law of statics which allows for trensformation from
> > a Conservative field to a Non Coservative field with
> > conformance to Maxwell laws. Elements are
> > in cluster form where each element is aimed at resonance

> > as is the array is in its entirety. Element positions are not
> > constrained with respect to position or shape.
> > See Pointings Vector for similarities
> > Art
>
> NEC 4.1 Computes at 14.25 MHz:
>
> Gain 6.3 dBi
> F/B ratio 4.2 dB
> TOA 11 deg.
> Zin 107.9 + j 245.3
>
> Code used as follows:
>
> CM Gaussian Array
> CE
> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> GS 0 0 0.025400
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> EX 0 2 21 0 1 0
> FR 0 5 0 0 14.15 0.05
> LD 5 0 0 0 3.08E7
> RP 0 181 1 1000 -90 90 1 1
> EN
>
> Where the coordinates are in inches. Please verify that
> I have interpreted the coordinates correctly. I have
> assumed the driven element is "GW 2", and fed in the
> center. I have also used non tapered 0.13" diameter
> 6063-T832 aluminum alloy. Segment tapering is
> allowed, but these dimensions have not been
> specified. Our results appear to be significantly different.
>
> 73,
>
> Frank- Hide quoted text -
>
> - Show quoted text -

Frank,
Your comment about segment taper dimensions not being shown
I use tapered telescopic fibre glass fishing poles for elements(they
cannot fall apart only get tighter) and therefore segments do not come
into the equation. I adhere .002 inch aluminum foil to the exterior
for conduction and place glass fibre tape along the length if there is
a question of environment problems, tho ice easily slides down in the
absence of clamps. Also insert foam at ends to prevent occillation.
Note. It is sometimes convenient to insert solenoids wound on plastic

syringes within the elements to create a dual or multiband antenna
which would duplicate the IR antenna with respect to band coverage.
Aluminum has become so expensive and fishing poles so inexpensive that
if you are experimentaly minded the choice becomes obvious(see Ebay
for
poles) I also use scrap circuit boards as element to boom connections
since element weight is best kept down (don't use my military rotor ,
prop pitch, anymore since antenna boom length and weight and torque
requirements is no longer a factor). It was wind sway on a 60 foot
boom that forced me to re think things tho I am not responsible for
all those windmills that have just been planted in Central Illinois
but they do emphasise my past predicaments.
Best regards
Art
factors are now a thing of the past.

66. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 00:42:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <2kv_h.6163$YW4.3600@trndny06>
Source record: 41865

"art" <aunwin@insightbb.com> wrote in message
news:1178228478.342243.132260@p77g2000hsh.googlegroups.com...
> On 3 May, 13:48, "Frank's" <frank...@nojunkmailplease.telus.net>
> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1178211314.436289.255210@y80g2000hsf.googlegroups.com...
>>
>>
>>
>>
>>
>> > The following is an example of a gaussian array except that
>> > only element height has been subjected to variation and not all
>> > dimensions
>> > A gaussian array is aimed towards resonant elements in cluster form.
>>
>> > Freq Gain dbi F/B F/B ave Zr Zi Swr Toa
>> > BW
>> > 14.15 14.6 25.9 25.2 27.1 -5.7 1.34 12
>> > 63
>> > 14.2 14.6 29 28.2 27.5 -1.9 1.25 11
>> > 63
>> > 14.25 14.6 30.6 30.6 27.8 1.9 1.24 11
>> > 63
>> > 14.3 14.6 28.2 28 28 5.7 1.31 11
>> > 63
>> > 14.35 14.6 25.2 28.2 28.2 9.6 1.73 11
>> > 63
>>
>> > Dimensions
>> > Cartesian, inches. Elements 1.3 in dia tapered
>>
>> > X Y Z
>> > 273.3 164.1 820
>> > 25.1 203.3 1079
>> > 171.1 202.1 582
>> > 321.6 178.4 1036.5
>> > 2.1 206.5 701.2
>> > 153.5 194.5 1038.1
>>
>> > Gaussian arrays are based on adding a unit of time to
>> > Gaussian law of statics which allows for trensformation from
>> > a Conservative field to a Non Coservative field with

>> > conformance to Maxwell laws. Elements are
>> > in cluster form where each element is aimed at resonance
>> > as is the array is in its entirety. Element positions are not
>> > constrained with respect to position or shape.
>> > See Pointings Vector for similarities
>> > Art
>>
>> NEC 4.1 Computes at 14.25 MHz:
>>
>> Gain 6.3 dBi
>> F/B ratio 4.2 dB
>> TOA 11 deg.
>> Zin 107.9 + j 245.3
>>
>> Code used as follows:
>>
>> CM Gaussian Array
>> CE
>> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
>> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
>> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
>> GS 0 0 0.025400
>> GE 1 -1 0
>> GN 2 0 0 0 13.0000 0.0050
>> EX 0 2 21 0 1 0
>> FR 0 5 0 0 14.15 0.05
>> LD 5 0 0 0 3.08E7
>> RP 0 181 1 1000 -90 90 1 1
>> EN
>>
>> Where the coordinates are in inches. Please verify that
>> I have interpreted the coordinates correctly. I have
>> assumed the driven element is "GW 2", and fed in the
>> center. I have also used non tapered 0.13" diameter
>> 6063-T832 aluminum alloy. Segment tapering is
>> allowed, but these dimensions have not been
>> specified. Our results appear to be significantly different.
>>
>> 73,
>>
>> Frank- Hide quoted text -
>>
>> - Show quoted text -
>
> Hi Frank, I am not proficient with NEC2 so I can't help you with that.
> I will add certain things in the hope things clear up for you.
> Elements are 1.3 inches diameter and tapered. The element listing is
> of one half of the array
> with the otherside being a mirror image, all dimensions are in inches.
> The last element listed

> was center fed. Design was weighted for max gain then F/B then for
> resistance feed.
> Gain was set for horizontal polarisation. Normaly a Gaussian array has
> every dimension listed as being variable but I decided for simplicity
> to only vary the individual height of each element plus keeping them
> parallel and not tilted so as to avoid confusion.Some designs come out
> with some elements off center as well as not 1/2 wave based as well as
> irregular shaped which would confuse those who are not fully familiar
> with antenna theory. It is usual
> to declare the polarity required instead of maximum gain so that
> polarity purity can be pursued however, in such cases all dimensions
> should be considered variable. If maximum bandwidth is required it is
> also best to have all dimensions variable.If all dimensions are
> variable you get the situation where all elements are resonant and
> such designs are compatable with complex circuitry calculations. Note
> that the salient curves with respect to bandwidth are in sync with
> each other because of the absence of coupling and minimum reactance of
> individual parts which prevents focussing as with a Yagi array. Can't
> think of anything else I can add but don't hesitate with any follow up
> questions if you have any either with the basic theory, concepts,
> mathematics or the sample at hand.
> Good luck
> Art
>

you have one fed element and several un-fed ones... isn't that a parasitic array? what are the currents in the other elements? how do those currents come into being besides coupling between the elements?? How can you use NEC to calculate 'gaussian' arrays that are in 'equilibrium' by your definition, NEC assumes currents and coupling between the elements, there is no way to change that... its part of the basic EM formulas that all antenna modeling programs are based on!

67. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 00:59:19 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178240359.562282.33270@n76g2000hsh.googlegroups.com>
Source record: 41866

```
On 3 May, 17:42, "Dave" <n...@nowhere.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1178228478.342243.132260@p77g2000hsh.googlegroups.com...
>
>
>
>
>
> > On 3 May, 13:48, "Frank's" <frank...@nojunkmailplease.telus.net>
> > wrote:
> >> "art" <aun...@insightbb.com> wrote in message
>
> >>news:1178211314.436289.255210@y80g2000hsf.googlegroups.com...
>
> >> > The following is an example of a gaussian array except that
> >> > only element height has been subjected to variation and not all
> >> > dimensions
> >> > A gaussian array is aimed towards resonant elements in cluster form.
>
> >> > Freq Gain dbi F/B F/B ave Zr Zi Swr Toa
> >> > BW
> >> > 14.15 14.6 25.9 25.2 27.1 -5.7 1.34 12
> >> > 63
> >> > 14.2 14.6 29 28.2 27.5 -1.9 1.25 11
> >> > 63
> >> > 14.25 14.6 30.6 30.6 27.8 1.9 1.24 11
> >> > 63
> >> > 14.3 14.6 28.2 28 28 5.7 1.31 11
> >> > 63
> >> > 14.35 14.6 25.2 28.2 28.2 9.6 1.73 11
> >> > 63
>
> >> > Dimensions
> >> > Cartesian, inches. Elements 1.3 in dia tapered
>
> >> > X Y Z
> >> > 273.3 164.1 820
> >> > 25.1 203.3 1079
> >> > 171.1 202.1 582
> >> > 321.6 178.4 1036.5
> >> > 2.1 206.5 701.2
> >> > 153.5 194.5 1038.1
>
```

> >> > Gaussian arrays are based on adding a unit of time to
> >> > Gaussian law of statics which allows for trensformation from
> >> > a Conservative field to a Non Coservative field with
> >> > conformance to Maxwell laws. Elements are
> >> > in cluster form where each element is aimed at resonance
> >> > as is the array is in its entirety. Element positions are not
> >> > constrained with respect to position or shape.
> >> > See Pointings Vector for similarities
> >> > Art
>
> >> NEC 4.1 Computes at 14.25 MHz:
>
> >> Gain 6.3 dBi
> >> F/B ratio 4.2 dB
> >> TOA 11 deg.
> >> Zin 107.9 + j 245.3
>
> >> Code used as follows:
>
> >> CM Gaussian Array
> >> CE
> >> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> >> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> >> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> >> GS 0 0 0.025400
> >> GE 1 -1 0
> >> GN 2 0 0 0 13.0000 0.0050
> >> EX 0 2 21 0 1 0
> >> FR 0 5 0 0 14.15 0.05
> >> LD 5 0 0 0 3.08E7
> >> RP 0 181 1 1000 -90 90 1 1
> >> EN
>
> >> Where the coordinates are in inches. Please verify that
> >> I have interpreted the coordinates correctly. I have
> >> assumed the driven element is "GW 2", and fed in the
> >> center. I have also used non tapered 0.13" diameter
> >> 6063-T832 aluminum alloy. Segment tapering is
> >> allowed, but these dimensions have not been
> >> specified. Our results appear to be significantly different.
>
> >> 73,
>
> >> Frank- Hide quoted text -
>
> >> - Show quoted text -
>
> > Hi Frank, I am not proficient with NEC2 so I can't help you with that.
> > I will add certain things in the hope things clear up for you.
> > Elements are 1.3 inches diameter and tapered. The element listing is

> > of one half of the array
> > with the otherside being a mirror image, all dimensions are in inches.
> > The last element listed
> > was center fed. Design was weighted for max gain then F/B then for
> > resistance feed.
> > Gain was set for horizontal polarisation. Normaly a Gaussian array has
> > every dimension listed as being variable but I decided for simplicity
> > to only vary the individual height of each element plus keeping them
> > parallel and not tilted so as to avoid confusion.Some designs come out
> > with some elements off center as well as not 1/2 wave based as well as
> > irregular shaped which would confuse those who are not fully familiar
> > with antenna theory. It is usual
> > to declare the polarity required instead of maximum gain so that
> > polarity purity can be pursued however, in such cases all dimensions
> > should be considered variable. If maximum bandwidth is required it is
> > also best to have all dimensions variable.If all dimensions are
> > variable you get the situation where all elements are resonant and
> > such designs are compatable with complex circuitry calculations. Note
> > that the salient curves with respect to bandwidth are in sync with
> > each other because of the absence of coupling and minimum reactance of
> > individual parts which prevents focussing as with a Yagi array. Can't
> > think of anything else I can add but don't hesitate with any follow up
> > questions if you have any either with the basic theory, concepts,
> > mathematics or the sample at hand.
> > Good luck
> > Art
>
> you have one fed element and several un-fed ones... isn't that a parasitic
> array? what are the currents in the other elements? how do those currents
> come into being besides coupling between the elements?? How can you use NEC
> to calculate 'gaussian' arrays that are in 'equilibrium' by your definition,
> NEC assumes currents and coupling between the elements, there is no way to
> change that... its part of the basic EM formulas that all antenna modeling
> programs are based on!- Hide quoted text -
>
> - Show quoted text -

David,
When you started the group on the idea that you are not allowed to add
the unit of time to both sides of the gaussian equation for statics it
stopped all true consideration of the concept.
Even when shown the relationship by mathematics to Maxwell the group
dug deeper into a hole. When the group rejected these concepts there
is no point in trying to defend the concept in the face of un informed
comments such as yours. You have had a long run of calling me an idiot
so I am going to let time be my judge. There is no way I can duplicate
the massive stand of Cecil with over 300 postings in the face of such
abusive comments by the pseudo experts that abound in this group.
Have a happy day
Art KB9MZ......XG

68. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 01:23:01 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <VVv_h.1668$Vi6.642@edtnps82>
Source record: 41867

> Frank,
> Your comment about segment taper dimensions not being shown
> I use tapered telescopic fibre glass fishing poles for elements(they
> cannot fall apart only get tighter) and therefore segments do not come
> into the equation. I adhere .002 inch aluminum foil to the exterior
> for conduction and place glass fibre tape along the length if there is
> a question of environment problems, tho ice easily slides down in the
> absence of clamps. Also insert foam at ends to prevent occillation.
> Note. It is sometimes convenient to insert solenoids wound on plastic
> syringes within the elements to create a dual or multiband antenna
> which would duplicate the IR antenna with respect to band coverage.
> Aluminum has become so expensive and fishing poles so inexpensive that
> if you are experimentaly minded the choice becomes obvious(see Ebay
> for
> poles) I also use scrap circuit boards as element to boom connections
> since element weight is best kept down (don't use my military rotor ,
> prop pitch, anymore since antenna boom length and weight and torque
> requirements is no longer a factor). It was wind sway on a 60 foot
> boom that forced me to re think things tho I am not responsible for
> all those windmills that have just been planted in Central Illinois
> but they do emphasise my past predicaments.
> Best regards
> Art
> factors are now a thing of the past.

Code modifies as shown below:

```
CM Gaussian Array
CE
GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 3 16 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
RP 0 1 361 1000 63 0 1 1
EN
```

Third element fed in the center.
NEC 4.1 Computes at 14.25 MHz:

Gain 5.4 dBi
F/B ratio 7.9 dB
TOA 27 deg.
Zin 66.8 - j 32.5

Max currents (1V peak applied to TAG 3):
TAG 1 0.0022 mA (peak)
TAG 2 0.0037 mA (peak)
TAG 3 0.0134 mA (peak).

Frank

69. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 01:47:54 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178243274.407893.16000@h2g2000hsg.googlegroups.com>
Source record: 41868

```
On 3 May, 18:23, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > Frank,
> > Your comment about segment taper dimensions not being shown
> > I use tapered telescopic fibre glass fishing poles for elements(they
> > cannot fall apart only get tighter) and therefore segments do not come
> > into the equation. I adhere .002 inch aluminum foil to the exterior
> > for conduction and place glass fibre tape along the length if there is
> > a question of environment problems, tho ice easily slides down in the
> > absence of clamps. Also insert foam at ends to prevent occillation.
> > Note. It is sometimes convenient to insert solenoids wound on plastic
> > syringes within the elements to create a dual or multiband antenna
> > which would duplicate the IR antenna with respect to band coverage.
> > Aluminum has become so expensive and fishing poles so inexpensive that
> > if you are experimentaly minded the choice becomes obvious( see Ebay
> > for
> > poles) I also use scrap circuit boards as element to boom connections
> > since element weight is best kept down ( don't use my military rotor ,
> > prop pitch, anymore since antenna boom length and weight and torque
> > requirements is no longer a factor). It was wind sway on a 60 foot
> > boom that forced me to re think things tho I am not responsible for
> > all those windmills that have just been planted in Central Illinois
> > but they do emphasise my past predicaments.
> > Best regards
> > Art
> > factors are now a thing of the past.
>
> Code modifies as shown below:
>
> CM Gaussian Array
> CE
> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> GS 0 0 0.025400
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> EX 0 3 16 0 1 0
> FR 0 5 0 0 14.15 0.05
> LD 5 0 0 0 3.08E7
> RP 0 1 361 1000 63 0 1 1
> EN
>
> Third element fed in the center.
```

> NEC 4.1 Computes at 14.25 MHz:
>
> Gain 5.4 dBi
> F/B ratio 7.9 dB
> TOA 27 deg.
> Zin 66.8 - j 32.5
>
> Max currents (1V peak applied to TAG 3):
> TAG 1 0.0022 mA (peak)
> TAG 2 0.0037 mA (peak)
> TAG 3 0.0134 mA (peak).
>
> Frank- Hide quoted text -
>
> - Show quoted text -

Frank,
I stated quite clearly that the elements stated had mirror images on the other side of the antenna array so why are you only considering only three elements? Remember, I stated that to simplify things I have varied ONLY the height of the individual elements with respect to each other. I have NOT introduced variance in length, diameter, skew, material or any thing else which is required for the ultimate Gaussian array i.e. For maximum effect all cartesian coordinates and related dimensions must be variable to obtain the optimum condition of equilibrium. For simplicity I have varied ONLY the height of individual elements while holding to parallelism to each other and to the earths surface .
ART

70. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 02:17:57 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <pJw_h.1687$Vi6.1105@edtnps82>
Source record: 41869

> Frank,
> I stated quite clearly that the elements stated had mirror images on
> the other side of the antenna array so why are you only considering
> only three elements? Remember, I stated that to simplify things I
> have varied ONLY the height of the individual elements with respect
> to each other. I have NOT introduced variance in length, diameter,
> skew, material or any thing else which is required for the ultimate
> Gaussian array i.e. For maximum effect all cartesian coordinates and
> related dimensions must be variable to obtain the optimum condition of
> equilibrium. For simplicity I have varied ONLY the height of
> individual elements while holding to parallelism to each other and to
> the earths surface .
> ART

Code mirrored across the X - Z plane:

```
CM Gaussian Array
CE
GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 3 16 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
RP 0 181 1 1000 -90 140 1 1
EN
```

Results:

```
Gain 6.8 dBi
F/B ratio 13.8 dB
TOA 11 deg.
Zin 78.4 - j 27.1
```

Frank

PS to interpret the GW card:

```
GW TAG# #segs. X1 Y1 Z1 X2 Y2 Z2 wire radius
```

71. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 02:37:45 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178246265.553391.164440@n59g2000hsh.googlegroups.com>
Source record: 41870

```
On 3 May, 19:17, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > Frank,
> > I stated quite clearly that the elements stated had mirror images on
> > the other side of the antenna array so why are you only considering
> > only three elements? Remember, I stated that to simplify things I
> > have varied ONLY the height of the individual elements with respect
> > to each other. I have NOT introduced variance in length, diameter,
> > skew, material or any thing else which is required for the ultimate
> > Gaussian array i.e. For maximum effect all cartesian coordinates and
> > related dimensions must be variable to obtain the optimum condition of
> > equilibrium. For simplicity I have varied ONLY the height of
> > individual elements while holding to parallelism to each other and to
> > the earths surface .
> > ART
>
> Code mirrored across the X - Z plane:
>
> CM Gaussian Array
> CE
> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
> GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
> GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
> GS 0 0 0.025400
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> EX 0 3 16 0 1 0
> FR 0 5 0 0 14.15 0.05
> LD 5 0 0 0 3.08E7
> RP 0 181 1 1000 -90 140 1 1
> EN
>
> Results:
>
> Gain 6.8 dBi
> F/B ratio 13.8 dB
> TOA 11 deg.
> Zin 78.4 - j 27.1
>
> Frank
>
```

> PS to interpret the GW card:
>
> GW TAG# #segs. X1 Y1 Z1 X2 Y2 Z2 wire radius

Frank,
I can't help you anymore. I am assuming that your intentions are good
but as I said earlier I am not proficient or familiar enough with the
program you are using and heaven knows that I have taken a lot of
abuse over this concept. Tho this concept has brought forth the rath
of the pseudo experts that abound on this newsgroup I have never the
less applied for a utility
patent on the strength of my own convictions. So eventually it will
become printed matter
and time will tell if open minds outside this group will judge the
concept favorably.
Best regards and have a great day.
Art

72. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 02:59:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133l8chtej78q5e@corp.supernews.com>
Source record: 41871

nm5k@wt.net wrote:
>
> Well, it is, as far as designing the antenna. . .

> MK

And MK takes the bait, hook, line, and sinker. The fight is on, and the fish will be played until he can't so much as wiggle a fin. . .

Roy Lewallen, W7EL

73. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 03:02:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133l8iu5n5fba47@corp.supernews.com>
Source record: 41872

You will get many, many lobes in various directions. If one happens to be pointing in a direction you want to communicate to, you'll find that the antenna "works". If it doesn't, you'll find that it "doesn't work".

Roy Lewallen, W7EL

Spam Collector wrote:
> While reading about antennas, I've been unable to find
> answers to what I thought would be basic questions.
> Most of what I've read seems to concentrate on narrow-
> bandwith antennas, and even at that seems to concentrate
> on what happens when lengths become shorter and ignores
> the effects of longer lengths (for definitions of 'longer'
> meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
> will perform at higher bands. For example, if I were
> to run a wire around my property (about 300 x 500 feet),
> giving me about 1600' of antenna length, I could run it
> as a folded random wire (fed from one end), a loop (fed
> from a corner or the middle of one side), or as a dipole
> (if fed like the loop but cut on the oposite side).
> What are the performance differences between the
> three configurations, and is there a upper frequency
> limit for practical use of them? For example, would it
> work on say 2m or 70cm, where the antenna would be
> hundreds of wavelengths long?
>
> Thanks for any insight,
> Frank
> KE5MJZ
>
>

74. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 03:22:10 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <CFx_h.409958$5j1.161620@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41873

Roy Lewallen wrote:
> nm5k@wt.net wrote:
>>
>> Well, it is, as far as designing the antenna. . .
>
>> MK
>
> And MK takes the bait, hook, line, and sinker. The fight is on, and the
> fish will be played until he can't so much as wiggle a fin. . .
>
> Roy Lewallen, W7EL

Do fish have phasors? If so, then we know that they must keep rotating.
Of course we can't figure out which direction they are rotating, but at
least the spin continues.

73,
Gene
W4SZ

75. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 03:26:14 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <459l339hkmuhj05b2a3o1t3j4dcesnv7n0@4ax.com>
Source record: 41874

On 03 May 2007 20:43:19 GMT, Spam Collector
<spam-collector@artair.com> wrote:

>While reading about antennas, I've been unable to find
>answers to what I thought would be basic questions.
>Most of what I've read seems to concentrate on narrow-
>bandwith antennas, and even at that seems to concentrate
>on what happens when lengths become shorter and ignores
>the effects of longer lengths (for definitions of 'longer'
>meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
>will perform at higher bands. For example, if I were
>to run a wire around my property (about 300 x 500 feet),
>giving me about 1600' of antenna length, I could run it
>as a folded random wire (fed from one end), a loop (fed
>from a corner or the middle of one side), or as a dipole
>(if fed like the loop but cut on the oposite side).
> What are the performance differences between the
>three configurations, and is there a upper frequency
>limit for practical use of them? For example, would it
>work on say 2m or 70cm, where the antenna would be
>hundreds of wavelengths long?
>
I use a ~550 foot horizontal loop fed with 450 ohm window line. A
balanced double L tuner is used as a matching device on HF. Homebrew
balanced tuners permit the loop to be used on 6 and 2M. On 6M the loop
performs well for an omnidirectional antenna. My primary 6M antennas
are Sterba curtains. The loop works FB on 2M FM but it is not suitable
for weak signal work.

73 de n4jvp
Fritz

76. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 05:19:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Fnz_h.7198$rO7.1146@newssvr25.news.prodigy.net>
Source record: 41875

Roy Lewallen wrote:
> And MK takes the bait, hook, line, and sinker.

Actually, the hook, line, and sinker that was swallowed
years ago is that a 360 cubic inch 75m Texas Bugcatcher
coil can be magically shrunken down to a dimensionless
point inductance that passes current with a zero delay
and phase shift, i.e. faster than the speed of light.

The technical truth will triumph in the end. A 75m
Texas Bugcatcher coil occupies ~30 degrees of a 75m
mobile antenna and it takes the forward current (and
reflected current) ~21 nS to flow through the coil.
--
73, Cecil http://www.w5dxp.com

77. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 07:24:12 UTC
From: nm5k@wt.net
Message-ID: <1178263452.133669.20630@q75g2000hsh.googlegroups.com>
Source record: 41876

art wrote:

>
> I was referring to 'EE's not " HS "graduates ! It is certainly
> understandable
> from those who are not familiar with the arts. You can only get so
> far with a
> general understanding but it has been said on this newsgroup by others
> that without a full understanding of the concepts you finish up with
> lots of
> misconceptions, and that seems to make makes sense when I read your
> postings.

Are you an EE? Seems to me you were some type of mechanical
engineer. If so, I don't see how your qualifications are a heck of
a lot greater than mine.
How would you describe your level of understanding? General? High?
Massive? Einsteins lost step child? I could guess, but I'll reserve
comment..
What misconceptions have I finished up with lately? Can you list them?
I'd be glad to go back and review any I'm not aware of.

> . I suggest you keep quiet and wait until you can buy one then you
> are
> less likely to screw up.

Why would I want to buy a gaussian antenna? I have no real use for one
that I can think of. Besides, I don't generally waste money on
antennas.

>It is not a design for a typical couch expert
> to
> expound upon.

I've never been able to gather enough coherant details to expound on
it,
even if I wanted to. Also, I don't sit on a couch. There is one in the
other
room, but I'm never in there. I sit in a rollaround office chair,
which hurts
my ass in general. Needs more cushioning. A couch might be more
comfortable, but would probably sit too low. I also doubt I have
enough
room in this clutterhut room to fit a couch...

Suggest you wait until you can quote from a book
> if you want to impress

I rarely quote from books. And I'm not here to impress people.
Why would I try to do that when many here obviously know
quite a bit more than I do? Or you for that matter...
Would be like racing a pack of V8 corvettes with a V6 impala.
I've never claimed to be any great guru of antennas.
I just fart with this stuff to kill time, and maybe erect a bit
better
antenna than I would if I buried my head in the sand.
I don't have any real "guru" ego to try to protect. I just call em as
I
see em..
I do have a few books, but I'm almost always too lazy to get up
and find one to quote whatever it would be I would want to quote.
But my comments still stand. I hear about all these new fangled
gaussian designs, but I never hear much about you actually trying
or using any of them.
If I was trying to design a new type of antenna, I would test it in
the real world before trying to convince the masses of the internet
if it is a workable design or not. Seems to me it would save a lot of
time. From what I read of your posts, I'm not even sure if you know
if it's workable or not. To me, that strikes me as a weird way to
live.
MK

78. Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 07:27:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <veml33t93afgumagu73nm6mn4l8cb7h2qv@4ax.com>
Source record: 41727

aknoweledged the undeniable truth

The technical truth will triumph in the end.

an explanational truth of Poyntings Vector.

Technical truth is the only winner here

the truth eventually will come out

Sounds like that may not be the truth

provide some new truth

obfuscation of the truth

more interested in obfuscation than in the truth

So which is the truth?

convince you of their truth

You are getting close to the truth

I'm not convinced about the truth

insisting on his truth

no equivalent can negate that physical truth ;-)

but the truth of it is

Sounds like that may not be the truth

to tell you the truth

Every statement here is a lie.

79. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 07:32:33 UTC
From: nm5k@wt.net
Message-ID: <1178263953.735800.32750@u30g2000hsc.googlegroups.com>
Source record: 41728

On May 3, 8:59 pm, Roy Lewallen <w...@eznec.com> wrote:
> n...@wt.net wrote:
>
> > Well, it is, as far as designing the antenna. . .
> > MK
>
> And MK takes the bait, hook, line, and sinker. The fight is on, and the
> fish will be played until he can't so much as wiggle a fin. . .
>
> Roy Lewallen, W7EL

I like to stir it. But there is no fight to be fought. I'm not
arguing
with him. I just fail to see any real advantage of considering coil
current "taper", or whatever you would want to call it when designing
a typical bugcatcher. From many of his posts, you would think it's
a required consideration, or rewards one with super performance
not available to a designer using regular ole lumped coil theory.
The coil is still going to end up being mounted in the same place
either route you take.
MK

80. Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 09:49:48 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f1evjs$420$1@news.netins.net>
Source record: 41729
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I am trying to construct a broadband 4:1 balun, and I want to double check if my understanding of the measurements is correct before I apply any real RF power.

I do not have access to an antenna analyzer, though I do have an HP4193A Vector Impedance meter and HP8753 Network Analyzer at my disposal.

First I wound the core in a bifilar manner with the leads being labeled A1,B1 and A2,B2. Then I measured the input impedance across A1 and A2 leaving B1 and B2 unconnected. Then placed a 200 ohm resistor across A1 and B2 while tying B1 and A2 together, and measured across A1 and A2 looking for 50 ohms (4:1).

I have also seen a reference to a K value for an indication of broadbandness. K = 1 - L(short)/L(open)

Here are my results...

8 bifilar turns of teflon coated AWG 16, on Type 43 core.

Mhz A1-A2 Open Impedance A1-A2 200 ohm Impedance
2 941 @ +59.5 51.4 @ 3.6 (51.3 +3.2j)
4 2080 @ -25.6 51.7 @ 3.2
7 4130 @ -74.2 52.1 @ 3.7
10 2900 @ -81.5 52.3 @ 4.4
14 1687 @ -84.8 52.4 @ 5.6
18 1180 @ -86.1 52.5 @ 6.8
21 966 @ -86.7 52.6 @ 7.7
25 781 @ -87.2 52.7 @ 9.1
28 682 @ -87.3 52.6 @ 10.2
30 630 @ -87.5 52.7 @ 10.8 (51.7 +9.9j)
---
50 356 @ -87.0 52.8 @ 18.6
54 327 @ -86.2 52.8 @ 20.4 (49.5 +18j)

Inductance Open = .93 uH
Inductance Short = 167 uH
K == .994

I did not intend to operate this balun above 10m, but thought it would be interesting to see the 6m data as well. And it looks like it would work fine there as well.

From what I have read, the open reactance should be at least 4 to 5 times as high as the normal drive impedence. In this case, it is over 12 times the 50 ohm input at 30Mhz and over 6 times at 54Mhz.

So did I do good? Am I way off?
How can I tell if/when core saturation will be a problem?

--Teh

81. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 10:58:20 UTC
From: Dave <noone@nowhere.com>
Message-ID: <glE_h.7601$b61.4204@trndny09>
Source record: 41730

"art" <aunwin@insightbb.com> wrote in message
news:1178240359.562282.33270@n76g2000hsh.googlegroups.com...
> On 3 May, 17:42, "Dave" <n...@nowhere.com> wrote:

> David,
> When you started the group on the idea that you are not allowed to add
> the unit of time to both sides of the gaussian equation for statics it
> stopped all true consideration of the concept.
> Even when shown the relationship by mathematics to Maxwell the group
> dug deeper into a hole. When the group rejected these concepts there
> is no point in trying to defend the concept in the face of un informed
> comments such as yours. You have had a long run of calling me an idiot
> so I am going to let time be my judge. There is no way I can duplicate
> the massive stand of Cecil with over 300 postings in the face of such
> abusive comments by the pseudo experts that abound in this group.
> Have a happy day
> Art KB9MZ......XG
>

i have a long run of pointing out junk science. and yours is some of the
junkiest. you insist on using NEC to calculate 'equilibrium', not
understanding that NEC uses exactly the maxwell equations that you don't
believe in. and you throw about modified equations without any way of
proving they are correct. and you have this concept of a fictional surface
where a magic transformation takes place with no way to define or defend it.
So far the only thing you have proven is that allowing optimizers to run on
randomly placed elements can result in gain. And you have shown that if you
let it go far enough without logical constraints you get unrealizable
configurations. Unfortunately a patent doesn't prove anything in this
country besides the fact that no one else has described exactly the same
thing, at least as far as an examiner can tell.

82. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 11:26:49 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463b1860$0$15116$4c368faf@roadrunner.com>
Source record: 41731

"Spam Collector" <spam-collector@artair.com> wrote in message
news:slrnf3kibd.ks2.spam-collector@k6.artair.com...
> While reading about antennas, I've been unable to find
> answers to what I thought would be basic questions.
> Most of what I've read seems to concentrate on narrow-
> bandwith antennas, and even at that seems to concentrate
> on what happens when lengths become shorter and ignores
> the effects of longer lengths (for definitions of 'longer'
> meaning 'much longer, as in many wavelengths longer).
> The question is how various low-band antenna types
> will perform at higher bands. For example, if I were
> to run a wire around my property (about 300 x 500 feet),
> giving me about 1600' of antenna length, I could run it
> as a folded random wire (fed from one end), a loop (fed
> from a corner or the middle of one side), or as a dipole
> (if fed like the loop but cut on the oposite side).
> What are the performance differences between the
> three configurations, and is there a upper frequency
> limit for practical use of them? For example, would it
> work on say 2m or 70cm, where the antenna would be
> hundreds of wavelengths long?
>
> Thanks for any insight,
> Frank
> KE5MJZ
>
>

When I was a kid I did pretty much what you are suggesting with a receiving antenna hooked up to a hallicrafter s40 b. At first I thought this was a really great antenna becuase it picked up a lot of staions I had never heard before. Unfortunately it didnt pick up the stations I wanted to hear so I went back to using a 15ft piece of wire thumb tacked to my bedroom wall.

Jimmie

83. Base insulator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 12:24:55 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463b25fe$0$9903$4c368faf@roadrunner.com>
Source record: 41732

Anyone know of a good way to build a base insulator for a Rohn 25G tower. We were talking about putting up a guyed tower as a 1/2 lambda radiator on 40m. We were thinking of connecting the base and rest of the toer together with some fiberglass dowels. Also considered was making a mounting plate out of a 3 inch stack of polycarbonate sheets. Rotate the tower so it is offset from the base and bolt the poly carbonate to the tower and base from opposite sides. One od the guys thinks he can get some cermanic insulators made for this but if that doesnt happen any thoughts would be appreciated.

84. Re: The Formula

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 13:08:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <DfG_h.20092$JZ3.1266@newssvr13.news.prodigy.net>
Source record: 41733

nm5k@wt.net wrote:
> I just fail to see any real advantage of considering coil
> current "taper", or whatever you would want to call it when designing
> a typical bugcatcher.

There's no advantage in discovering an earth-like planet
50 light years away either but lots of curious people find
such endeavors interesting.

Designing a typical bugcatcher is not my goal nor does it
hold any interest for me. I have not had a QSO in years.
99% of my interest in amateur radio is in figuring out
how things really work in reality. The only reason that
I obtained a EE degree was to know more about how an amateur
radio system works. If I never had another QSO, I wouldn't
miss a thing.

I don't understand your interests and you don't understand
mine. So what's new?
--
73, Cecil http://www.w5dxp.com

85. Re: Base insulator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 13:14:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <dIG_h.101$4X.24@nlpi069.nbdc.sbc.com>
Source record: 41734

Jimmie D wrote:
> Anyone know of a good way to build a base insulator for a Rohn 25G tower.

Rohn manufactures an insulating section.
--
73, Cecil http://www.w5dxp.com

86. Re: with the punce

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 13:56:05 UTC
From: Douche Bag <loumaagsucks@hotmail.com>
Message-ID: <1178286964.864266.177390@p77g2000hsh.googlegroups.com>
Source record: 41736
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

U kan go ax sombodi else nigga!

On May 3, 5:07 pm, "an_old_friend" <mor...@mork.nutup> wrote:
> with the punce gotcha he wonders why I simple don't bother to ty impoving
> my spelling do u hav anyting cognet two say?
>
> --
> Posted via a free Usenet account fromhttp://www.teranews.com

87. Re: Base insulator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 13:56:23 UTC
From: "Paul E. Cater" <paulcater@roadrunner.com>
Message-ID: <EY2dnZOpoPnJpqbbnZ2dnUVZ_gednZ2d@adelphia.com>
Source record: 41735

Good day Cecil,

I helped a fellow at one time that used a material named "Glastic" solid rod to insert at the base of the tower between section divides. He had used a partial section of tower to place in the ground instead of the other methods commonly used to mount the tower.

You can review the specs at http://www.glastic.com/

Regards,
Paul

Cecil Moore wrote:
> Jimmie D wrote:
>> Anyone know of a good way to build a base insulator for a Rohn 25G tower.
>
> Rohn manufactures an insulating section.

88. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 14:50:56 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f1fh8lilm1@aioe.org>
Source record: 41737

> Frank,
> I can't help you anymore. I am assuming that your intentions are good
> but as I said earlier I am not proficient or familiar enough with the
> program you are using and heaven knows that I have taken a lot of
> abuse over this concept. Tho this concept has brought forth the rath
> of the pseudo experts that abound on this newsgroup I have never the
> less applied for a utility
> patent on the strength of my own convictions. So eventually it will
> become printed matter
> and time will tell if open minds outside this group will judge the
> concept favorably.
> Best regards and have a great day.
> Art
>

I admire Frank and anyone trying to deal with this "Goosian" mumbo-jumbo "presented" by somebody who mixes up polarity with polarization, reflector with director and even has a patent for it. Perhaps Art would have more understanding at the AntenneX group, there are bunch of miracle antennas being celebrated.

We are too stupid to get the "equiliberated electrons, that the salient curves with respect to bandwidth are in sync with each other because of the absence of coupling and minimum reactance of individual parts which prevents focusing as with a Yagi array. "

He is still keeping secret what the POLARITY is. How can one make any sense of the rest of the crap? Try to model the gausian mumbo-jumbo? Of course you can't, it is waaaay beyond stoopid earthly modeling programs. Only Art knows the magnificent computored miracle antenna that you antenna morons can't comprehend because you were confused by 100 years of misleading antenna charlatans. Riiiiiiight!

bada BUm

89. Re: Base insulator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 15:07:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <O_H_h.7$rm.4@trndny03>
Source record: 41738

kc1xx http://xxtowers.com/ sells parts they use for insulating broadcast towers for rohn-25 that is much cheaper than the rohn section. His setup includes 2 plates that go on the top and bottom of the sections and a porcelain insulator that bolts between them. I've got 4 of them sitting in the shed waiting to go in the new 80m 4-square later this summer, they sure look plenty hefty for the job!

"Cecil Moore" <nospam@w5dxp.com> wrote in message news:dlG_h.101$4X.24@nlpi069.nbdc.sbc.com...
> Jimmie D wrote:
>> Anyone know of a good way to build a base insulator for a Rohn 25G tower.
>
> Rohn manufactures an insulating section.
> --
> 73, Cecil http://www.w5dxp.com

90. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 15:25:20 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178292320.705879.108170@q75g2000hsh.googlegroups.com>
Source record: 41739

On 4 May, 03:58, "Dave" <n...@nowhere.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1178240359.562282.33270@n76g2000hsh.googlegroups.com...
>
> > On 3 May, 17:42, "Dave" <n...@nowhere.com> wrote:
> > David,
> > When you started the group on the idea that you are not allowed to add
> > the unit of time to both sides of the gaussian equation for statics it
> > stopped all true consideration of the concept.
> > Even when shown the relationship by mathematics to Maxwell the group
> > dug deeper into a hole. When the group rejected these concepts there
> > is no point in trying to defend the concept in the face of un informed
> > comments such as yours. You have had a long run of calling me an idiot
> > so I am going to let time be my judge. There is no way I can duplicate
> > the massive stand of Cecil with over 300 postings in the face of such
> > abusive comments by the pseudo experts that abound in this group.
> > Have a happy day
> > Art KB9MZ......XG
snip
. you insist on using NEC to calculate 'equilibrium', not
> understanding that NEC uses exactly the maxwell equations that you don't
> believe in.

Now you are making things up, I have not said that I don't believe in
Maxwells equations

and you throw about modified equations without any way of
> proving they are correct.

And an independent person from M.I.T. a Doctor no less confirmed my
analysis as being consistent with Maxwells laws and went to great
lengths in supplying the mathematical route.

and you have this concept of a fictional surface

The arbitary border of a Gaussian field is generally stated as being
frictionless since it is a arbitary boundary that surrounds a mass in
equilibrium.Contrary to your statement equilibrium does not
necessarily mean coupling it means a balanced existence in a
gravitational field (my words). Coupling means an mutual existence
inside a common field.
where the tranfer of energy occurres inside that common field. In
which case an equation cannot be made for a given space of time since
the exchange of energy continues to take place after the application
of energy has ceased.

> where a magic transformation takes place with no way to define or defend it.

It is no magic transformation if one adds time to a conservative field
such that it becomes a non conservative field. If one wants reality
the unit of time must be present for a fantasy conservative field made
of static particles becomes a non conservative field with reality.

> So far the only thing you have proven is that allowing optimizers to run on
> randomly placed elements can result in gain.

The optimizer is based on proven Maxwellian laws not a figment of
imagination. It shows that
laws were in existence before Maxwell that were established by other
people whose thoughts
interlocked with other thoughts and data. Pointings vector is one of
these which shows all the same characteristics of my concepts that you
disdain in your last posting. Thus contrary to dismissing Maxwell I am
confirming the laws by an independent avenue.

> And you have shown that if you
> let it go far enough without logical constraints you get unrealizable
> configurations.

I suppose that is posible to occur but it wasn't I that provided the
porported demonstration.

The whole basis of the concept is equilibrium and if a computor
program fails to conform with that position I would blame the human
content of the program and not nature.

Unfortunately a patent doesn't prove anything in this
> country besides the fact that no one else has described exactly the same
> thing, at least as far as an examiner can tell.

Very true, which in itself is not all that bad and Congress has not
abandoned that institution
for good reason. When a request is printed it invites experts in
radiation, such as you, to submit reasons as to why it should not be
granted. Why not give it a try, but use of the word "can't" alone will
not be seen as satisfactory. The institution is for those who use the
word of " can" which you seem to take delight in deriding which in
itself cannot prevent changes or prevent the advance of science.
Why not do something really constructive and help Frank with his
program? For the life of me
I do not understand why those familiar with NEC in this group aren't
helping the guy. Is he persona non grata or are all taking a delight
in seeing him struggle. If the NEC program determines something
different to what I supplied then the debate would be settled and the
truth will come out. Why would a group of antenna experts not give
assistance to a fellow ham in need? Is there something that you abhor
when a thread is stopped in its tracks without reaching the 400
postings mark? Is the exchange of insults the overiding factor in this
group?
(I know the answer to that!)

Art Unwin KB9MZ.......XG
Bloomington IL

91. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 16:12:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o2mm33ddn4to8im1hjtbdq2q9aj5skeebm@4ax.com>
Source record: 41740

On 4 May 2007 08:25:20 -0700, art <aunwin@insightbb.com> wrote:

>Why not do something really constructive and help Frank with his
>program? For the life of me
>I do not understand why those familiar with NEC in this group aren't
>helping the guy.

Hi Art,

He doesn't need help with NEC, obviously. After four or five rounds of correspondence he eked out the necessary details to test a claim, and found it was unconfirmable.

If he needs any help, it is getting a complete description (hence, why it took him four or five rounds of filling in gaps in the first place). If he now has the complete description (something you NEVER acknowledge), then the analysis is complete.

Given both your software and his (and ours) all use the same calculating engine, then it remains a challenge as to how you arrive at your results. When you toss in statements like resonance achieved with significant reactance, or elements that resonate at a third of their wavelength dimension, one has to wonder even more about your fundamental failures of first principles.

73's
Richard Clark, KB7QHC

92. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 16:33:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h0nm331sm0l3kt7v1eurrlaol1vnlg16mf@4ax.com>
Source record: 41741
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Fri, 4 May 2007 09:49:48 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>First I wound the core in a bifilar manner with the leads being labeled
>A1,B1 and A2,B2. Then I measured the input impedance across A1 and A2
>leaving B1 and B2 unconnected. Then placed a 200 ohm resistor across A1
>and B2 while tying B1 and A2 together, and measured across A1 and A2
>looking for 50 ohms (4:1).
>
>I have also seen a reference to a K value for an indication of
>broadbandness. K = 1 - L(short)/L(open)
>
>Here are my results...
>
>8 bifilar turns of teflon coated AWG 16, on Type 43 core.

Hi Teh,

Your numbers suggest Type 75 instead, OR some other mechanism at work.
Given your lead description above is fine, but could have been poorly
implemented (in text, it is difficult to sort those things out).

>From what I have read, the open reactance should be at least 4 to 5 times
>as high as the normal drive impedence. In this case, it is over 12
>times the 50 ohm input at 30Mhz and over 6 times at 54Mhz.
>
>So did I do good? Am I way off?
>How can I tell if/when core saturation will be a problem?

The ratio is as good as any. More important is how much power the
BalUn can withstand. Your last question gets into the common
misconception of "core saturation" which is typically a consideration
for the winding linked magnetics not found in this application. BalUns
are not classical power transformers that are so common to 60Hz AC.

The choke BalUn (which is what you are building) employs the lossy
resistance of Ferrite to establish the isolation you want in a BalUn.
There may be some reactance achieved along the way, but it is not
usually a design goal and these class of Ferrites would be a poor
choice in achieving that. If you note that your data describes a
very, very broad curve; it demonstrates a very poor Q which is its
principle attraction (broadbandedness).

As a simple test, pass one very short wire through one bead and
measure its Z (give us a complete description of resistance AND

reactance) over frequency. This will confirm what type material you are using and will remove unnecessary complexity. Type 43 should show a frequency peak roughly ten times above your current data's frequency peak.

73's
Richard Clark, KB7QHC

93. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 16:44:06 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <qpJ_h.2563$Vi6.55@edtnps82>
Source record: 41742

```
>> Code mirrored across the X - Z plane:
>>
>> CM Gaussian Array
>> CE
>> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
>> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
>> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
>> GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
>> GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
>> GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
>> GS 0 0 0.025400
>> GE 1 -1 0
>> GN 2 0 0 0 13.0000 0.0050
>> EX 0 3 16 0 1 0
>> FR 0 5 0 0 14.15 0.05
>> LD 5 0 0 0 3.08E7
>> RP 0 181 1 1000 -90 140 1 1
>> EN
>>
>> Results:
>>
>> Gain 6.8 dBi
>> F/B ratio 13.8 dB
>> TOA 11 deg.
>> Zin 78.4 - j 27.1
>>
>> Frank
>>
>> PS to interpret the GW card:
>>
>> GW TAG# #segs. X1 Y1 Z1 X2 Y2 Z2 wire radius
>
> Frank,
> I can't help you anymore. I am assuming that your intentions are good
> but as I said earlier I am not proficient or familiar enough with the
> program you are using and heaven knows that I have taken a lot of
> abuse over this concept. Tho this concept has brought forth the rath
> of the pseudo experts that abound on this newsgroup I have never the
> less applied for a utility
> patent on the strength of my own convictions. So eventually it will
> become printed matter
> and time will tell if open minds outside this group will judge the
> concept favorably.
> Best regards and have a great day.
```

> Art

Possibly I did not understand your original coordinates as follows:

X Y Z
273.3 164.1 820
25.1 203.3 1079
171.1 202.1 582
321.6 178.4 1036.5
2.1 206.5 701.2
153.5 194.5 1038.1

I interpreted the above as:

Wire #1
X1 = 273.3, X2 = 25.1;
Y1 = 164.1, Y2 = 203.3; and
Z1 = 820, Z2 = 1079.

Wire #2
X1 = 171.1, X2 = 321.6;
Y1 = 202.1, Y2 = 178.4;and
Z1 = 582, Z2 = 1035.6.

Wire #3
X1 = 2.1, X2 = 153.5;
Y1 = 206.5, Y2 = 194.5;and
Z1 = 701.2, Z2 = 1038.1.

The lengths of the wires were determined by
SQRT((X2-X1)^2+(Y2-Y1)^2+(Z2-Z1)^2). The results
made some sense since the lengths were approximately
what would be expected in the region of 14 MHz. The driven element
was selected as Wire #3. I mirrored the above wires across the X - Z
plane (The only possible plane), by changing all Y coordinates to
negative values. The resultant array therefore consisted of six
elements. The mirrored Wire #3 was not driven. Note
that wrapping the elements in fiberglass tape will modify the
electrical lengths by a small amount.

Since you appear to have actually constructed a model I am
curious how you measured the parameters listed in your
original posting. What equipment did you use? How
did you determine the gain, and take-off angle?

Frank

94. Re: Base insulator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 16:46:17 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463b6340$0$15144$4c368faf@roadrunner.com>
Source record: 41743

"Dave" <noone@nowhere.com> wrote in message news:O_H_h.7$rm.4@trndny03...
> kc1xx http://xxtowers.com/ sells parts they use for insulating broadcast
> towers for rohn-25 that is much cheaper than the rohn section. His setup
> includes 2 plates that go on the top and bottom of the sections and a
> porcelain insulator that bolts between them. I've got 4 of them sitting
> in the shed waiting to go in the new 80m 4-square later this summer, they
> sure look plenty hefty for the job!
>
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:dlG_h.101$4X.24@nlpi069.nbdc.sbc.com...
>> Jimmie D wrote:
>>> Anyone know of a good way to build a base insulator for a Rohn 25G
>>> tower.
>>
>> Rohn manufactures an insulating section.
>> --
>> 73, Cecil http://www.w5dxp.com
>
>

Gives me an idea, one of the guys has some big pocelan stand off used in
building substations. Three of these on a metal plate might work.

95. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 16:47:21 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <cpom33hi7l3tg5vpqo9g64b0053e2htbi6@4ax.com>
Source record: 41744

On 03 May 2007 20:43:19 GMT, Spam Collector
<spam-collector@artair.com> wrote:

>While reading about antennas, I've been unable to find
Random antennas yield random results.
John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

96. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 17:15:12 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178298912.592235.51780@c35g2000hsg.googlegroups.com>
Source record: 41745

```
On 4 May, 09:44, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> >> Code mirrored across the X - Z plane:
>
> >> CM Gaussian Array
> >> CE
> >> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> >> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> >> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> >> GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
> >> GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
> >> GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
> >> GS 0 0 0.025400
> >> GE 1 -1 0
> >> GN 2 0 0 0 13.0000 0.0050
> >> EX 0 3 16 0 1 0
> >> FR 0 5 0 0 14.15 0.05
> >> LD 5 0 0 0 3.08E7
> >> RP 0 181 1 1000 -90 140 1 1
> >> EN
>
> >> Results:
>
> >> Gain 6.8 dBi
> >> F/B ratio 13.8 dB
> >> TOA 11 deg.
> >> Zin 78.4 - j 27.1
>
> >> Frank
>
> >> PS to interpret the GW card:
>
> >> GW TAG# #segs. X1 Y1 Z1 X2 Y2 Z2 wire radius
>
> > Frank,
> > I can't help you anymore. I am assuming that your intentions are good
> > but as I said earlier I am not proficient or familiar enough with the
> > program you are using and heaven knows that I have taken a lot of
> > abuse over this concept. Tho this concept has brought forth the rath
> > of the pseudo experts that abound on this newsgroup I have never the
> > less applied for a utility
> > patent on the strength of my own convictions. So eventually it will
> > become printed matter
> > and time will tell if open minds outside this group will judge the
```

> > concept favorably.
> > Best regards and have a great day.
> > Art
>
> Possibly I did not understand your original coordinates as follows:
>
X Y Z X Y Z
273.3 164.1 820 273.3 -164.1 820
25.1 203.3 1079 25.1 -203.3 1079
171.1 202.1 582 171.1 -202.1 582
321.6 178.4 1036.5 321.6 -178.4 1036.5
2.1 206.5 701.2 2.1 -206.5 701.2
153.5 194.5 1038.1 153.5 -194.5 1038.1
1 source
wire 6, centre
> I interpreted the above as:
>
> Wire #1
> X1 = 273.3, X2 = 25.1;
> Y1 = 164.1, Y2 = 203.3; and
> Z1 = 820, Z2 = 1079.
>
> Wire #2
> X1 = 171.1, X2 = 321.6;
> Y1 = 202.1, Y2 = 178.4;and
> Z1 = 582, Z2 = 1035.6.
>
> Wire #3
> X1 = 2.1, X2 = 153.5;
> Y1 = 206.5, Y2 = 194.5;and
> Z1 = 701.2, Z2 = 1038.1.
>
> The lengths of the wires were determined by
> SQRT((X2-X1)^2+(Y2-Y1)^2+(Z2-Z1)^2). The results
> made some sense since the lengths were approximately
> what would be expected in the region of 14 MHz. The driven element
> was selected as Wire #3. I mirrored the above wires across the X - Z
> plane (The only possible plane), by changing all Y coordinates to
> negative values. The resultant array therefore consisted of six
> elements. The mirrored Wire #3 was not driven. Note
> that wrapping the elements in fiberglass tape will modify the
> electrical lengths by a small amount.
>
> Since you appear to have actually constructed a model I am
> curious how you measured the parameters listed in your
> original posting. What equipment did you use? How
> did you determine the gain, and take-off angle?
>
> Frank- Hide quoted text -
>

> - Show quoted text -

Note that I have added the mirror dimensions above.
Seems like mirror image is your stumbling block.
Where did you get your program from since it may have been
modified or corrected.? My program is over 20 years old so
I am assuming it has stood the test of time. I am sorry I can't help
you
with your particular program and since help is not forth coming from
this antenna group I would go back to the vendor and ask for
help since it appears to have stumped every body here
Good luck
Art

97. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 17:31:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ecrm33tedj46hh5vtcvr72qdk92k378qmi@4ax.com>
Source record: 41746
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Fri, 04 May 2007 09:33:59 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>Type 43 should show
>a frequency peak roughly ten times above your current data's frequency
>peak.

This may have been obscure. The peak of isolation (as revealed in
common mode resistance) should occur in the low VHF region, not the
low HF.

73's
Richard Clark, KB7QHC

98. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 17:36:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ejrm331lohrp5lnathbqi0ranjuo7unkc6@4ax.com>
Source record: 41747

On 4 May 2007 10:15:12 -0700, art <aunwin@insightbb.com> wrote:

>Seems like mirror image is your stumbling block.

Hi Art,

As there are 3 planes at which a mirror could be set (if one simply approaches it through the principle axis; if not, there is an infinte number of mirror choices), the stumbling block is (and has always been) with an incomplete description.

It has only taken you 8 postings to do what could have been done once in the beginning - if in fact all the details have been offered.

73's
Richard Clark, KB7QHC

99. Re: with the punce

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 17:54:35 UTC
From: an_old_friend <morkie@mork.nutup>
Message-ID: <463b670e$0$16402$88260bb3@free.teranews.com>
Source record: 41748
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

"Douche Bag" <loumaagsucks@hotmail.com> wrote in message
news:1178286964.864266.177390@p77g2000hsh.googlegroups.com...
>U kan go ax sombodi else nigga!
>

http://www.niggermania.com/

- -
old blog- http://kb9rqz.blogspot.com/

new blog- http://ipunce.blogspot.com/index.html

> On May 3, 5:07 pm, "an_old_friend" <mor...@mork.nutup> wrote:
>> with the punce gotcha he wonders why I simple don't bother to ty
>> impoving
>> my spelling do u hav anyting cognet two say?
>>
>> --
>> Posted via a free Usenet account fromhttp://www.teranews.com
>
>

--
Posted via a free Usenet account from http://www.teranews.com

100. Re: Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 18:43:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <n9L_h.21016$Um6.16058@newssvr12.news.prodigy.net>
Source record: 41749

Richard Clark wrote:
> The technical truth will triumph in the end.
...

Richard, I can't wait to see your posting following
the triumph of the technical truth and, FYI, that's
not very far away.
--
73, Cecil http://www.w5dxp.com

101. Re: Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 19:06:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <wuL_h.135$sL7.73@nlpi061.nbdc.sbc.com>
Source record: 41750

Richard Clark wrote:
> The technical truth will triumph in the end.

As promised, here is a procedure using EZNEC that
will prove just how wrong W7EL and W8JI are about
phase shifts through loading coils.

1. Use the helical coil feature of EZNEC to generate
a 75m Texas Bugcatcher coil.

2. Using EZNEC, find the 1/4WL self-resonant frequency.

3. Load the top of the coil with its characteristic
impedance as indicated by the source's amplitude and
phase being equal to the load's amplitude and phase.
Be patient, because this is an iterative process.

4. Observe the phase shift in the current through the
coil using EZNEC's load's feature.

5. Change the frequency to the user frequency and
observe the new phase shift.
--
73, Cecil http://www.w5dxp.com

102. Swap: HP/Agilent 8712B network analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 19:10:02 UTC
From: Steve <zarco@sonic.net>
Message-ID: <463b850e$0$14075$742ec2ed@news.sonic.net>
Source record: 41751

I've got a spare HP 8712B vector network analyzer I'd
like to swap for either an ICOM 756 Pro III or Collins
S-line (Tx and Rx). Contact me off list if interested.

Steve

103. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 19:31:58 UTC
From: Dave <noone@nowhere.com>
Message-ID: <OSL_h.24$XG1.9@trndny07>
Source record: 41752

"art" <aunwin@insightbb.com> wrote in message
news:1178292320.705879.108170@q75g2000hsh.googlegroups.com...
> On 4 May, 03:58, "Dave" <n...@nowhere.com> wrote:
> Thus contrary to dismissing Maxwell I am
> confirming the laws by an independent avenue.
>

ah, so your antenna can't be any different than any other parasitically coupled antenna. you can wave your hands all you want about equilibrium and adding time to gauss'es law where it doesn't need to be. but if your antennas conform to the standard maxwell equations and can be modeled with standard modeling software, then they are nothing new. So what is the big deal about them? and why try to patent something that has nothing new to it???

104. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 19:54:07 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <zbM_h.3304$Vi6.3022@edtnps82>
Source record: 41753

>> Possibly I did not understand your original coordinates as follows:
>>
> X Y Z X Y Z
> 273.3 164.1 820 273.3 -164.1 820
> 25.1 203.3 1079 25.1 -203.3 1079
> 171.1 202.1 582 171.1 -202.1 582
> 321.6 178.4 1036.5 321.6 -178.4 1036.5
> 2.1 206.5 701.2 2.1 -206.5 701.2
> 153.5 194.5 1038.1 153.5 -194.5 1038.1
> 1 source
> wire 6, centre
>> I interpreted the above as:
>>
>> Wire #1
>> X1 = 273.3, X2 = 25.1;
>> Y1 = 164.1, Y2 = 203.3; and
>> Z1 = 820, Z2 = 1079.
>>
>> Wire #2
>> X1 = 171.1, X2 = 321.6;
>> Y1 = 202.1, Y2 = 178.4;and
>> Z1 = 582, Z2 = 1035.6.
>>
>> Wire #3
>> X1 = 2.1, X2 = 153.5;
>> Y1 = 206.5, Y2 = 194.5;and
>> Z1 = 701.2, Z2 = 1038.1.
>>
>> The lengths of the wires were determined by
>> SQRT((X2-X1)^2+(Y2-Y1)^2+(Z2-Z1)^2). The results
>> made some sense since the lengths were approximately
>> what would be expected in the region of 14 MHz. The driven element
>> was selected as Wire #3. I mirrored the above wires across the X - Z
>> plane (The only possible plane), by changing all Y coordinates to
>> negative values. The resultant array therefore consisted of six
>> elements. The mirrored Wire #3 was not driven. Note
>> that wrapping the elements in fiberglass tape will modify the
>> electrical lengths by a small amount.
>>
>> Since you appear to have actually constructed a model I am
>> curious how you measured the parameters listed in your
>> original posting. What equipment did you use? How
>> did you determine the gain, and take-off angle?
>>

>> Frank- Hide quoted text -
>>
>> - Show quoted text -
>
> Note that I have added the mirror dimensions above.
> Seems like mirror image is your stumbling block.
> Where did you get your program from since it may have been
> modified or corrected.? My program is over 20 years old so
> I am assuming it has stood the test of time. I am sorry I can't help
> you
> with your particular program and since help is not forth coming from
> this antenna group I would go back to the vendor and ask for
> help since it appears to have stumped every body here
> Good luck
> Art

Ok, I had interpreted your dimensions correctly. The only change
required was that the feed is now applied to wire #6.

Results:

Gain + 6.9 dBi
F/B ratio 23.1 dB (offset 20 degrees from pattern rear)
TOA 11 deg.
Zin 78.4 - j 27.1

My program is GNEC (v1.62d) from Nittany Scientific
(www.nittany-scientific.com). The program includes the NEC2/NEC4
cores optimized for 32 bit Windows.

Frank

NEC code used:

```
CM Gaussian Array
CE
GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 6 16 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
RP 0 181 1 1000 -90 202 1 1
EN
```

105. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 20:21:05 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178310064.986770.84630@p77g2000hsh.googlegroups.com>
Source record: 41755

```
On 4 May, 12:54, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> >> Possibly I did not understand your original coordinates as follows:
>
> > X Y Z X Y Z
> > 273.3 164.1 820 273.3 -164.1 820
> > 25.1 203.3 1079 25.1 -203.3 1079
> > 171.1 202.1 582 171.1 -202.1 582
> > 321.6 178.4 1036.5 321.6 -178.4 1036.5
> > 2.1 206.5 701.2 2.1 -206.5 701.2
> > 153.5 194.5 1038.1 153.5 -194.5 1038.1
> > 1 source
> > wire 6, centre
> >> I interpreted the above as:
>
> >> Wire #1
> >> X1 = 273.3, X2 = 25.1;
> >> Y1 = 164.1, Y2 = 203.3; and
> >> Z1 = 820, Z2 = 1079.
>
> >> Wire #2
> >> X1 = 171.1, X2 = 321.6;
> >> Y1 = 202.1, Y2 = 178.4;and
> >> Z1 = 582, Z2 = 1035.6.
>
> >> Wire #3
> >> X1 = 2.1, X2 = 153.5;
> >> Y1 = 206.5, Y2 = 194.5;and
> >> Z1 = 701.2, Z2 = 1038.1.
>
> >> The lengths of the wires were determined by
> >> SQRT((X2-X1)^2+(Y2-Y1)^2+(Z2-Z1)^2). The results
> >> made some sense since the lengths were approximately
> >> what would be expected in the region of 14 MHz. The driven element
> >> was selected as Wire #3. I mirrored the above wires across the X - Z
> >> plane (The only possible plane), by changing all Y coordinates to
> >> negative values. The resultant array therefore consisted of six
> >> elements. The mirrored Wire #3 was not driven. Note
> >> that wrapping the elements in fiberglass tape will modify the
> >> electrical lengths by a small amount.
>
> >> Since you appear to have actually constructed a model I am
> >> curious how you measured the parameters listed in your
> >> original posting. What equipment did you use? How
```

> >> did you determine the gain, and take-off angle?
>
> >> Frank- Hide quoted text -
>
> >> - Show quoted text -
>
> > Note that I have added the mirror dimensions above.
> > Seems like mirror image is your stumbling block.
> > Where did you get your program from since it may have been
> > modified or corrected.? My program is over 20 years old so
> > I am assuming it has stood the test of time. I am sorry I can't help
> > you
> > with your particular program and since help is not forth coming from
> > this antenna group I would go back to the vendor and ask for
> > help since it appears to have stumped every body here
> > Good luck
> > Art
>
> Ok, I had interpreted your dimensions correctly. The only change
> required was that the feed is now applied to wire #6.
>
> Results:
>
> Gain + 6.9 dBi
> F/B ratio 23.1 dB (offset 20 degrees from pattern rear)
> TOA 11 deg.
> Zin 78.4 - j 27.1
>
> My program is GNEC (v1.62d) from Nittany Scientific
> (www.nittany-scientific.com). The program includes the NEC2/NEC4
> cores optimized for 32 bit Windows.
>
> Frank
>
> NEC code used:
>
> CM Gaussian Array
> CE
> GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
> GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
> GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65
> GS 0 0 0.025400
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> EX 0 6 16 0 1 0
> FR 0 5 0 0 14.15 0.05
> LD 5 0 0 0 3.08E7

> RP 0 181 1 1000 -90 202 1 1
> EN- Hide quoted text -
>
> - Show quoted text -

Frank, thanks for sticking with the pursuit despite the lack of help from the hams on the antenna group. There obviously is a big difference in the concluding results so the onus is certainly upon me to recheck my typing from the program to my posting. I am quite sure if the error was on your side the vultures would have arrived at your door. Possibly you have annoyed them in the past which is why they are not helping you. After I have checked things out I certainly will get back to you and share my findings since you have applied so much effort on this subject.
My very best regards and thankyou for your efforts, it certainly was appreceated regardless of the outcome.
My wife's birthday today so it is always possible that something will come up so please be patient with me. In the mean time it would be instructive if you applied feed to each of the other elements in turn as it may supply a clue in the future. In the mean time we will watch the vultures come after me with the conviction that all is really known about antennas and I am an idiot to think otherwise while in the company of so many experts.
Art Unwin KB9MZ.....XG

106. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 21:20:08 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99274A9E6E784nonenowhere@61.9.191.5>
Source record: 41756

Spam Collector <spam-collector@artair.com> wrote in
news:slrnf3kibd.ks2.spam-collector@k6.artair.com:

...
> What are the performance differences between the
> three configurations, and is there a upper frequency
> limit for practical use of them? For example, would it
> work on say 2m or 70cm, where the antenna would be
> hundreds of wavelengths long?

Frank, as you will have noted from others' responses, the answer to this is not simple.

Longer or larger antennas are not necessarily better. You would benefit from examining the changes in pattern and feedpoint impedance of a loop as it grows from 1/10 of a wavelength to 10 wavelengths per side, and compare a very large loop with a rhombic.

You can only evaluate different antennas in your own context if you list the relevant factors and rank their importance, factors like size, height, frequency agility, transmission lines, matching arrangements, automated operation etc.

Efficient and effective multi-band antennas don't happen by accident, they are a significant challenge, and an efficient and effective 160m to 70cm is an extreme challenge. On the other hand, you will see proof that "loading up the fencewire works", but it goes to the meaning of 'works', which is less specific than 'effective and efficient'.

Owen

107. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 21:54:28 UTC
From: richardharrison@webtv.net
Message-ID: <12559-463BAB94-376@storefull-3258.bay.webtv.net>
Source record: 41759

Art Unwin wrote:
'elements are in cluster form where each element is aimed at resonance
as is the array in its entirety."

Art may have spilled the beans above.

A feature in Ham pages is "Fact of the Day" from Tigertek Inc. Their December 21, 2006 was "Virtually-Pure Horizontal Polarization". It is copyrighted, but appeared immediately when I searched on "ham radio fact of the day by Tigertek". The item rang a bell when it said that magnetic dipoles that meet the requirements are sometimes inefficient so several are clustered together and fed in-phase.

That does not mean that Art has no novelty, but it may or may not make a good patent.

Best regards, Richard Harrison, KB5WZI

108. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 22:00:17 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178316017.466034.149070@y5g2000hsa.googlegroups.com>
Source record: 41757

```
On 4 May, 13:21, art <aun...@insightbb.com> wrote:
> On 4 May, 12:54, "Frank's" <frank...@nojunkmailplease.telus.net>
> wrote:
>
>
>
>
>
> > >> Possibly I did not understand your original coordinates as follows:
>
> > > X Y Z X Y Z
> > > 273.3 164.1 820 273.3 -164.1 820
> > > 25.1 203.3 1079 25.1 -203.3 1079
> > > 171.1 202.1 582 171.1 -202.1 582
> > > 321.6 178.4 1036.5 321.6 -178.4 1036.5
> > > 2.1 206.5 701.2 2.1 -206.5 701.2
> > > 153.5 194.5 1038.1 153.5 -194.5 1038.1
> > > 1 source
> > > wire 6, centre
> > >> I interpreted the above as:
>
> > >> Wire #1
> > >> X1 = 273.3, X2 = 25.1;
> > >> Y1 = 164.1, Y2 = 203.3; and
> > >> Z1 = 820, Z2 = 1079.
>
> > >> Wire #2
> > >> X1 = 171.1, X2 = 321.6;
> > >> Y1 = 202.1, Y2 = 178.4;and
> > >> Z1 = 582, Z2 = 1035.6.
>
> > >> Wire #3
> > >> X1 = 2.1, X2 = 153.5;
> > >> Y1 = 206.5, Y2 = 194.5;and
> > >> Z1 = 701.2, Z2 = 1038.1.
>
> > >> The lengths of the wires were determined by
> > >> SQRT((X2-X1)^2+(Y2-Y1)^2+(Z2-Z1)^2). The results
> > >> made some sense since the lengths were approximately
> > >> what would be expected in the region of 14 MHz. The driven element
> > >> was selected as Wire #3. I mirrored the above wires across the X - Z
> > >> plane (The only possible plane), by changing all Y coordinates to
> > >> negative values. The resultant array therefore consisted of six
> > >> elements. The mirrored Wire #3 was not driven. Note
```

> > >> that wrapping the elements in fiberglass tape will modify the
> > >> electrical lengths by a small amount.
>
> > >> Since you appear to have actually constructed a model I am
> > >> curious how you measured the parameters listed in your
> > >> original posting. What equipment did you use? How
> > >> did you determine the gain, and take-off angle?
>
> > >> Frank- Hide quoted text -
>
> > >> - Show quoted text -
>
> > > Note that I have added the mirror dimensions above.
> > > Seems like mirror image is your stumbling block.
> > > Where did you get your program from since it may have been
> > > modified or corrected.? My program is over 20 years old so
> > > I am assuming it has stood the test of time. I am sorry I can't help
> > > you
> > > with your particular program and since help is not forth coming from
> > > this antenna group I would go back to the vendor and ask for
> > > help since it appears to have stumped every body here
> > > Good luck
> > > Art
>
> > Ok, I had interpreted your dimensions correctly. The only change
> > required was that the feed is now applied to wire #6.
>
> > Results:
>
> > Gain + 6.9 dBi
> > F/B ratio 23.1 dB (offset 20 degrees from pattern rear)
> > TOA 11 deg.
> > Zin 78.4 - j 27.1
>
> > My program is GNEC (v1.62d) from Nittany Scientific
> > (www.nittany-scientific.com). The program includes the NEC2/NEC4
> > cores optimized for 32 bit Windows.
>
> > Frank
>
> > NEC code used:
>
> > CM Gaussian Array
> > CE
> > GW 1 30 273.3 164.1 820 25.1 203.3 1079 0.65
> > GW 2 41 171.1 202.1 582 321.6 178.4 1036.5 0.65
> > GW 3 31 2.1 206.5 701.2 153.5 194.5 1038.1 0.65
> > GW 4 30 273.3 -164.1 820 25.1 -203.3 1079 0.65
> > GW 5 41 171.1 -202.1 582 321.6 -178.4 1036.5 0.65
> > GW 6 31 2.1 -206.5 701.2 153.5 -194.5 1038.1 0.65

> > GS 0 0 0.025400
> > GE 1 -1 0
> > GN 2 0 0 0 13.0000 0.0050
> > EX 0 6 16 0 1 0
> > FR 0 5 0 0 14.15 0.05
> > LD 5 0 0 0 3.08E7
> > RP 0 181 1 1000 -90 202 1 1
> > EN- Hide quoted text -
>
> > - Show quoted text -
>
> Frank, thanks for sticking with the pursuit despite the lack of help
> from the hams on the antenna group. There obviously is a big
> difference in the concluding results so the onus is certainly upon me
> to recheck my typing from the program to my posting. I am quite sure
> if the error was on your side the vultures would have arrived at your
> door. Possibly you have annoyed them in the past which is why they are
> not helping you. After I have checked things out I certainly will get
> back to you and share my findings since you have applied so much
> effort on this subject.
> My very best regards and thankyou for your efforts, it certainly was
> appreceated regardless of the outcome.
> My wife's birthday today so it is always possible that something will
> come up so please be patient with me. In the mean time it would be
> instructive if you applied feed to each of the other elements in turn
> as it may supply a clue in the future. In the mean time we will watch
> the vultures come after me with the conviction that all is really
> known about antennas and I am an idiot to think otherwise while in the
> company of so many experts.
> Art Unwin KB9MZ.....XG- Hide quoted text -
>
> - Show quoted text -

Frank, I could not find anything that would have caused a problem.
I intend now to up the segment a lot and then reload the program and
start again
which will take some time.
Art

109. Re: Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-04 22:01:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <F2O_h.294$UU.293@newssvr19.news.prodigy.net>
Source record: 41758

Cecil Moore wrote:
> 3. Load the top of the coil with its characteristic
> impedance as indicated by the source's amplitude and
> phase being equal to the load's amplitude and phase.

Misspoke there. The load's amplitude is equal to the
sources's amplitude. The load's phase is 90 degrees
out of phase with the source's phase.
--
73, Cecil http://www.w5dxp.com

110. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 00:06:17 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <ZTP_h.4028$Vi6.2131@edtnps82>
Source record: 41760

> Frank, I could not find anything that would have caused a problem.
> I intend now to up the segment a lot and then reload the program and
> start again
> which will take some time.
> Art

Hold everything Art. It seems I did not understand how your
coordinates were set up. Thanks to somebody who pointed
out my error -- now back to the drawing board!!

Frank

111. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 00:56:33 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178326593.226084.208070@y80g2000hsf.googlegroups.com>
Source record: 41761

On 4 May, 17:06, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > Frank, I could not find anything that would have caused a problem.
> > I intend now to up the segment a lot and then reload the program and
> > start again
> > which will take some time.
> > Art
>
> Hold everything Art. It seems I did not understand how your
> coordinates were set up. Thanks to somebody who pointed
> out my error -- now back to the drawing board!!
>
> Frank

O.K. But don't forget to thank the person who pointed it out, and do
it PRIVATELY
Help is hard to get these days and you should protect his identity.
For myself
I want to thank that person very much for taking such a risk. I really
did not want to take out my program and then reload it for fear of
losing everything, now I don't have to take the risk.
I was looking at MMANA as a possible down load for checking purposes
even tho similar programs have been checked successfully using NEC 4
but this is not the time to put my laptop in danger
Thanks a bunch
Art

112. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 01:08:12 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <0OQ_h.4056$Vi6.310@edtnps82>
Source record: 41762

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in message
news:ZTP_h.4028$Vi6.2131@edtnps82...
>> Frank, I could not find anything that would have caused a problem.
>> I intend now to up the segment a lot and then reload the program and
>> start again
>> which will take some time.
>> Art
>
> Hold everything Art. It seems I did not understand how your
> coordinates were set up. Thanks to somebody who pointed
> out my error -- now back to the drawing board!!
>
> Frank

Code modified as shown below:

```
CM Gaussian Array
CE
GW 1 31 273.3 164.1 820 273.3 -164.1 820 0.65
GW 2 41 25.1 203.3 1079 25.1 -203.3 1079 0.65
GW 3 31 171.1 202.1 582 171.1 -202.1 582 0.65
GW 4 30 321.6 178.4 1036.5 321.6 -178.4 1036.5 0.65
GW 5 41 2.1 206.5 701.2 2.1 -206.5 701.2 0.65
GW 6 31 153.5 194.5 1038.1 153.5 -194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 6 16 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
RP 0 1 361 1000 79 0 1 1
EN
```

Results at 14.25 MHz:

Gain = +14.6 dB
F/B ration = 31.5 dB
TOA = 11 degrees
Zin = 27.0 + j 0.25

These results appear to agree with your findings.
The structure could be fine tuned by including the insulation
and element tapering. Also I have not fully balanced the
segmentation. The only question I have is
how does this compare with a conventional 6 element
yagi at the same nominal height of 85 ft.

Frank

113. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 02:11:12 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178331072.227102.250220@e65g2000hsc.googlegroups.com>
Source record: 41763

```
On 4 May, 18:08, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> "Frank's" <frank...@nojunkmailplease.telus.net> wrote in message
>
> news:ZTP_h.4028$Vi6.2131@edtnps82...
>
> >> Frank, I could not find anything that would have caused a problem.
> >> I intend now to up the segment a lot and then reload the program and
> >> start again
> >> which will take some time.
> >> Art
>
> > Hold everything Art. It seems I did not understand how your
> > coordinates were set up. Thanks to somebody who pointed
> > out my error -- now back to the drawing board!!
>
> > Frank
>
> Code modified as shown below:
>
> CM Gaussian Array
> CE
> GW 1 31 273.3 164.1 820 273.3 -164.1 820 0.65
> GW 2 41 25.1 203.3 1079 25.1 -203.3 1079 0.65
> GW 3 31 171.1 202.1 582 171.1 -202.1 582 0.65
> GW 4 30 321.6 178.4 1036.5 321.6 -178.4 1036.5 0.65
> GW 5 41 2.1 206.5 701.2 2.1 -206.5 701.2 0.65
> GW 6 31 153.5 194.5 1038.1 153.5 -194.5 1038.1 0.65
> GS 0 0 0.025400
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> EX 0 6 16 0 1 0
> FR 0 5 0 0 14.15 0.05
> LD 5 0 0 0 3.08E7
> RP 0 1 361 1000 79 0 1 1
> EN
>
> Results at 14.25 MHz:
>
> Gain = +14.6 dB
> F/B ration = 31.5 dB
> TOA = 11 degrees
> Zin = 27.0 + j 0.25
>
```

> These results appear to agree with your findings.
> The structure could be fine tuned by including the insulation
> and element tapering. Also I have not fully balanced the
> segmentation. The only question I have is
> how does this compare with a conventional 6 element
> yagi at the same nominal height of 85 ft.
>
> Frank

Frank,
I am very gratefull to both you and the other person who helped you out.
To compare this particular model with say a yagi would be difficult. I provided it as a sample only and in a simplistic form for review of those you may be interested. What it does show is beam width that has not been compressed by focussing as with the yagi as well as a naturally high f/b even tho conventional reflectors are not used. What is important to me is that it is back up proof of my concept in addition to the mathematical aproach which has been rejected by all.
I see this as a major step forward in the design of antennas especially for WiFi where even coverage
is desired Even with this bare model the beamwidth can be increased enormously with just a slight modification, and the bandwidth can be increased also over the Yagi.
There is no doubt that a fully developed gaussian array will provide better results in many ways for real estate used, not that ships have a requirement for an extra long yagi at HF. So again Frank thank you so much for putting this thing to rest. It has been nearly 100 years since the Yagi and a hard battle against those who followed the view that all is known about antennas. Naturally I have not explored all the variations of this new concept and I expect when industry gets a hold of it more surprises will come to the fore since there are so many universities joining the hunt for a better antennas for cell phones because of the dropped call problems since this antenna allows for more Gaussian channels because of its polarity purity. If you want to write it up for any reason or show it to your club e.t.c
then be my guest tho I must tell you that a patent request has been in the channels for quite a while. For myself I have no interest in pursing it anymore since change is considered so unacceptable by many that they resort to abuse. If you need any more info you can E mail me any time at the address shown above and I will supply all I can. If you look back a few weeks and months and even over a year you will see many postings on the subject with a special reference to a gentleman from M.I.T. a Doctor in fact who went to extraordinary lengths to supply the mathematical proofs to this concept just a couple of weeks ago and to whom I owe a lot of thanks since his apearance on the scene was not exactly welcome by some of the couch masters..
So now thanks to you this subject can be seen as closed and insults should now come to an end especially when written in a book which in this group gives it overiding power. Now it will be interesting to see

what the amateur community can do with this new finding tho naturally
there will be a period where the average ham will enlarge on all the
negative things over any good things.
Best Regards
Art Unwin KB9MZ .....XG
Bloomington IL

114. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 07:20:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133oc1fdeqv3cd8@corp.supernews.com>
Source record: 41764

Frank's wrote:
> . . .
> These results appear to agree with your findings.
> The structure could be fine tuned by including the insulation
> and element tapering. Also I have not fully balanced the
> segmentation. The only question I have is
> how does this compare with a conventional 6 element
> yagi at the same nominal height of 85 ft.

Out of curiosity, I brought up an EZNEC model of two stacked 5 element beams from the ARRL Antenna Book, 20th Ed., model ARRL_5L15 95'.EZ. I deleted half the elements to leave a single 5 element array, and lowered it to 65 feet. I also changed the current source to a voltage source for simplicity, and removed the wire loss (which EZNEC translates to NEC as a bunch of loads) -- the wire loss makes a difference of only 0.05 dB. Here's an NEC model of the 5 element array up 65':

```
CM 5L15 95'
CE
GW 1,11,-3.464585,-3.528538,19.812,-3.464585,3.528612,19.812,.008906
GW 2,11,-1.766258,-3.345701,19.812,-1.766258,3.3457,19.812,.0088644
GW 3,11,-.4925144,-3.283913,19.812,-.4925144,3.283913,19.812,.0089841
GW 4,11,1.120895,-2.98782,19.812,1.120895,2.98782,19.812,.0087506
GW 5,11,3.464584,-2.793987,19.812,3.464584,2.793987,19.812,.009137
GE 1
FR 0,1,0,0,21.2
GN 2,0,0,0,13.,.005
EX 0,2,6,0,1.414214,0.
RP 0,1,361,1000,80.,0.,0.,1.,0.
EN
```

Gain as-is is 14.11 dBi; with loss, 14.07 dBi. Zin = 21.51 - j22.26 ohms. Takeoff angle is 10 degrees.

Seems to me this would be a lot easier to build and support than the "Gaussian" model. And I'll bet you could make up the half dB gain difference quite easily by adding a sixth element.

People with the 20th Edition of the Antenna Book can open the model, make the same modifications I did, and run it with the EZNEC ARRL program furnished with the Antenna Book, or any EZNEC program type except the demo.

Anyone who's impressed with the gain figure of either antenna should model a dipole at the same height for comparison.

Roy Lewallen, W7EL

115. Re: with the punce

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 07:35:29 UTC
From: Mrak Mroagan <spammersanonymous@fruitcake>
Message-ID: <te1l0.2qh.19.1@news.alt.net>
Source record: 41765
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

```
--

"an_old_friend" <morkie@mork.nutup> wrote in message
news:463a42b6$0$16353$88260bb3@free.teranews.com...
> with the punce gotcha he wonders why I simple don't bother to ty impoving
> my spelling do u hav anyting cognet two say?
>
>
>
>
> --
> Posted via a free Usenet account from http://www.teranews.com
>
"If I want a cock I go for a man if I
want pussy I go fo r a fmeale simple as that [sic]"
```

116. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 11:16:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1hp19$h8q$1@nnrp.linuxfan.it>
Source record: 41766

Cecil Moore wrote:

> ...
> Here's how I solved the quoting problem:
>
> http://www.w5dxp.com/krausdip.jpg
>
> http://www.qsl.net offers free web pages to amateur radio
> operators.

Cecil:

I expected a textual description.

You copied the "image" from adobe, then pasted that image into a image handling application and saved it as a jpeg image???

By the way, "Fine Reader" is the best OCR application--in my humble opinion ... it seemingly works like "magic." :-)

Regards,
JS

117. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 11:58:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <jj__h.167$SC4.71@nlpi068.nbdc.sbc.com>
Source record: 41767

John Smith I wrote:
> You copied the "image" from adobe, then pasted that image into a image
> handling application and saved it as a jpeg image???

Yep, Alt-Print-Screen takes the screen display and puts
it in the clipboard from which it can be pasted to any
image application for trimming, e.g Microsoft Paint.
OCR is of limited usefulness when graphics need to
accompany the text.
--
73, Cecil http://www.w5dxp.com

118. only in your dreams

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:06:32 UTC
From: Mark@kb9rqz.org
Message-ID: <lpso33l93b0taoosip817gqf8katru9dmk@4ax.com>
Source record: 41768
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

On 4 May 2007 06:56:05 -0700, Douche Bag <loumaagsucks@hotmail.com>
wrote:

>U kan go ax sombodi else nigga!
>
>On May 3, 5:07 pm, "an_old_friend" <mor...@mork.nutup> wrote:
>> with the punce gotcha he wonders why I simple don't bother to ty impoving
>> my spelling do u hav anyting cognet two say?
>>
>> --
>> Posted via a free Usenet account fromhttp://www.teranews.com
>

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woghger you are a Congress all in your own head

http://khkb9rqz.blogspot.com

--
Posted via a free Usenet account from http://www.teranews.com

119. only in your dreams

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:06:49 UTC
From: Mark@kb9rqz.org
Message-ID: <dqso33tpvb4ipnjf35b4v2s58ug4kroo0i@4ax.com>
Source record: 41770
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

On Fri, 4 May 2007 13:54:35 -0400, "an_old_friend" <morkie@mork.nutup>
wrote:

>
>"Douche Bag" <loumaagsucks@hotmail.com> wrote in message

only in your dreams

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woghger you are a Congress all in your own head

http://khkb9rqz.blogspot.com

--
Posted via a free Usenet account from http://www.teranews.com

120. only in your dreams

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:07:04 UTC
From: Mark@kb9rqz.org
Message-ID: <1rso33lfcvtk6op0o60klal7nagmq1nmud@4ax.com>
Source record: 41769
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

On Sat, 5 May 2007 02:35:29 -0500, "Mrak Mroagan"
<spammersanonymous@fruitcake> wrote:

121. Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:11:40 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <14WdnUoZc5u66aHbnZ2dnUVZ_gWdnZ2d@comcast.com>
Source record: 41771

Hello:

I realize that everyone is going to probably write back and tell me I'm crazy, but this is really driving me crazy, so let me ask, please.

I'm a retired engineer, but have never worked much with RF.

I have been putting up several models of Kidde and First Alert smoke detectors in my new house recently.

Several different models, from both brands, both ionization and photoelectric, some with the 9V battery, some with the built in 10 year Li cell.

All exhibit the same performance:

About once every day or so, at totally random times, they give 3 or 4 Chirps, then nothing for approx another day or so.
This is not the indication that it gives for an actual fire; rather from the skimpy instructions they include, an indication of needing a new battery, or some internal fault the circuitry has discovered on its own.

All the batteries are brand new.

Here's what I'm leading up to:

About a quarter of a mile from my house, in a direct line, there's a Ham operator with a massive mast of what must be pushing 100 feet in height. Almost the kind you would see for a small commercial station. Has all sorts of antenna and beams mounted to it.
I have no idea what freq's he operates at, and really don't want to ask him.

This is obviously a chap who takes his hobby seriously, and probably radiates at the max allowable power levels, I would guess.

Is there any possibility that if he points his array at my house, it might radiate enough power to cause my problem ?

If not, any thoughts on what else might be causing these chirps from two different mfg's., and several models ?

Much thanks,
Bob

122. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:27:31 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1ht8ltab1@nnrp.linuxfan.it>
Source record: 41772

Cecil Moore wrote:

> ...
> OCR is of limited usefulness when graphics need to
> accompany the text.

Cecil:

Very true, however, the graphics in question can be copied (such as with your method), clipped, saved as an individual image (away from any "text") and added/inserted to the text gleaned from using the OCR program, allowing one to "recreate" the original document(s).

Not easy (or for the faint hearted), but can be done ...

Regards,
JS

123. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 12:56:06 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <G9%_h.20179$JZ3.5000@newssvr13.news.prodigy.net>
Source record: 41773

Robert11 wrote:
> Is there any possibility that if he points his array at my house, it might
> radiate enough power to cause my problem ?

Hams are usually pretty cooperative. Knock on his door,
explain the problem, and ask him to run a test for you.
--
73, Cecil http://www.w5dxp.com

124. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 13:05:57 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <1j%_h.36$H47.25@newsfe12.lga>
Source record: 41774

> OCR is of limited usefulness when graphics need to
> accompany the text.
> --
> 73, Cecil http://www.w5dxp.com

OmniPage OCR software can recognize the text and also copy the
pictures/graphics and recreate the page and save in various formats.
It can work from scanned documents or graphics format files.

Snagit software can take snapshots of just about anything selected/cutout on
the screen and save/paste to about anything.

Yuri, K3BU

125. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 13:14:03 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <Cq%_h.37$H47.0@newsfe12.lga>
Source record: 41775

"Robert11" <rgsros@notme.com> wrote in message
news:14WdnUoZc5u66aHbnZ2dnUVZ_gWdnZ2d@comcast.com...
> Hello:
>
> I realize that everyone is going to probably write back and tell me I'm
> crazy, but this is really driving me crazy, so let me ask, please.
>
> I'm a retired engineer, but have never worked much with RF.
>
> I have been putting up several models of Kidde and First Alert smoke
> detectors in my new house recently.
>
> Several different models, from both brands, both ionization and
> photoelectric, some with the 9V battery, some with
> the built in 10 year Li cell.
>
> All exhibit the same performance:
>
> About once every day or so, at totally random times, they give 3 or 4
> Chirps, then nothing for approx another day or so.
> This is not the indication that it gives for an actual fire; rather from
> the skimpy instructions they include, an indication of needing a new
> battery, or some internal fault the circuitry has discovered on its own.
>
> All the batteries are brand new.
>
> Here's what I'm leading up to:
>
> About a quarter of a mile from my house, in a direct line, there's a Ham
> operator with a massive mast of what must be pushing 100 feet in height.
> Almost the kind you would see for a small commercial station. Has all
> sorts of antenna and beams mounted to it.
> I have no idea what freq's he operates at, and really don't want to ask
> him.
>
> This is obviously a chap who takes his hobby seriously, and probably
> radiates at the max allowable power levels, I would guess.
>
> Is there any possibility that if he points his array at my house, it might
> radiate enough power to cause my problem ?
>
> If not, any thoughts on what else might be causing these chirps from two
> different mfg's., and several models ?
>

> Much thanks,
> Bob
>

Possible.
Smoke detectors not supposed to be radio receivers. In other words, they should be immune to RF interference. If they have wires going to them, they work as antennas, pickup more RF and make things worse. Owner or manufacturers should remedy the situation, usually bypass capacitor or ferrite choke on the cables help.

Another solution, if there are no wires going to detector, is to insulate portion of the circuitry with tape and wrap it in a aluminum foil, creates the shielding and minimizes RF pickup.
Good luck.

Yuri, K3BU.us

I would approach ham and tell him about the problem. Most hams are decent human beings and will try to sort the problem.

126. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 13:29:25 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <3f1p33hp5ramm5m47p4uhiej62b27irq0o@4ax.com>
Source record: 41776
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Fri, 4 May 2007 09:49:48 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>I am trying to construct a broadband 4:1 balun, and I want to double
>check if my understanding of the measurements is correct before I apply
>any real RF power.
>
>I do not have access to an antenna analyzer, though I do have an HP4193A
>Vector Impedance meter and HP8753 Network Analyzer at my disposal.
>
>First I wound the core in a bifilar manner with the leads being labeled
>A1,B1 and A2,B2. Then I measured the input impedance across A1 and A2
>leaving B1 and B2 unconnected. Then placed a 200 ohm resistor across A1
>and B2 while tying B1 and A2 together, and measured across A1 and A2
>looking for 50 ohms (4:1).
>
>I have also seen a reference to a K value for an indication of
>broadbandness. K = 1 - L(short)/L(open)
>
>Here are my results...
>
>8 bifilar turns of teflon coated AWG 16, on Type 43 core.
>
>Mhz A1-A2 Open Impedance A1-A2 200 ohm Impedance
>2 941 @ +59.5 51.4 @ 3.6 (51.3 +3.2j)
>4 2080 @ -25.6 51.7 @ 3.2
>7 4130 @ -74.2 52.1 @ 3.7
>10 2900 @ -81.5 52.3 @ 4.4
>14 1687 @ -84.8 52.4 @ 5.6
>18 1180 @ -86.1 52.5 @ 6.8
>21 966 @ -86.7 52.6 @ 7.7
>25 781 @ -87.2 52.7 @ 9.1
>28 682 @ -87.3 52.6 @ 10.2
>30 630 @ -87.5 52.7 @ 10.8 (51.7 +9.9j)
>---
>50 356 @ -87.0 52.8 @ 18.6
>54 327 @ -86.2 52.8 @ 20.4 (49.5 +18j)
>
>Inductance Open = .93 uH
>Inductance Short = 167 uH
>K == .994
>
>I did not intend to operate this balun above 10m, but thought it would be

>interesting to see the 6m data as well. And it looks like it would work
>fine there as well.
>
>From what I have read, the open reactance should be at least 4 to 5 times
>as high as the normal drive impedence. In this case, it is over 12
>times the 50 ohm input at 30Mhz and over 6 times at 54Mhz.
>
>So did I do good? Am I way off?
>How can I tell if/when core saturation will be a problem?
>
>--Teh
>
>
>

As you have a vector impedance meter have you measured the common mode (blocking) impedance? From the description your balun is a voltage balun that are notorious for having poor common mode impedances.

Danny, K6MHE

127. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 14:30:58 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Cy0%h.411$dj2.309@trndny02>
Source record: 41777

"art" <aunwin@insightbb.com> wrote in message
news:1178331072.227102.250220@e65g2000hsc.googlegroups.com...
> On 4 May, 18:08, "Frank's" <frank...@nojunkmailplease.telus.net>
> wrote:
> What it does show is beam width that has
> not been compressed by focussing as with the yagi as well as a

wider beam equals lower gain, this is and advantage??

> naturally high f/b even tho conventional reflectors are not used.

this is easy to do without reflectors, 2 element vertical arrays can have
extremely high f/b ratios with no 'conventional reflector'.

> phones because of the dropped call problems since this antenna allows
> for more Gaussian channels because of its polarity purity. If you want

define: 'Gaussian channel' and 'polarity purity' and how they prevent
dropped calls.

128. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 15:15:09 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <327p331fn5f5bn9c3cqk9jagquqh8d0d98@4ax.com>
Source record: 41778

On Sat, 5 May 2007 08:11:40 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hello:
>
>I realize that everyone is going to probably write back and tell me I'm
>crazy, but this is really driving me crazy, so let me ask, please.
>
>I'm a retired engineer, but have never worked much with RF.
>
>I have been putting up several models of Kidde and First Alert smoke
>detectors in my new house recently.
>
>Several different models, from both brands, both ionization and
>photoelectric, some with the 9V battery, some with
>the built in 10 year Li cell.
>
>All exhibit the same performance:
>
>About once every day or so, at totally random times, they give 3 or 4
>Chirps, then nothing for approx another day or so.
>This is not the indication that it gives for an actual fire; rather from the
>skimpy instructions they include, an indication of needing a new battery, or
>some internal fault the circuitry has discovered on its own.
>
>All the batteries are brand new.
>
>Here's what I'm leading up to:
>
>About a quarter of a mile from my house, in a direct line, there's a Ham
>operator with a massive mast of what must be pushing 100 feet in height.
>Almost the kind you would see for a small commercial station. Has all sorts
>of antenna and beams mounted to it.
>I have no idea what freq's he operates at, and really don't want to ask him.
>
>This is obviously a chap who takes his hobby seriously, and probably
>radiates at the max allowable power levels, I would guess.
>
>Is there any possibility that if he points his array at my house, it might
>radiate enough power to cause my problem ?
>
>If not, any thoughts on what else might be causing these chirps from two
>different mfg's., and several models ?
>

>Much thanks,
>Bob
>
I don't think you could trip a smoke detector with RF if you tried.

Those things work very well. Multiple sensors triggering means you
have a REAL PROBLEM!

There is either some connection smoldering (damaged wall switch?) or
some substance in the air being circulated by the ventilation system
that is triggering the alarms.

Unless you have an all electric house you need carbon monoxide sensors
as well.

Visit your local Fire Station and ask their advice. They will likely
take a serious interest in your problem.

Whatever you do, do not ignore the problem!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

129. Re: Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 15:30:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <xq1%h.442$UU.5@newssvr19.news.prodigy.net>
Source record: 41779

I have succeeded in using EZNEC to model a coil sans
reflected current. Eliminating the reflected current
clearly shows the phase shift of the forward current
through the coil.

I modeled a 75m Texas Bugcatcher coil terminated in
its characteristic impedance of 2745 ohms at its
self-resonant frequency of 7.96 MHz which essentially
eliminated the reflected current. The 90 degree phase
shift at self-resonance is clearly visible. That EZNEC
file can be downloaded from:

http://www.qsl.net/w5dxp/coil505.EZ

Switch from 7.96 MHz to 3.8 MHz and change the load
from 2745 ohms to 1975 ohms. The phase shift through
the coil on 75m is clearly ~38 degrees.

I compiled the forward current magnitude and phase
into an EXCEL file and generated the graphics for
the self-resonant frequency of 7.96 MHz. That
file can be downloaded from:

http://www.w5dxp.com/coil505.xls
--
73, Cecil http://www.w5dxp.com

130. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 15:58:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g49p33521brh1s7qkt8i0rmeee68ggr9um@4ax.com>
Source record: 41780

On Sat, 05 May 2007 00:20:08 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Anyone who's impressed with the gain figure of either antenna should
>model a dipole at the same height for comparison.
>

Hi Roy,

A useful suggestion. Having a reference is always the point to start
from.

Another option, as for all of Art's designs, throw away half the
elements to improve performance.

Easier yet, simply pull up a design that has been around 80 years
(found in most books on the subject of Antennas), the Yagi. Case in
point (and illustrating my comment about throwing away three of those
six wires) is available without thinking, designing, or going to the
library: simply use the free version of EZNEC and open NBSYAGI.EZ.

To make it comparable to the description that has taken a dozen
postings to sort out:
1. shift the units to inches (makes absolutely no difference on the
original design);
2. shift the frequency, along with a rescale, to 14.25 Mhz (makes
absolutely no difference on the original design);
3. raise the antenna by 1400 inches (makes absolutely no difference
on the original design);
4. change the ground type to perfect (makes absolutely no difference
on the original design);
5. change the plot type to 3D (makes absolutely no difference on the
original design);
6. change the Step Size to 1 degree (makes absolutely no difference
on the original design).

Now, to enjoy the rewards of the triumph of truth:
1. press the FF Plot
2. press the show 2D plot

Results:
Gain: 15.58 dBi
toa: 8 degrees

Differences?
MORE GAIN THAN THE INEFFICIENT GAUSSIAN BUNDLE
LOWER LAUNCH ANGLE THAN THE INEFFICIENT GAUSSIAN BUNDLE

HALF THE ELEMENTS OF THE INEFFICIENT GAUSSIAN BUNDLE
SIMPLER TO CONSTRUCT THAN THE INEFFICIENT GAUSSIAN BUNDLE
THEORY AVAILABLE, NOT SO WITH THE INEFFICIENT GAUSSIAN BUNDLE
DESIGN IS FREE, NOT SO WITH THE INEFFICIENT GAUSSIAN BUNDLE

[no Gauss were harmed during the analysis of these antennas]

73's
Richard Clark, KB7QHC

131. Re: Laws, Statisitics, Lies, and the Damned TRUTH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 17:05:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eP2%h.341$mR2.1@newssvr22.news.prodigy.net>
Source record: 41781

Cecil Moore wrote:
> I have succeeded in using EZNEC to model a coil sans
> reflected current.

I've pulled together a new web page covering the subject
of the phase shift through a 75m Bugcatcher coil. It
uses EZNEC to take a look at the phase shift through
the coil after reflections through the coil have been
minimized by resistive loading.

http://www.w5dxp.com/current2.htm
--
73, Cecil http://www.w5dxp.com

132. FS:Crushcraft traps for a A-4

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 17:07:20 UTC
From: radio52@sbcglobal.net
Message-ID: <iR2%h.584$LR5.248@newssvr17.news.prodigy.net>
Source record: 41782

Been in my garage for over three years. Theses traps are for 10-15-20 meters
and are in used condition. Make offer
Radio52@sbcglobal.net

133. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 17:29:46 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178386186.790328.280540@q75g2000hsh.googlegroups.com>
Source record: 41783

On May 5, 5:11 am, "Robert11" <rgs...@notme.com> wrote:
> Hello:
>
> I realize that everyone is going to probably write back and tell me I'm
> crazy, but this is really driving me crazy, so let me ask, please.
>
> I'm a retired engineer, but have never worked much with RF.
>
> I have been putting up several models of Kidde and First Alert smoke
> detectors in my new house recently.
>
> Several different models, from both brands, both ionization and
> photoelectric, some with the 9V battery, some with
> the built in 10 year Li cell.
>
> All exhibit the same performance:
>
> About once every day or so, at totally random times, they give 3 or 4
> Chirps, then nothing for approx another day or so.
> This is not the indication that it gives for an actual fire; rather from the
> skimpy instructions they include, an indication of needing a new battery, or
> some internal fault the circuitry has discovered on its own.
>
> All the batteries are brand new.
>
> Here's what I'm leading up to:
>
> About a quarter of a mile from my house, in a direct line, there's a Ham
> operator with a massive mast of what must be pushing 100 feet in height.
> Almost the kind you would see for a small commercial station. Has all sorts
> of antenna and beams mounted to it.
> I have no idea what freq's he operates at, and really don't want to ask him.
>
> This is obviously a chap who takes his hobby seriously, and probably
> radiates at the max allowable power levels, I would guess.
>
> Is there any possibility that if he points his array at my house, it might
> radiate enough power to cause my problem ?
>
> If not, any thoughts on what else might be causing these chirps from two
> different mfg's., and several models ?
>
> Much thanks,
> Bob

Hi Bob,

I've set off just about everything at one point or another by transmitting, but so far, never a smoke detector. Doesn't mean it's not possible though. I would do as Cecil suggested, and ask your neighbor if he'd be willing to run a quick test. Chances are that it's probably not the source, but if it is, he might be able to help you find a solution to the problem.

Jim AC6XG

134. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 18:13:30 UTC
From: richardharrison@webtv.net
Message-ID: <12559-463CC94A-672@storefull-3258.bay.webtv.net>
Source record: 41784

Richard Clark, KB7QHC wrote:
"Having a reference is always the point to start from."

Kraus compares his W8JK array with its two dipoles spaced only 1/8-wavelength apart, against an array with its two dipoles spaced 1/2-wavelength, one dipole above the other. These two arrays are both pictured on page 184 of the 3rd edition of Kraus` "Antennas". Though the gain of either array is about 6 dB, the inherent impedance of the W8JK array is low due to its close spacing and coupling. Impedance of the 1/2-wave-spaced array is 333 ohms at its drivepoint. Impedance of the W8JK is adjusted with a stub to match the feedline. Its inherent low impedance may cost the W8JK about a fraction of a dB in efficiency (see page 187) but as both dipoles are high (sharing the same horizontal plane) a lowered angle of maximum radiation has proved advantageous for the W8JK.

Kraus` comparison seems fair and his disclosure seems complete. Maybe that`s why the the antenna array known by his amateur radio call sign is famous.

Best regards, Richard Harrison, KB5WZI

135. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 18:31:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133pjc2o6karj52@corp.supernews.com>
Source record: 41785

Although it's possible that RF is triggering the alarms, I think it's highly unlikely in this case for the following reasons:

1. Battery operated alarms are physically small, so they make very poor receiving antennas. That inherently makes them pretty immune to RF.

2. Although it's possible that one particular design might be particularly sensitive, it's unlikely that several quite different ones would be equally sensitive.

3. Typical amateur operating habits usually involve a comparatively long period of operation at one frequency and direction. A few chirps per day doesn't fit this pattern.

So I think you're looking in the wrong place for the problem. But I sure don't know where you should be looking. I've had an ionization alarm trigger from such things as steam from a nearby bathroom when someone takes a shower, but I'd be surprised if it would get thick enough to trigger a photoelectric alarm, or widespread enough to trigger multiple alarms. But there are probably some resources on the web which can help you sort it out. Good luck!

Roy Lewallen, W7EL

136. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 19:13:18 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f1il0e$6bf$1@news.netins.net>
Source record: 41786
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sat, 05 May 2007 06:29:25 -0700, Danny Richardson wrote:

> As you have a vector impedance meter have you measured the common mode
> (blocking) impedance? From the description your balun is a voltage balun
> that are notorious for having poor common mode impedances.
>
> Danny, K6MHE

Yes, the balun is a 4:1 voltage type. I have not measured the common mode inductance yet. But in this case, the application is for a Carolina Windom which requires common mode current to make part of the feedline act as a radiator.

The feedline will be choked with a 1:1 current balun at the proper distance. That is next on the list to be built.

--Teh

137. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 19:25:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tfmp331167vreio8v47a90gtjnc0nutc4r@4ax.com>
Source record: 41787
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sat, 5 May 2007 19:13:18 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>Yes, the balun is a 4:1 voltage type.

Hi Teh,

Then, yes, you certainly have to worry about core saturation and
failure.

73's
Richard Clark, KB7QHC

138. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 19:29:58 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <WW4%h.5980$au6.1475@edtnps90>
Source record: 41788

> Out of curiosity, I brought up an EZNEC model of two stacked 5 element
> beams from the ARRL Antenna Book, 20th Ed., model ARRL_5L15 95'.EZ. I
> deleted half the elements to leave a single 5 element array, and lowered
> it to 65 feet. I also changed the current source to a voltage source for
> simplicity, and removed the wire loss (which EZNEC translates to NEC as a
> bunch of loads) -- the wire loss makes a difference of only 0.05 dB.
> Here's an NEC model of the 5 element array up 65':
>
> CM 5L15 95'
> CE
> GW 1,11,-3.464585,-3.528538,19.812,-3.464585,3.528612,19.812,.008906
> GW 2,11,-1.766258,-3.345701,19.812,-1.766258,3.3457,19.812,.0088644
> GW 3,11,-.4925144,-3.283913,19.812,-.4925144,3.283913,19.812,.0089841
> GW 4,11,1.120895,-2.98782,19.812,1.120895,2.98782,19.812,.0087506
> GW 5,11,3.464584,-2.793987,19.812,3.464584,2.793987,19.812,.009137
> GE 1
> FR 0,1,0,0,21.2
> GN 2,0,0,0,13.,.005
> EX 0,2,6,0,1.414214,0.
> RP 0,1,361,1000,80.,0.,0.,1.,0.
> EN
>
> Gain as-is is 14.11 dBi; with loss, 14.07 dBi. Zin = 21.51 - j22.26 ohms.
> Takeoff angle is 10 degrees.
>
> Seems to me this would be a lot easier to build and support than the
> "Gaussian" model. And I'll bet you could make up the half dB gain
> difference quite easily by adding a sixth element.
>
> People with the 20th Edition of the Antenna Book can open the model, make
> the same modifications I did, and run it with the EZNEC ARRL program
> furnished with the Antenna Book, or any EZNEC program type except the
> demo.
>
> Anyone who's impressed with the gain figure of either antenna should model
> a dipole at the same height for comparison.
>
> Roy Lewallen, W7EL

A dipole at 85 ft shows a gain of 7.5 dBi, with a TOA of 11 degrees.
Using ARRL's program "YW" a 6 element Yagi at 85 ft has a gain
of 16.7 dBi on 14 MHz.

Running Roy's program, above, I get exactly the same results. The
F/B ratio is also excellent at 28 dB.

Frank

139. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 19:57:27 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <68op3394tfsqegqhvbjuvllilmf8q8kejj@4ax.com>
Source record: 41789
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sat, 5 May 2007 19:13:18 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>Yes, the balun is a 4:1 voltage type. I have not measured the common
>mode inductance yet. But in this case, the application is for a Carolina
>Windom which requires common mode current to make part of the feedline
>act as a radiator.
>
>The feedline will be choked with a 1:1 current balun at the proper
>distance. That is next on the list to be built.
>
>--Teh

Okay, then in that case be sure to check the common mode impedance on
your current balun. Many are less than 1K and, for good operation
you'll need more than that. The higher the better.

Danny, K6MHE

140. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 20:00:42 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f1inpa$6bf$2@news.netins.net>
Source record: 41790
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Fri, 04 May 2007 09:33:59 -0700, Richard Clark wrote:

> As a simple test, pass one very short wire through one bead and measure
> its Z (give us a complete description of resistance AND reactance) over
> frequency. This will confirm what type material you are using and will
> remove unnecessary complexity. Type 43 should show a frequency peak
> roughly ten times above your current data's frequency peak.
>
> 73's
> Richard Clark, KB7QHC

I did find out that part of my test setup was flawed.
My adapter from the VIM probe to the coil did very naughty things.
The new setup completely isolates the balun from any surrounding
influences and stray L/C is minimized.

Testing the bead material properties.
The beads I am using are supposed to be Type 43, DigiKey #240-2119-ND
aka Steward 28B1250-000. They are .875" high, 1.25" OD and .75" ID.

Using piece of wire 3" long bent into a U shape. Measurements are
Magnitude and Angle of the vector.

Freq.
(MHz) Bare Wire Single Bead Two Beads
.5 .58 @ 29.0 4.62 @ 68.2 9.0 @ 70.3
1 .74 @ 46.0 8.09 @ 70.2 15.8 @ 71.0
2 1.15 @ 62.1 14.36 @ 70.2 28.0 @ 70.4
4 2.08 @ 74.7 25.30 @ 67.0 49.6 @ 66.3
8 4.04 @ 81.8 42.00 @ 61.6 81.7 @ 60.3
16 8.01 @ 85.5 68.50 @ 56.4 132.7 @ 54.0
32 15.93 @ 87.3 105.40 @ 46.9 204.0 @ 42.3
64 31.80 @ 88.4 145.10 @ 37.4 279.0 @ 27.9
110 56.30 @ 89.0 181.00 @ 30.6 333.0 @ 13.2

Remeasuring the Balun.
With the new setup, there is not a big difference in the terminated
measurements, but the peak in the open impedance of the primary winding
went from ~7 Mhz up to 11.4 Mhz.

Freq.
(MHz) Open Inductance 200 Ohm Termination
.5 275 @ 74 49.6 @ 9.2
1 491 @ 72 51.1 @ 5.4
2 897 @ 69 51.8 @ 3.8

```
4 1731 @ 59 52.0 @ 3.4
8 3710 @ 31 52.4 @ 4.4
16 3460 @ -51 52.6 @ 7.2
32 1261 @ -78 51.9 @ 14.4
64 591 @ -84 51.2 @ 35.7
110 291 @ -83 86.8 @ 76.7

Peak 11.4 Mhz 4850 @ -9.0

--Teh
```

141. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 21:08:51 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463cf24e$0$27083$4c368faf@roadrunner.com>
Source record: 41791

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in message
news:WW4%h.5980$au6.1475@edtnps90...
>> Out of curiosity, I brought up an EZNEC model of two stacked 5 element
>> beams from the ARRL Antenna Book, 20th Ed., model ARRL_5L15 95'.EZ. I
>> deleted half the elements to leave a single 5 element array, and lowered
>> it to 65 feet. I also changed the current source to a voltage source for
>> simplicity, and removed the wire loss (which EZNEC translates to NEC as a
>> bunch of loads) -- the wire loss makes a difference of only 0.05 dB.
>> Here's an NEC model of the 5 element array up 65':
>>
>> CM 5L15 95'
>> CE
>> GW 1,11,-3.464585,-3.528538,19.812,-3.464585,3.528612,19.812,.008906
>> GW 2,11,-1.766258,-3.345701,19.812,-1.766258,3.3457,19.812,.0088644
>> GW 3,11,-.4925144,-3.283913,19.812,-.4925144,3.283913,19.812,.0089841
>> GW 4,11,1.120895,-2.98782,19.812,1.120895,2.98782,19.812,.0087506
>> GW 5,11,3.464584,-2.793987,19.812,3.464584,2.793987,19.812,.009137
>> GE 1
>> FR 0,1,0,0,21.2
>> GN 2,0,0,0,13.,.005
>> EX 0,2,6,0,1.414214,0.
>> RP 0,1,361,1000,80.,0.,0.,1.,0.
>> EN
>>
>> Gain as-is is 14.11 dBi; with loss, 14.07 dBi. Zin = 21.51 - j22.26 ohms.
>> Takeoff angle is 10 degrees.
>>
>> Seems to me this would be a lot easier to build and support than the
>> "Gaussian" model. And I'll bet you could make up the half dB gain
>> difference quite easily by adding a sixth element.
>>
>> People with the 20th Edition of the Antenna Book can open the model, make
>> the same modifications I did, and run it with the EZNEC ARRL program
>> furnished with the Antenna Book, or any EZNEC program type except the
>> demo.
>>
>> Anyone who's impressed with the gain figure of either antenna should
>> model a dipole at the same height for comparison.
>>
>> Roy Lewallen, W7EL
>
> A dipole at 85 ft shows a gain of 7.5 dBi, with a TOA of 11 degrees.
> Using ARRL's program "YW" a 6 element Yagi at 85 ft has a gain
> of 16.7 dBi on 14 MHz.

>
> Running Roy's program, above, I get exactly the same results. The
> F/B ratio is also excellent at 28 dB.
>
> Frank
>
Is it possible to post an image of what Art's antenna would look like?
I would like to so what his antenna looks like as his discription has gone
beyound my imagination.

Jimmie.

142. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 21:13:44 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <NvadndaZGcIabqHbnZ2dnUVZ_sSmnZ2d@comcast.com>
Source record: 41792

"Yuri Blanarovich" <K3BU@optonline.net> wrote in message
news:Cq%_h.37$H47.0@newsfe12.lga...
>
> "Robert11" <rgsros@notme.com> wrote in message
> news:14WdnUoZc5u66aHbnZ2dnUVZ_gWdnZ2d@comcast.com...
>> Hello:
>>
>> I realize that everyone is going to probably write back and tell me I'm
>> crazy, but this is really driving me crazy, so let me ask, please.
>>
>> I'm a retired engineer, but have never worked much with RF.
>>
>> I have been putting up several models of Kidde and First Alert smoke
>> detectors in my new house recently.
>>
>> Several different models, from both brands, both ionization and
>> photoelectric, some with the 9V battery, some with
>> the built in 10 year Li cell.
>>
>> All exhibit the same performance:
>>
>> About once every day or so, at totally random times, they give 3 or 4
>> Chirps, then nothing for approx another day or so.
>> This is not the indication that it gives for an actual fire; rather from
>> the skimpy instructions they include, an indication of needing a new
>> battery, or some internal fault the circuitry has discovered on its own.
>>
>> All the batteries are brand new.
>>
>> Here's what I'm leading up to:
>>
>> About a quarter of a mile from my house, in a direct line, there's a Ham
>> operator with a massive mast of what must be pushing 100 feet in height.
>> Almost the kind you would see for a small commercial station. Has all
>> sorts of antenna and beams mounted to it.
>> I have no idea what freq's he operates at, and really don't want to ask
>> him.
>>
>> This is obviously a chap who takes his hobby seriously, and probably
>> radiates at the max allowable power levels, I would guess.
>>
>> Is there any possibility that if he points his array at my house, it
>> might radiate enough power to cause my problem ?
>>

>> If not, any thoughts on what else might be causing these chirps from two
>> different mfg's., and several models ?
>>
>> Much thanks,
>> Bob
>>
>
> Possible.
> Smoke detectors not supposed to be radio receivers. In other words, they
> should be immune to RF interference.

In a perfect world, yes. I had a problem with RF getting into a CO detector, the plug-in AC powered kind. When I opened it up, I found there was only one bypass cap on the circuit board, a 100 uF electrolytic. Adding a .1 to the board, and a .01/1000V across the AC line fixed it. Somebody else with the same problem ended up having to make a shield out of aluminum foil inside the enclosure. His was AC, with a DC backup. Never had problems witj smoke detectors, and the CO alarm is only affected at the 1KW power level. Also, I am talking about less than 50 feet of separation here, not several blocks.

Tam/WB2TT

>If they have wires going to them, they
> work as antennas, pickup more RF and make things worse. Owner or
> manufacturers should remedy the situation, usually bypass capacitor or
> ferrite choke on the cables help.
>
> Another solution, if there are no wires going to detector, is to insulate
> portion of the circuitry with tape and wrap it in a aluminum foil, creates
> the shielding and minimizes RF pickup.
> Good luck.
>
> Yuri, K3BU.us
>
> I would approach ham and tell him about the problem. Most hams are decent
> human beings and will try to sort the problem.
>

143. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 21:45:31 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <%V6%h.6012$au6.5029@edtnps90>
Source record: 41793

> Is it possible to post an image of what Art's antenna would look like?
> I would like to so what his antenna looks like as his discription has gone
> beyound my imagination.
>
> Jimmie.

I can send you a JPEG of an NEC graphic. It is only 9 kB. The array looks like two stacked 3 element yagis, with only the upper array driven. I deleted the lower array, and it only made a slight difference to the performance.

Frank

144. Re: Balun Construction :: Did I do this right?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 21:58:19 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <p3vp33l9ifi0h20rcjo7b6csg7signmd5u@4ax.com>
Source record: 41794
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sat, 5 May 2007 20:00:42 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>On Fri, 04 May 2007 09:33:59 -0700, Richard Clark wrote:
>
>> As a simple test, pass one very short wire through one bead and measure
>> its Z (give us a complete description of resistance AND reactance) over
>> frequency. This will confirm what type material you are using and will
>> remove unnecessary complexity. Type 43 should show a frequency peak
>> roughly ten times above your current data's frequency peak.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
>I did find out that part of my test setup was flawed.
>My adapter from the VIM probe to the coil did very naughty things.
>The new setup completely isolates the balun from any surrounding
>influences and stray L/C is minimized.
>
>Testing the bead material properties.
>The beads I am using are supposed to be Type 43, DigiKey #240-2119-ND
>aka Steward 28B1250-000. They are .875" high, 1.25" OD and .75" ID.
>
>Using piece of wire 3" long bent into a U shape. Measurements are
>Magnitude and Angle of the vector.
>
>Freq.
>(MHz) Bare Wire Single Bead Two Beads
>.5 .58 @ 29.0 4.62 @ 68.2 9.0 @ 70.3
>1 .74 @ 46.0 8.09 @ 70.2 15.8 @ 71.0
>2 1.15 @ 62.1 14.36 @ 70.2 28.0 @ 70.4
>4 2.08 @ 74.7 25.30 @ 67.0 49.6 @ 66.3
>8 4.04 @ 81.8 42.00 @ 61.6 81.7 @ 60.3
>16 8.01 @ 85.5 68.50 @ 56.4 132.7 @ 54.0
>32 15.93 @ 87.3 105.40 @ 46.9 204.0 @ 42.3
>64 31.80 @ 88.4 145.10 @ 37.4 279.0 @ 27.9
>110 56.30 @ 89.0 181.00 @ 30.6 333.0 @ 13.2
>
>
>Remeasuring the Balun.
>With the new setup, there is not a big difference in the terminated
>measurements, but the peak in the open impedance of the primary winding

>went from ~7 Mhz up to 11.4 Mhz.
>
>
>Freq.
>(MHz) Open Inductance 200 Ohm Termination
>.5 275 @ 74 49.6 @ 9.2
>1 491 @ 72 51.1 @ 5.4
>2 897 @ 69 51.8 @ 3.8
>4 1731 @ 59 52.0 @ 3.4
>8 3710 @ 31 52.4 @ 4.4
>16 3460 @ -51 52.6 @ 7.2
>32 1261 @ -78 51.9 @ 14.4
>64 591 @ -84 51.2 @ 35.7
>110 291 @ -83 86.8 @ 76.7
>
>Peak 11.4 Mhz 4850 @ -9.0
>
>--Teh

Teh,

After reading you previous response as the your application I have some real doubts as to the efficiency and power handling capability of you unit.

I suggest you may find some very useful information at:

http://audiosystemsgroup.com/RFI-Ham.pdf

The section on baluns begins on page 24, however, my power concern is addressed on page 26.

I think you find that information valuable.

73,
Danny, K6MHE

145. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 23:15:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133q401chh493b3@corp.supernews.com>
Source record: 41795

Frank's wrote:
>
> I can send you a JPEG of an NEC graphic. It is only 9 kB. The array
> looks like two stacked 3 element yagis, with only the upper array
> driven. I deleted the lower array, and it only made a slight
> difference to the performance.

Sure doesn't look like stacked Yagis to me. No two elements are at the same height. Or are we talking about the same model?

Roy Lewallen, W7EL

146. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-05 23:52:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <665q3391mtgrt9j2o780tbtuv9koeq1kfs@4ax.com>
Source record: 41796

On Sat, 05 May 2007 16:15:13 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Sure doesn't look like stacked Yagis to me. No two elements are at the
>same height.

Hi Roy,

Ever the conventionalist. Elements needn't be at the same height to
perform this job. Maybe to perform a better job, maybe not; but it
doesn't seem like anyone will visit this one again soon. Antennas
seem to have the capacity to present a better model than the last one
shown. Using the NBS Yagi to compare certainly wasn't the epitome of
design.

>Or are we talking about the same model?

Only one person could possible confirm that, and history has revealed
we have NEVER seen that happen.

73's
Richard Clark, KB7QHC

147. High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 01:31:40 UTC
From: Mac <vk2evb@hotmail.com>
Message-ID: <463d2ffd_8@news.peopletelecom.com.au>
Source record: 41798
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

Hi There,

The Bishop Druit College Radio Club
http://www.qsl.net/mm0axl/mncarg/bdc.html situated in the Mid North Coast of NSW

Australia at Coffs Harbour are looking forward to making Local or DX IRLP contacts on Fridays 0315 - 0345 UTC.

Contacts will be on IRLP node 6625 via local repeater VK2RDO on 146.650Mhz.

The young people in the club have been experimenting with building simple FM radio recievers, and
have been contemplating the design of plasma balls using ordinary light globes and car spark coils.

Contacts with interested parties or similar school electronic/radio groups would be great but unfortunately
the club only has limited time during the local lunchtime period.

Also the Bishop Druit College French and German Language classes are interested in contacts Monday to Friday 0315 - 0345 UTC.

If interested and can help arrange a contact please email:

Gary VK2ZKT gryan@bdc.nsw.edu.au

or

Peter VK2EVB vk2evb@wia.org.au

148. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 02:15:36 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <cTa%h.15444$KN6.11165@edtnps89>
Source record: 41797

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:133q401chh493b3@corp.supernews.com...
> Frank's wrote:
>>
>> I can send you a JPEG of an NEC graphic. It is only 9 kB. The array
>> looks like two stacked 3 element yagis, with only the upper array
>> driven. I deleted the lower array, and it only made a slight
>> difference to the performance.
>
> Sure doesn't look like stacked Yagis to me. No two elements are at the
> same height. Or are we talking about the same model?
>
> Roy Lewallen, W7EL

If I got the coordinates right, then tags 2, 4, and 6 are within +/- 2 ft of
the
same plane and parallel to the Y axis. Tag 6 is in the middle, and is the
driven element. Tag 2 is longer (Reflector) than the driven element, and
Tag 4 is
shorter (director). The currents in these 3 elements appear to be about
what
I would expect in a 3 element beam. The other three Tags (1, 3, & 5) are
more random in their placement, and far removed from the "Yagi" like plane.
The do not seem to contribute very much
to the performance. The radiation pattern is very close to a Yagi
pattern, although the vertical beam width appears wider.

Just to be sure I did not mess up -- again! -- I have pasted the code below.

Frank

```
CM Gaussian Array
CE
GW 1 31 273.3 164.1 820 273.3 -164.1 820 0.65
GW 2 41 25.1 203.3 1079 25.1 -203.3 1079 0.65
GW 3 31 171.1 202.1 582 171.1 -202.1 582 0.65
GW 4 30 321.6 178.4 1036.5 321.6 -178.4 1036.5 0.65
GW 5 41 2.1 206.5 701.2 2.1 -206.5 701.2 0.65
GW 6 31 153.5 194.5 1038.1 153.5 -194.5 1038.1 0.65
GS 0 0 0.025400
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
EX 0 6 16 0 1 0
FR 0 5 0 0 14.15 0.05
LD 5 0 0 0 3.08E7
```

```
RP 0 181 1 1000 -90 0 1 1
EN
```

149. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 06:48:25 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <ZSe%h.1802$nN5.1460@newsfe1-win.ntli.net>
Source record: 41799
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

http://www.youtube.com/watch?v=gtmJ7rLuwTM&mode=related&search=

that would bring a tear to a glass eye .....

150. Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 13:27:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sJk%h.271$4X.38@nlpi069.nbdc.sbc.com>
Source record: 41800

If a Texas Bugcatcher Coil could be turned into a
traveling wave device instead of a standing wave
device, the inherent phase shift through the coil
would become obvious. I used the Helix option in
EZNEC to generate a reasonably close model of a
75m Texas Bugcatcher coil and loaded it with a
resistance equal to the coil's characteristic impedance
which essentially eliminated the reflected current,
leaving the forward current intact and visible. All
of the data points on the following web page came from
EZNEC. All of the files are available for downloading.
Please take a look at:

http://www.w5dxp.com/current2.htm
--
73, Cecil http://www.w5dxp.com

151. K Factor for 160 M Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 14:52:18 UTC
From: Sonny Hood <wrhood@cox.net>
Message-ID: <prqr33933qfk16684mbpghnrhin0ccoba7@4ax.com>
Source record: 41801

I have a friend that is putting up a 160 vertical consisting of 100 ft of Rohn 55G and a 2" length of aluminum pipe to be shunt loaded on 160 meters. He is looking for the K factor for the 18" diameter of the tower and then the K factor of the 2" needed to resonate the tower as a quarter wave vertical antenna. So far his calculations have come up with .86 as for the 100 ft. Section of tower. His estimate for the 2" is approx. 17 ft. He is now looking for the shunt point and method of connection. He wants to know if there is an internet site with references to this type of antenna system?

152. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 15:26:10 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <ssm%h.27$e24.1@newsfe12.lga>
Source record: 41802

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:sJk%h.271$4X.38@nlpi069.nbdc.sbc.com...
> If a Texas Bugcatcher Coil could be turned into a
> traveling wave device instead of a standing wave
> device, the inherent phase shift through the coil
> would become obvious. I used the Helix option in
> EZNEC to generate a reasonably close model of a
> 75m Texas Bugcatcher coil and loaded it with a
> resistance equal to the coil's characteristic impedance
> which essentially eliminated the reflected current,
> leaving the forward current intact and visible. All
> of the data points on the following web page came from
> EZNEC. All of the files are available for downloading.
> Please take a look at:
>
> http://www.w5dxp.com/current2.htm
> --
> 73, Cecil http://www.w5dxp.com

Soooo, W8JI and his worshippers were right! Current is just about constant through the loading coil (for traveling wave) but they did not know the case, in which this happens in the antenna circuit, while they were sticking with DC circuit analysis.
I hope Roy approves your use of EZNEC for this demonstration and perhaps will admit that they were wrong, and indeed the RF current through standing wave antenna circuit, such a quarter wave resonant vertical monopole, the loading coil has the current drop along the coil (standing wave circuit).

This exercise, and Walt's, and whole commotion of reflections and interference has open my antenna eyes a bit wider and allow me to understand better wasaaaap in antenna circuits, which should lead to mo' betta' antenna designs.
The only problem I have swallowing Gaussian soup, to understand how on earth and 100 years of antenna tinkering could not see the magic of this (another) miraculous way of getting much more and better signals out of antenna with given power.

Thanks guys, this is the best antenna NG, allowing good and questionable posts and free discussion, unlike the TowerTalk antenna reflector where any "heresy" against W8JI crapola "teachings" gets suspended.

Yuri, K3BU.us

153. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 16:05:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <g1n%h.858$SC4.95@nlpi068.nbdc.sbc.com>
Source record: 41803

Yuri Blanarovich wrote:
> Soooo, W8JI and his worshippers were right! Current is just about constant
> through the loading coil (for traveling wave) ...

Especially since I modeled the coil with lossless wire. :-)

Traveling wave current amplitude is just about constant
at both ends of a loading coil but there's a phase shift
as can be seen at: http://www.w5dxp.com/current2.htm
In the middle of the coil, the current increases because
of the adjacent coil coupling. There is a little drop off
(unit percents)in amplitude end-to-end because of I^2*R
losses and radiation. But one can consider the coil to be
lossless and non-radiating and still get within a few percent
of reality.

The problem is that W8JI used *standing wave current* for
his measurements. What is flowing through the coil is the
forward current and reflected current, not the standing
wave current. The standing wave current is just standing
there as indicated by the cos(kz) term. The amplitude of the
standing wave current at any point in the coil or on the
antenna has more to do with the phase difference between
the forward and reflected currents than anything else. At
the tip of the antenna, the forward current and reflected
current are equal in magnitude, 180 degrees out of phase,
and thus sum to zero.

> I hope Roy approves your use of EZNEC for this demonstration and perhaps
> will admit that they were wrong, and indeed the RF current through standing
> wave antenna circuit, such a quarter wave resonant vertical monopole, the
> loading coil has the current drop along the coil (standing wave circuit).

The current "drop" is an illusion. The current decreases primarily
because of out-of-phase addition of the forward and reflected
current. If one makes the antenna longer and places the loading
coil somewhere else, one can measure a current "rise" through the
coil which is still an illusion created by the in-phase addition
of the forward and reflected currents.

I verified these findings on the bench a couple of months ago
using my 75m Texas Bugcatcher coil loaded with a 3K ohm resistor.
But I wanted to see if EZNEC agrees. It does.
--
73, Cecil http://www.w5dxp.com

154. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 18:11:33 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <eh6s33d0110j0kklce8qf2fios1vsrgkha@4ax.com>
Source record: 41804
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Sun, 06 May 2007 06:48:25 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>http://www.youtube.com/watch?v=gtmJ7rLuwTM&mode=related&search=
>
>that would bring a tear to a glass eye .....
>
Nice.
Beats the heck out of what passes for NFL shows in the the US!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

155. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 18:20:57 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <d0p%h.6619$8E.1998@newsfe5-win.ntli.net>
Source record: 41805
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

>>that would bring a tear to a glass eye .....
>>
> Nice.
> Beats the heck out of what passes for NFL shows in the the US!
>
> John Ferrell W8CCW

what is wrong with this? ....

http://www.youtube.com/watch?v=fugEOU3H6Ng&mode=related&search=

156. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 19:07:30 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <3Yt6IxFydiPGFwc7@g3ohx.demon.co.uk>
Source record: 41806
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

In message <d0p%h.6619$8E.1998@newsfe5-win.ntli.net>, Jim GM4DHJ
<jim.gm4dhj@ntlworld.com> writes
>
>>>that would bring a tear to a glass eye .....
>>>
>> Nice.
>> Beats the heck out of what passes for NFL shows in the the US!
>>
>> John Ferrell W8CCW
>
>what is wrong with this? ....
>
>http://www.youtube.com/watch?v=fugEOU3H6Ng&mode=related&search=
>
>

Err... Everything?
Chalk and Cheese isn't close.
The Seekers' rendition of Waltzing Matilda almost wants you to go for
Australian citizenship.
Ian.
--

157. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 19:47:56 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <Mhq%h.1852$o42.1478@newsfe3-win.ntli.net>
Source record: 41807
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

>>what is wrong with this? ....
>>
>>http://www.youtube.com/watch?v=fugEOU3H6Ng&mode=related&search=
>>
>>
>
> Err... Everything?
> Chalk and Cheese isn't close.
> The Seekers' rendition of Waltzing Matilda almost wants you to go for
> Australian citizenship.
> Ian.
> --
>
and Stevie nicks makes me want to go for a run in the Mustang ....

158. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 20:03:18 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <awq%h.9078$d9.1247@newsfe6-gui.ntli.net>
Source record: 41808
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> The Seekers' rendition of Waltzing Matilda almost wants you to go for
> Australian citizenship.
> Ian.
> --
>

You will like this then...

http://www.youtube.com/watch?v=aSoGJQkKDYk&mode=related&search=

159. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 20:21:23 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178482883.276836.268750@l77g2000hsb.googlegroups.com>
Source record: 41809

On May 6, 9:05 am, Cecil Moore <nos...@w5dxp.com> wrote:

> In the middle of the coil, the current increases because
> of the adjacent coil coupling.

I'd like to see your Norton analysis of that one.

73, ac6xg

160. Re: K Factor for 160 M Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 20:26:43 UTC
From: nm5k@wt.net
Message-ID: <1178483203.203289.41280@e65g2000hsc.googlegroups.com>
Source record: 41810

On May 6, 8:52 am, Sonny Hood <wrh...@cox.net> wrote:
> I have a friend that is putting up a 160 vertical consisting of 100 ft
> of Rohn 55G and a 2" length of aluminum pipe to be shunt loaded on 160
> meters. He is looking for the K factor for the 18" diameter of the
> tower and then the K factor of the 2" needed to resonate the tower as
> a quarter wave vertical antenna. So far his calculations have come up
> with .86 as for the 100 ft. Section of tower. His estimate for the
> 2" is approx. 17 ft. He is now looking for the shunt point and method
> of connection. He wants to know if there is an internet site with
> references to this type of antenna system?

http://search.yahoo.com/search?p=shunt+fed+tower&fr=yfp-t-501&toggle=1&cop=mss&ei=UTF-8
http://search.yahoo.com/search;_ylt=A0geu_bbMD5GRn0ADldXNyoA?p=shunt+feeding+a++tower&ei=UTF-8&fr=yfp-t-501&x=wrt

This is another case of almost being able to do it faster by sense of
smell, vs trying to calculate it all out, and hope it works.
You'll probably still have to tweak it..
I'd probably try the shunt bar at about the 75 ft level for starters,
with about a 2-3 foot separation of the shunt wire from the tower.
Put a variable in series at the feed, and see if it will match. If
not,
just move the wire farther or closer to the tower for best match,
while also checking the variable. If that doesn't work, move the
support up or down a bit. You can just move the lower end of the
wire to see which way is getting better. If moving it closer makes a
better match, then go up and move the upper one too if you want it
parallel. It doesn't have to be though..
I'll irk Art, and quote from a book... The ARRL ant book says
to mount the bar at the top if the tower is 75 ft or less..
Thats why I would probably try it at about the 65-75 foot level
to start with. If it didn't match, I'd probably try going up a bit
first,
vs down.
Once you get it matched, note the spacing of the wire, and
then pull it down tight so it can't move in the wind, etc..
You'll probably need a few standoff insulators.
BTW, that would work even better if he top loaded it with some
wires.. Make it a full quarter wave, or even longer...
Two equal length and spaced wires are enough to minimize
radiation from the wires if a 1/4 wave total.. . IE: T..
An electrical 3/8 wave will raise the max current point
up off the ground a bit, and can reduce losses a bit if the
number of radials/ground quality are fairly low.
A large beam on the tower will also add some top loading.

BTW, he could add a second shunt feed at maybe about 20-25
ft and use 80 too.. Adjusting one is pretty much the same as
adjusting a gamma match on a yagi. Just on a bit bigger scale..
MK

161. Re: K Factor for 160 M Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-06 21:21:30 UTC
From: herbert.don@gmail.com
Message-ID: <1178486490.237467.165330@h2g2000hsg.googlegroups.com>
Source record: 41811

What is k Factor?
On May 6, 7:52 am, Sonny Hood <wrh...@cox.net> wrote:
> I have a friend that is putting up a 160 vertical consisting of 100 ft
> of Rohn 55G and a 2" length of aluminum pipe to be shunt loaded on 160
> meters. He is looking for the K factor for the 18" diameter of the
> tower and then the K factor of the 2" needed to resonate the tower as
> a quarter wave vertical antenna. So far his calculations have come up
> with .86 as for the 100 ft. Section of tower. His estimate for the
> 2" is approx. 17 ft. He is now looking for the shunt point and method
> of connection. He wants to know if there is an internet site with
> references to this type of antenna system?

162. Getting to old to crawl around the attic

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 00:08:19 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <f5udnVymTPJy8KPbnZ2dnUVZ_uWInZ2d@insightbb.com>
Source record: 41812

I'm about to string up some new coax and instead of fighting my attic, I've decided to just go through the wall. I'm not trying to hide the coax (it's on a secluded side of the house), but I do want it to be neat and secure. I have vinyl siding, any advice for attachment? (I've seen nail-on clips for RG58/59 but none for RG8.) Also, is there any way to dress up the hole for the coax? Maybe some kind of tube that has a flange? BTW, this is RG8.

--
Bob D. ND9B

163. Re: K Factor for 160 M Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 00:12:50 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463e6ee8$0$4898$4c368faf@roadrunner.com>
Source record: 41813

<nm5k@wt.net> wrote in message
news:1178483203.203289.41280@e65g2000hsc.googlegroups.com...
> On May 6, 8:52 am, Sonny Hood <wrh...@cox.net> wrote:
>> I have a friend that is putting up a 160 vertical consisting of 100 ft
>> of Rohn 55G and a 2" length of aluminum pipe to be shunt loaded on 160
>> meters. He is looking for the K factor for the 18" diameter of the
>> tower and then the K factor of the 2" needed to resonate the tower as
>> a quarter wave vertical antenna. So far his calculations have come up
>> with .86 as for the 100 ft. Section of tower. His estimate for the
>> 2" is approx. 17 ft. He is now looking for the shunt point and method
>> of connection. He wants to know if there is an internet site with
>> references to this type of antenna system?
>
>
> http://search.yahoo.com/search?p=shunt+fed+tower&fr=yfp-t-501&toggle=1&cop=mss&ei=UTF-8
> http://search.yahoo.com/search;_ylt=A0geu_bbMD5GRn0ADldXNyoA?p=shunt+feeding+a++tower&ei
=UTF-8&fr=yfp-t-501&x=wrt
>
> This is another case of almost being able to do it faster by sense of
> smell, vs trying to calculate it all out, and hope it works.
> You'll probably still have to tweak it..
> I'd probably try the shunt bar at about the 75 ft level for starters,
> with about a 2-3 foot separation of the shunt wire from the tower.
> Put a variable in series at the feed, and see if it will match. If
> not,
> just move the wire farther or closer to the tower for best match,
> while also checking the variable. If that doesn't work, move the
> support up or down a bit. You can just move the lower end of the
> wire to see which way is getting better. If moving it closer makes a
> better match, then go up and move the upper one too if you want it
> parallel. It doesn't have to be though..
> I'll irk Art, and quote from a book... The ARRL ant book says
> to mount the bar at the top if the tower is 75 ft or less..
> Thats why I would probably try it at about the 65-75 foot level
> to start with. If it didn't match, I'd probably try going up a bit
> first,
> vs down.
> Once you get it matched, note the spacing of the wire, and
> then pull it down tight so it can't move in the wind, etc..
> You'll probably need a few standoff insulators.
> BTW, that would work even better if he top loaded it with some
> wires.. Make it a full quarter wave, or even longer...
> Two equal length and spaced wires are enough to minimize
> radiation from the wires if a 1/4 wave total.. . IE: T..

> An electrical 3/8 wave will raise the max current point
> up off the ground a bit, and can reduce losses a bit if the
> number of radials/ground quality are fairly low.
> A large beam on the tower will also add some top loading.
> BTW, he could add a second shunt feed at maybe about 20-25
> ft and use 80 too.. Adjusting one is pretty much the same as
> adjusting a gamma match on a yagi. Just on a bit bigger scale..
> MK
>

I helped set one up years ago down in Jacksonvile Fl, 1974 I think. I was young and nimble then and was performing the tower monkey duties. Everything was done with the "by guess by golly method" and I dont remember that it took too long to do, maybe a couple of hours including a beer/soda break. I had gone there expecting all day.

Jimmie

164. Re: Getting to old to crawl around the attic

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 00:39:52 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <szu%h.4362$296.2793@newsread4.news.pas.earthlink.net>
Source record: 41814

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:f5udnVymTPJy8KPbnZ2dnUVZ_uWlnZ2d@insightbb.com...
> I'm about to string up some new coax and instead of fighting my attic,
> I've decided to just go through the wall. I'm not trying to hide the coax
> (it's on a secluded side of the house), but I do want it to be neat and
> secure. I have vinyl siding, any advice for attachment? (I've seen nail-on
> clips for RG58/59 but none for RG8.) Also, is there any way to dress up
> the hole for the coax? Maybe some kind of tube that has a flange? BTW,
> this is RG8.
>
> --
> Bob D. ND9B

If you only have one or two pieces of coax to run through the wall you may
want to look at one of the very long (6 ot 10 inch) barrel type connectors.
I think you can find some nail in clamps for conduit. It will be somewhat
bigger than the coax. Maybe some big staples made for wiring, just be sure
to find a solid board behind the vinyl to nail to.

165. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 01:36:28 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <wov%h.7204$2v1.3666@newssvr14.news.prodigy.net>
Source record: 41815

Jim Kelley wrote:
> I'd like to see your Norton analysis of that one.

RF is not DC. Edison questioned how one could measure
100 volts between any two of three terminals. :-)
--
73, Cecil http://www.w5dxp.com

166. High School Radio Club looking for IRLP contacts world wide

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 05:17:59 UTC
From: Mac <vk2evb@hotmail.com>
Message-ID: <463eb685$1_5@news.peopletelecom.com.au>
Source record: 41816
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi There,

The Bishop Druit College Radio Club
http://www.qsl.net/mm0axl/mncarg/bdc.html situated in the Mid North Coast of NSW

Australia at Coffs Harbour are looking forward to making Local or DX IRLP contacts on Fridays 0315 - 0345 UTC.

Contacts will be on IRLP node 6625 via local repeater VK2RDO on 146.650Mhz.

The young people in the club have been experimenting with building simple FM radio recievers, and
have been contemplating the design of plasma balls using ordinary light globes and car spark coils.

Contacts with interested parties or similar school electronic/radio groups would be great but unfortunately
the club only has limited time during the local lunchtime period.

Also the Bishop Druit College French and German Language classes are interested in contacts Monday to Friday 0315 - 0345 UTC.

If interested and can help arrange a contact please email:

Gary VK2ZKT gryan@bdc.nsw.edu.au

or

Peter VK2EVB vk2evb@wia.org.au

167. Re: K Factor for 160 M Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 10:18:39 UTC
From: Andr&#65533; <nospam@free.fr>
Message-ID: <463efcff$0$2042$426a74cc@news.free.fr>
Source record: 41817

another possibility, if you don't want to climb the tower:

a coil at the feed point if the vertical is too short, or a capacitance if
it is too long.

73

Andr&#65533;
http://f5ad.free.fr

168. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 12:21:43 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <016u33thcq1cgoqrmohmdb569rnh79609g@4ax.com>
Source record: 41818
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Sun, 06 May 2007 18:20:57 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>
>>>that would bring a tear to a glass eye .....
>>>
>> Nice.
>> Beats the heck out of what passes for NFL shows in the the US!
>>
>> John Ferrell W8CCW
>
>what is wrong with this? ....
>
>http://www.youtube.com/watch?v=fugEOU3H6Ng&mode=related&search=
>
The percussion has the vocalist covered up. I cannot make out any
words. If there is a melody mixed in the presentation, I cannot sense
it. The flashing lights are a major distraction. The harsh lighting
does more to conceal the performance than illuminate it. Twanging a
guitar is OK for a sound effect but I find it annoying after a short
while.
No offense intended, just my reaction.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

169. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 12:35:09 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <3l6u33t3jde63dpaq1g48lgl4aaf5c22ma@4ax.com>
Source record: 41819
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Sun, 06 May 2007 20:03:18 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>
>> The Seekers' rendition of Waltzing Matilda almost wants you to go for
>> Australian citizenship.
>> Ian.
>> --
>>
>
>You will like this then...
>
>http://www.youtube.com/watch?v=aSoGJQkKDYk&mode=related&search=
>
Yes. I have not found anything by the Seeker's that I don't like.

Since I was in my 30's in the 1970's I think that to be expected.
Full, round voices with harmony and melodies.

The people from that part of the world have earned my respect.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

170. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 13:53:03 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <3bG%h.4053$eY1.790@newsfe2-win.ntli.net>
Source record: 41820
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> Yes. I have not found anything by the Seeker's that I don't like.
>
> Since I was in my 30's in the 1970's I think that to be expected.
> Full, round voices with harmony and melodies.
>
> The people from that part of the world have earned my respect.
>
> John Ferrell W8CCW

good man ......

171. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 13:54:29 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ncG%h.665$UU.424@newssvr19.news.prodigy.net>
Source record: 41821

Jim Kelley wrote:
> I'd like to see your Norton analysis of that one.

Take a look at: http://www.k6mhe.com/n7ws/Loaded%20antennas.htm

"Figure 2 and Figure 3 clearly show the peaking of the current
that Hansen and Cebik write about."
--
73, Cecil http://www.w5dxp.com

172. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 13:55:41 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <xdG%h.4063$eY1.2877@newsfe2-win.ntli.net>
Source record: 41822
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

>>what is wrong with this? ....
>>
>>http://www.youtube.com/watch?v=fugEOU3H6Ng&mode=related&search=
>>
> The percussion has the vocalist covered up. I cannot make out any
> words. If there is a melody mixed in the presentation, I cannot sense
> it. The flashing lights are a major distraction. The harsh lighting
> does more to conceal the performance than illuminate it. Twanging a
> guitar is OK for a sound effect but I find it annoying after a short
> while.
> No offense intended, just my reaction.
>
> John Ferrell W8CCW

I like it that way and the lead guitar is very cool ......he has been
playing with Stevie for over 20 years .....

173. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 14:05:37 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <RmG%h.2447$MH3.1985@newsfe4-win.ntli.net>
Source record: 41823
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> The percussion has the vocalist covered up. I cannot make out any
> words. If there is a melody mixed in the presentation, I cannot sense
> it. The flashing lights are a major distraction. The harsh lighting
> does more to conceal the performance than illuminate it. Twanging a
> guitar is OK for a sound effect but I find it annoying after a short
> while.
> No offense intended, just my reaction.
>
> John Ferrell W8CCW

You might like this version from 25 years ago more to your taste...same guitarist when he was just a lad......

http://www.youtube.com/watch?v=En_-Iwyypx0

174. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 15:01:33 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178550093.767283.68050@e65g2000hsc.googlegroups.com>
Source record: 41824

On 7 May, 06:54, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > I'd like to see your Norton analysis of that one.
>
> Take a look at:http://www.k6mhe.com/n7ws/Loaded%20antennas.htm
>
> "Figure 2 and Figure 3 clearly show the peaking of the current
> that Hansen and Cebik write about."
> --
> 73, Cecil http://www.w5dxp.com

Thanks for pointing that out Cecil. He did a really good job of
explaining things
Art

175. Re: Getting to old to crawl around the attic

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 16:27:37 UTC
From: jim <james27613@yahoo.com>
Message-ID: <463F5379.90ECBF60@yahoo.com>
Source record: 41825

hi,

please be sure to form a drip loop at the entrance to the house
to prevent water damage.

73 james

176. What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 17:38:47 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1178559527.550526.307140@p77g2000hsh.googlegroups.com>
Source record: 41826
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Hi:

If my location is in southern California, what would I hear on a "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference between what I would hear at night and what I would hear during the day?

On medium-wave station, I notice the interference -- in the form of tones -- to be louder at night than the day. Does this difference also apply to extreme shortwave frequencies as high as 300 GHz?

NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am still curious as to what I would hear on a 300 GHz AM receiver.

Thanks,

Radium

177. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 18:02:15 UTC
From: ralph <ralph@home.com>
Message-ID: <7d4c9$463f699d$471cc74b$30293@ALLTEL.NET>
Source record: 41677
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Night and day no difference at 300 ghz. There is no such thing as "DXED" on 300 ghz LOL!

You probably wont hear a thing unless your inside a big city. And then only on FM or spread spectrum that = NOTHING!

Its a waste of money and time trying really

"Radium" <glucegen1@gmail.com> wrote in message news:1178559527.550526.307140@p77g2000hsh.googlegroups.com...
> Hi:
>
> If my location is in southern California, what would I hear on a
> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> between what I would hear at night and what I would hear during the
> day?
>
> On medium-wave station, I notice the interference -- in the form of
> tones -- to be louder at night than the day. Does this difference also
> apply to extreme shortwave frequencies as high as 300 GHz?
>
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
>
> Thanks,
>
> Radium
>

178. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 18:20:28 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1178562028.656708.248090@u30g2000hsc.googlegroups.com>
Source record: 41678
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 11:02 am, "ralph" <r...@home.com> wrote:

> Night and day no difference at 300 ghz.

Okay.

> There is no such thing as "DXED" on
> 300 ghz LOL!

Why doesn't DX work at 300 GHz?

> You probably wont hear a thing unless your inside a big city. And then only
> on FM or spread spectrum that = NOTHING!

But on AM, won't magnetic interference cause tones on the receiver of
any frequency provided that the disruption is occurring at the
frequency?

If there is a solar storm causing the emission of electromagnetic
radiation at 300 GHz wouldn't the 300 GHz receiver pick up the signals
caused by the solar storms?

179. Re: Gaussian cluster antenna array data

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 19:40:17 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <463f80a1$0$15183$4c368faf@roadrunner.com>
Source record: 41679

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in message
news:%V6%h.6012$au6.5029@edtnps90...
>> Is it possible to post an image of what Art's antenna would look like?
>> I would like to so what his antenna looks like as his discription has
>> gone beyound my imagination.
>>
>> Jimmie.
>
> I can send you a JPEG of an NEC graphic. It is only 9 kB. The array
> looks like two stacked 3 element yagis, with only the upper array
> driven. I deleted the lower array, and it only made a slight
> difference to the performance.
>
> Frank
>
If you could send me the jpg I would appreciate it. I had been trying to
picture what this may look like from Art's discription. I was imaginining a
cluster of elements of random lengths pointing in all kind of different
directions all fed from a common feedpoint.

Thanks
Jimmie

180. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 19:43:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1nvk2$t3p$1@news.service.uci.edu>
Source record: 41680

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> I'd like to see your Norton analysis of that one.
>
>
> RF is not DC. Edison questioned how one could measure
> 100 volts between any two of three terminals. :-)

Are you implying yours is a 3-phase antenna? :-)

ac6xg

181. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:02:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <hBL%h.695$UU.128@newssvr19.news.prodigy.net>
Source record: 41681

Jim Kelley wrote:
> Are you implying yours is a 3-phase antenna? :-)

No, just that phasing of RF signals is what is confusing
the DC gurus, just like AC phasing confused Edison.
--
73, Cecil http://www.w5dxp.com

182. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:03:45 UTC
From: nm5k@wt.net
Message-ID: <1178568225.759446.266000@q75g2000hsh.googlegroups.com>
Source record: 41682
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 12:20 pm, Radium <gluceg...@gmail.com> wrote:
> On May 7, 11:02 am, "ralph" <r...@home.com> wrote:

>
> Why doesn't DX work at 300 GHz?

Well, there could be, but at that freq, it would have to be line of
sight.. Like light rays... So DX isn't gonna happen too often, unless
one is on the space shuttle, or you each have gazillion foot towers,
with dishes or whatever aimed exactly at each other..
BTW, a QSO with the shuttle might qualify as DX, due to the
high frequency involved, but the actual distance still won't be too
awful far.. IE: 150-300 nm or so, depending on the orbit..
>
> > You probably wont hear a thing unless your inside a big city. And then only
> > on FM or spread spectrum that = NOTHING!
>
> But on AM, won't magnetic interference cause tones on the receiver of
> any frequency provided that the disruption is occurring at the
> frequency?

The "tones" you hear at night on MW are heterodynes. IE: the carriers
of various stations clashing with each other. This is due to the
increased
sky wave signals at night. In the day, you have little sky wave, and
most stations you hear are ground wave. Being most are on separate
frequencies, you don't hear many het's...
Het's are a common noise on the CB bands... AM anyway...
Listen to ch 19...Heterodyne city...
You would hear the same thing at 300ghz if two stations were
on the same frequency at the same time. Frequency has nothing to
do with that.
>
> If there is a solar storm causing the emission of electromagnetic
> radiation at 300 GHz wouldn't the 300 GHz receiver pick up the signals
> caused by the solar storms?

I imagine so, if the antenna, dish, whatever were pointed at the sun.
At that frequency, most anything you hear will be direct line of sight
space wave. So don't expect to hear too much around there, unless
you have services using that freq in your close area. I don't even
know
who uses 300 ghz to tell you the truth.. That's a pretty high
frequency.

MK

183. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:34:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1o2j6$28n$1@news.service.uci.edu>
Source record: 41684

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Are you implying yours is a 3-phase antenna? :-)
>
>
> No, just that phasing of RF signals is what is confusing
> the DC gurus, just like AC phasing confused Edison.

What is a DC guru, and why do you address comments to them?

As a suggestion, you might consider increasing the current for the EZNEC simulation on your webpage. At 20 amps per division it's plus or minus a pixel at 1024x768.

73, ac6xg

184. Re: Getting to old to crawl around the attic

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:39:48 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <o8M%h.166417$aG1.72579@pd7urf3no>
Source record: 41683

Bob D. wrote:
> I'm about to string up some new coax and instead of fighting my attic, I've
> decided to just go through the wall. I'm not trying to hide the coax (it's
> on a secluded side of the house), but I do want it to be neat and secure. I
> have vinyl siding, any advice for attachment? (I've seen nail-on clips for
> RG58/59 but none for RG8.) Also, is there any way to dress up the hole for
> the coax? Maybe some kind of tube that has a flange? BTW, this is RG8.
>

Murphy Says "Once you run a piece of coax through the wall you are going to
want to run something else as well, but will find out too late that the hole
is too small for anything else!" Need I say more? :-)

Irv VE6BP

185. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:40:42 UTC
From: matt weber <matthеww@qwest.net>
Message-ID: <7j3v33pisd9l64qpkmvmkg71sm3pli2u2o@4ax.com>
Source record: 41685
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

300Ghz is a 1 mm wave. It is pure line of sight. OTOH, it would
probably be pretty quiet, both because the S/N ratio would be high
(line of sight only transmission), and few devices are capable of
generating energy accidentally or deliberately at that wavelength.

On 7 May 2007 10:38:47 -0700, Radium <glucegen1@gmail.com> wrote:

>Hi:
>
>If my location is in southern California, what would I hear on a
>"DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
>between what I would hear at night and what I would hear during the
>day?
>
>On medium-wave station, I notice the interference -- in the form of
>tones -- to be louder at night than the day. Does this difference also
>apply to extreme shortwave frequencies as high as 300 GHz?
>
>NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
>still curious as to what I would hear on a 300 GHz AM receiver.
>
>
>Thanks,
>
>Radium

186. MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:45:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3eM%h.21261$Um6.16572@newssvr12.news.prodigy.net>
Source record: 41686

The 1and1.com server that I subscribe to for w5dxp.com
will not process the .EZ files generated by EZNEC. I
received this reply from support@1and1.com:

"In order to get thee working, we need to have the MIME
type for the .EZ file extension installed on the server.
To do this, please contact the company that created the
EZ filetype and ask them to provide to you the MIME type
type for that extension. Let us know what it is so we
can add it."

That leaves me in a quandary. The author of EZNEC has
ploinked me, asked me not to send him emails, and therefore
I have zero customer support for EZNEC. Could someone reply
to this posting so w7el will see it and, hopefully, put aside
his personal vendetta long enough to answer the customer
service question which not only affects my web page but
also the w2du.com web page?
--
73, Cecil http://www.w5dxp.com

187. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 20:52:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <HkM%h.21264$Um6.5368@newssvr12.news.prodigy.net>
Source record: 41687

Jim Kelley wrote:
> As a suggestion, you might consider increasing the current for the EZNEC
> simulation on your webpage. At 20 amps per division it's plus or minus
> a pixel at 1024x768.

Excellent suggestion, Jim. I'm sure there is a way to do that
within the EXCEL charting function but, so far, I haven't figured
out how to split the scales. I was going to mow the yard but it's
92 degrees out there and I would rather play with EZNEC anyway.
--
73, Cecil http://www.w5dxp.com

188. Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 21:03:28 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <463f9421$0$4798$4fafbaef@reader4.news.tin.it>
Source record: 41688

My question concerns the well known Struthers RF Wattmeter TS-1285/URM-120 which has three big plug-ins (2-30 MHz 1000 Watts, 25-250 MHz 500 Watts, 200-1000 MHz 500 Watts).

Differently from all common wattmeters, the Struthers meter has a perfectly linear scale. How could they achieve that?

On QST magazine (May 1996, pag. 77) K3BRS states that replacing the diode with a different type would cause the initial part of the scale to become very inaccurate.

Does anyone know of special diodes resulting in a linear wattmeter scale?

73

Tony I0JX

189. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 21:50:37 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1178574637.651723.109490@u30g2000hsc.googlegroups.com>
Source record: 41689
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 1:03 pm, n...@wt.net wrote:

> The "tones" you hear at night on MW are heterodynes. IE: the carriers
> of various stations clashing with each other. This is due to the
> increased
> sky wave signals at night. In the day, you have little sky wave, and
> most stations you hear are ground wave. Being most are on separate
> frequencies, you don't hear many het's...
> Het's are a common noise on the CB bands... AM anyway...
> Listen to ch 19...Heterodyne city...
> You would hear the same thing at 300ghz if two stations were
> on the same frequency at the same time. Frequency has nothing to
> do with that.

What is the best frequency if I want to listen to distant heterodynes
from outer space?

AFAIK, if the frequency is too high, then you only get line of sight.
Too low, and you can't get signals from space, because the ionosphere
keeps out long-wave signals. Low-frequency signals on earth that reach
the upper atmosphere are bounced back down to the lower atmospheres
because the ionosphere reflects them.

190. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 21:54:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9eN%h.789$LR5.155@newssvr17.news.prodigy.net>
Source record: 41690

Jim Kelley wrote:
> As a suggestion, you might consider increasing the current for the EZNEC
> simulation on your webpage.

Done as you suggested by changing the current amplitude scale.
What do you think about the simulation? Stand by for more
additions to that web page.
--
73, Cecil http://www.w5dxp.com

191. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:04:31 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <PnN%h.433364$5j1.324387@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41691

Cecil Moore wrote:
> The 1and1.com server that I subscribe to for w5dxp.com
> will not process the .EZ files generated by EZNEC. I
> received this reply from support@1and1.com:
>
> "In order to get thee working, we need to have the MIME
> type for the .EZ file extension installed on the server.
> To do this, please contact the company that created the
> EZ filetype and ask them to provide to you the MIME type
> type for that extension. Let us know what it is so we
> can add it."
>
> That leaves me in a quandary. The author of EZNEC has
> ploinked me, asked me not to send him emails, and therefore
> I have zero customer support for EZNEC. Could someone reply
> to this posting so w7el will see it and, hopefully, put aside
> his personal vendetta long enough to answer the customer
> service question which not only affects my web page but
> also the w2du.com web page?

Cecil,

I did not have the slightest problem in downloading the .EZ file.

What is the problem?

I hope that nobody is actually trying to launch the file directly from
the website, but if so, those folks need to get a clue, not a MIME type.

73,
Gene
W4SZ

192. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:12:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3vN%h.21271$Um6.9051@newssvr12.news.prodigy.net>
Source record: 41692

Gene Fuller wrote:
> I did not have the slightest problem in downloading the .EZ file.
> What is the problem?

The problem is that you are not very observant. The file you
downloaded was not from w5dxp.com. It was from qsl.net/w5dxp
which properly handles .EZ files. Please pay attention.

> I hope that nobody is actually trying to launch the file directly from
> the website, but if so, those folks need to get a clue, not a MIME type.

Methinks it is you who need to get a clue.
--
73, Cecil http://www.w5dxp.com

193. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:18:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MAN%h.798$LR5.462@newssvr17.news.prodigy.net>
Source record: 41694

Cecil Moore wrote:
> Gene Fuller wrote:
>> I did not have the slightest problem in downloading the .EZ file.
>> What is the problem?
>
> The problem is that you are not very observant. The file you
> downloaded was not from w5dxp.com. It was from qsl.net/w5dxp
> which properly handles .EZ files. Please pay attention.
>
>> I hope that nobody is actually trying to launch the file directly from
>> the website, but if so, those folks need to get a clue, not a MIME type.
>
> Methinks it is you who need to get a clue.

P.S. Your arrogant attitude is typical of r.r.a.a gurus
who consider themselves incapable of making a mistake.
Of the three possibilities that W7EL listed for people
not understanding what he says, the more than glaring
omission of a 4th possibility was that he might rarely
be *absolutely wrong* as he is on the subject of current
through 75m Texas Bugcatcher loading coils.
--
73, Cecil http://www.w5dxp.com

194. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:18:44 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <8BN%h.433421$5j1.355975@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41693

Cecil Moore wrote:
> Gene Fuller wrote:
>> I did not have the slightest problem in downloading the .EZ file.
>> What is the problem?
>
> The problem is that you are not very observant. The file you
> downloaded was not from w5dxp.com. It was from qsl.net/w5dxp
> which properly handles .EZ files. Please pay attention.
>
>> I hope that nobody is actually trying to launch the file directly from
>> the website, but if so, those folks need to get a clue, not a MIME type.
>
> Methinks it is you who need to get a clue.

Yeah, I know. I am still trying to figure out why anyone would load a
3.8 MHz coil with a 1975 ohm resistor rather than a whip. Does that work
well in the 75 meter shootouts?

8-)

73,
Gene
W4SZ

195. Re: Getting to old to crawl around the attic

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:23:00 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <8FN%h.7769$Ut6.436@newsread1.news.pas.earthlink.net>
Source record: 41695

"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:o8M%h.166417$aG1.72579@pd7urf3no...
> Bob D. wrote:
>> I'm about to string up some new coax and instead of fighting my attic,
>> I've decided to just go through the wall. I'm not trying to hide the coax
>> (it's on a secluded side of the house), but I do want it to be neat and
>> secure. I have vinyl siding, any advice for attachment? (I've seen
>> nail-on clips for RG58/59 but none for RG8.) Also, is there any way to
>> dress up the hole for the coax? Maybe some kind of tube that has a
>> flange? BTW, this is RG8.
>>
>
>
> Murphy Says "Once you run a piece of coax through the wall you are going
> to
> want to run something else as well, but will find out too late that the
> hole
> is too small for anything else!" Need I say more? :-)
>
> Irv VE6BP

I agree with that. I put a 3 or 4 inch hole in a house and put a piece of
PVC tubing through the hole. Then took some screen wire and wrapped it
around several coax and rotator cables comming through the pvc tube.
That was after the first two holes in the outside wall.

I moved and have 11 cables comming through the bottom part of a window in
the new house. Raised it a couple of inches, put a layer of foam insulation
down like you insualte copper pipes in the house with, then the coax,and
then another layer of the foam insulation. Then lowered the window on that.

196. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:25:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <HHN%h.21274$Um6.16383@newssvr12.news.prodigy.net>
Source record: 41696

Gene Fuller wrote:
> Yeah, I know. I am still trying to figure out why anyone would load a
> 3.8 MHz coil with a 1975 ohm resistor rather than a whip. Does that work
> well in the 75 meter shootouts?

No, but it works well for using EZNEC to prove the author
of EZNEC absolutely wrong. :-)

Take a look at the 3.8 MHz current through the 75m
Bugcatcher coil on my website. It is virtually flat
indicating that reflections have been eliminated.
Yet the phase shift through that coil on 3.8 MHz
is close to 38 degrees. That's a magnitude away
from the measured phase shift reported by w8ji
and w7el. Your previous postings indicate that you
agree with me, Gene, but just cannot bring yourself
to disagree with your guru friends.
--
73, Cecil http://www.w5dxp.com

197. Re: H F Antenna - BWD-90 VS G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:52:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f1oaje$8u1$1@nntp1.jpl.nasa.gov>
Source record: 41698

Bob D. wrote:
> I'm still trying to decide on a ready-made HF antenna. I have a couple more
> questions.
>
> Can the Barker & Williamson's BWD-90 really be used without an antenna
> tuner?
>
> Does the G5RV really need an antenna tuner?
>
> Wow, there's a 7:1 price difference here! Hope to be QSOing soon, instead
> of emailing.
>
The B&W (and all of the essentially identical antennas which are a folded dipole of some sort with a big resistor) are an interesting solution to a system engineering problem. Sure, they're hideously inefficient, but, they don't require a tuner, and if you're not power limited, you can overcome the inefficiency by just turning up the amp.

It's no different than putting a 3dB pads on the ports of a mixer to make them less sensitive to the match. You take a efficiency hit, but you pick up overall system insensitivity to component variations, etc.

A terminated folded dipole and a broadband solid state amp is not a bad system solution for someone who needs a broadband (2-30MHz) system that is simple to deploy and has essentially instantaneous frequency change ability. Hmmm.. folks with ALE or HF frequency hopping radios in a tactical environment. And who buys these sorts of things: military and diplomatic folks, who aren't power constrained, need fast frequency changes and simple installation, and aren't concerned about saving every penny. In that market, a few hundred dollars more or less makes almost no difference.

Jim, W6RMK

198. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 22:53:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gcbv339ldq68uaf7df36ii0fv8qnk2qkdb@4ax.com>
Source record: 41697

On Mon, 7 May 2007 23:03:28 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Differently from all common wattmeters, the Struthers meter has a perfectly
>linear scale. How could they achieve that?

Hi Tony,

Non-linear magnetic field.

>On QST magazine (May 1996, pag. 77) K3BRS states that replacing the diode with a
>different type would cause the initial part of the scale to become very
>inaccurate.

The difference between silicon and germanium, perhaps.

>Does anyone know of special diodes resulting in a linear wattmeter scale?

No.

73's
Richard Clark, KB7QHC

199. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:04:59 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f1obar$976$1@nntp1.jpl.nasa.gov>
Source record: 41706

Antonio Vernucci wrote:
> My question concerns the well known Struthers RF Wattmeter
> TS-1285/URM-120 which has three big plug-ins (2-30 MHz 1000 Watts,
> 25-250 MHz 500 Watts, 200-1000 MHz 500 Watts).
>
> Differently from all common wattmeters, the Struthers meter has a
> perfectly linear scale. How could they achieve that?
>
> On QST magazine (May 1996, pag. 77) K3BRS states that replacing the
> diode with a different type would cause the initial part of the scale to
> become very inaccurate.
>
> Does anyone know of special diodes resulting in a linear wattmeter scale?
>
> 73
>
> Tony I0JX
>
If you operate a diode detector in the "square law" region, the voltage output is proportional to the incident power. You don't get a huge dynamic range where this is true (10-20 dB, perhaps?), but on the other hand, people have been building diode detector based power meters for decades. Different diodes have different curves, so changing diode type would affect the calibration.

200. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:07:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133vca3a6k3b994@corp.supernews.com>
Source record: 41699

Gene Fuller wrote:
> Cecil Moore wrote:
>>
>> That leaves me in a quandary. The author of EZNEC has
>> ploinked me, asked me not to send him emails, and therefore
>> I have zero customer support for EZNEC. . .

I will provide Cecil and any other EZNEC customer with support for EZNEC. My request for no further email does not include EZNEC support.

EZNEC .EZ files are binary files, and can be handled like any other binary file. No special attachment or auxiliary software, or special encoding or treatment, is needed to transfer or attach them.

Roy Lewallen, W7EL

201. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:11:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <133vcgfqr9417cc@corp.supernews.com>
Source record: 41700

Gene Fuller wrote:
> . . .
> I hope that nobody is actually trying to launch the file directly from
> the website, but if so, those folks need to get a clue, not a MIME type.

For sure. I guarantee that would fail.

Roy Lewallen, W7EL

202. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:17:13 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178579833.428917.216710@y5g2000hsa.googlegroups.com>
Source record: 41701

On 7 May, 15:12, Cecil Moore <nos...@w5dxp.com> wrote:
> Gene Fuller wrote:
> > I did not have the slightest problem in downloading the .EZ file.
> > What is the problem?
>
> The problem is that you are not very observant. The file you
> downloaded was not from w5dxp.com. It was from qsl.net/w5dxp
> which properly handles .EZ files. Please pay attention.
>
> > I hope that nobody is actually trying to launch the file directly from
> > the website, but if so, those folks need to get a clue, not a MIME type.
>
> Methinks it is you who need to get a clue.
> --
> 73, Cecil http://www.w5dxp.com

Cecil
The MMANA antenna program is now updated such that I am in the process
of downlowding it to replace my AO Professional program which has
served me well over the years. From what I am reading it outshines all
other antenna programs available other than the $1000 plus
professional forms which are really over the top for radio amateurs.
Apparently it also has unlimited variables for optimisation as well as
links to NEC2 and NEC 4.
The program is available for downloading for all tho a small donation
will help out in keeping it up to date and supply help to those that
need it. The program was put together by hams from all over including
Arie for hams so we no longer are held hostage.Since it is the best
available unless you have $1000+ to spend then it makes sense to
download it and use the money for digital radio or the like,
especially since it does more for antennas than anything else around.
Plus, it also have the extra availability of variables for
optimisation which other do not have. It is for hams by hams to do
what hams want to do, makes sense to support it rather than give $1000
to somebody when it does not have all the options that MMANA has since
it was revised and updated at the beginning of this year, whereas my
old professional program has not kept up with the times and no longer
supported.
It was worth the expense when I bought it but science has moved on and
we need to keep up with it.It certainly can do more than my old buddy
AO Professional program or anything else so I am changing over to
MMANA.to help support ham radio to stay on the cusp .
Regards
Art

Art

203. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:21:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <TvO%h.818$LR5.634@newssvr17.news.prodigy.net>
Source record: 41702

Roy Lewallen wrote:
> I will provide Cecil and any other EZNEC customer with support for
> EZNEC. My request for no further email does not include EZNEC support.

Now you tell me after a year of zero support.

> EZNEC .EZ files are binary files, and can be handled like any other
> binary file. No special attachment or auxiliary software, or special
> encoding or treatment, is needed to transfer or attach them.

I don't understand exactly what 1and1.com is asking for,
but both w2du and I have the same problem. Here's the
1and1.com email to me.

"In order to get thee working, we need to have the MIME type
for the .EZ file extension installed on the server. To do this,
please contact the company that created the EZ filetype and ask
them to provide to you the MIME type type for that extension.
Let us know what it is so we can add it."

Would you please contact support@1and1.com and get this problem
solved?
--
73, Cecil http://www.w5dxp.com

204. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:30:04 UTC
From: "David L. Wilson" <dwilson314@comcast.net>
Message-ID: <paGdna9-bpTgK6LbnZ2dnUVZ_gidnZ2d@comcast.com>
Source record: 41703
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"matt weber" <matthewww@qwest.net> wrote in message
news:7j3v33pisd9l64qpkmvmkg71sm3pli2u2o@4ax.com...
> 300Ghz is a 1 mm wave. It is pure line of sight. OTOH, it would
> probably be pretty quiet, both because the S/N ratio would be high
> (line of sight only transmission), and few devices are capable of
> generating energy accidentally or deliberately at that wavelength.

Not quite true
http://www.orau.org/academic/collaboration/presentations/4attia.pdf

205. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:46:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1odrp$b5e$1@news.service.uci.edu>
Source record: 41705

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> As a suggestion, you might consider increasing the current for the
>> EZNEC simulation on your webpage.
>
>
> Done as you suggested by changing the current amplitude scale.
> What do you think about the simulation? Stand by for more
> additions to that web page.

From what I gathered, the objective of loading the coil with its characteristic impedance was that there would be no reflection. I was therefore surprised when you reported something other than a straight line for the current amplitude along the radiator (let alone an increase at some point). It is now apparent that what you are actually plotting is the superposed forward and reflected currents, and that you have somewhat more than a negligible amount of reflected current.

The primary utility in looking at the standing wave profile lies in the fact that it gives an idea of what the superposed field intensity plot might look like in the near field of the antenna. But it is obviously the currents associated with waves traveling on the antenna, both forward and reflected, that actually do the radiating.

I agree with you that it is useful to understand the exact effect the loading coil has on the traveling wave, and hence the standing wave profile of the antenna. But I still think it would be prudent to explore and understand the precise nature of the delay through the coil more thoroughly before making too many assumptions about this.

73, Jim AC6XG

206. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-07 23:46:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RTO%h.20439$JZ3.7533@newssvr13.news.prodigy.net>
Source record: 41704

Roy Lewallen wrote:
> EZNEC .EZ files are binary files, and can be handled like any other
> binary file.

Here is the latest request from 1and1.com. Please stop the
sandbagging and just answer their question.

"Ask them to give you the actual MIME Type declaration."
--
73, Cecil http://www.w5dxp.com

207. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 00:02:13 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f1oem6$b6b$1@nntp1.jpl.nasa.gov>
Source record: 41711

Dave (from the UK) wrote:
> There is a scanned copy of a book you may find interesting:
>
> ----
> Antennas, John D. Kraus, Ph.D.., 1950, 553 pages
>
> This book is a college text and engineering reference on antennas. A
> pretty thorough theoretical treatment along with practical information
> on antenna design.
> -----
>
> See
>
> http://www.pmillett.com/Books/Kraus_antennas.pdf (7.9 MB)
>
> More books at
>
> http://www.pmillett.com/technical_books_online.htm
>
> Apparently the copyright has expired on these books, so they are not
> pirated. I actually own a copy of the Kraus book, but it is attractive
> to have a copy on my laptop.

The copyright on that edition was renewed in 13 November 1978
(Registration # RE-7-717, original reg# A47618), so it's still in
copyright (until 95 years after publication: year 2045). This isn't
particularly unusual, since it's a standard textbook, and the second
edition didn't come out until 1988, so the publisher would have made
sure the copyright was renewed, even if W8JK didn't.

Jim

208. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 00:25:22 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992A6A05D37EFnonenowhere@61.9.191.5>
Source record: 41707

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:463f9421$0$4798$4fafbaef@reader4.news.tin.it:

> Does anyone know of special diodes resulting in a linear wattmeter
> scale?

Have a look at the diode characteristic below the knee, it is a square law detector (meaning that the DC current is proportional to the square of the AC voltage, and therefore power).

We are talking about millivolt levels, but the good news is that today, stable high gain DC amplifiers are a snack (see chopper stabilised Op Amps).

Owen

209. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 00:35:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3BP%h.7404$2v1.1@newssvr14.news.prodigy.net>
Source record: 41708

Jim Kelley wrote:
> I was
> therefore surprised when you reported something other than a straight
> line for the current amplitude along the radiator (let alone an increase
> at some point).

Just proves that you are not omniscient. Such is the nature
of a real world inductance especially close to self-resonance.
This is just evidence of another failure of lumped inductance
models. The current through a real-world inductance is NOT
linear if the operating frequency is within 15% of the self-
resonant frequency. For the Nth time, please read and
understand the IEEE white paper at:

http://www.ttr.com/TELSIKS2001-MASTER-1.pdf
--
73, Cecil http://www.w5dxp.com

210. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 00:39:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1ogruuco1@nnrp.linuxfan.it>
Source record: 41709

Cecil Moore wrote:
> > ...
> Would you please contact support@1and1.com and get this problem
> solved?

Cecil:

This link:

http://www.alvestrand.no/ietf/media-types.html

you may find interesting ...

Regards,
JS

211. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 00:52:23 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1ohjluco2@nnrp.linuxfan.it>
Source record: 41710

John Smith I wrote:

Cecil:
>
> This link:
>
> http://www.alvestrand.no/ietf/media-types.html
>
> you may find interesting ...
>
> Regards,
> JS

Further ...

As Roy states, .ez are binary ... so, perhaps ".bin
application/x-binary" would be suitable (just guessing here.)

However, the gods which be disdain posting of binaries to r.r.a.a 8-)

So, maybe we should create rec.radio.amateur.binary ... would be kinda
handy really, we could have pics of babes holding our antennas!
<innocent-look> ;-)

Regards,
JS

212. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:07:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <y3Q%h.7405$2v1.5263@newssvr14.news.prodigy.net>
Source record: 41712

John Smith I wrote:
> Cecil: This link:
> http://www.alvestrand.no/ietf/media-types.html
> you may find interesting ...

John, I'm a hardware-type guy. What's the bottom line?
--
73, Cecil http://www.w5dxp.com

213. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:12:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <a8Q%h.7406$2v1.2345@newssvr14.news.prodigy.net>
Source record: 41713

John Smith I wrote:
> As Roy states, .ez are binary ... so, perhaps ".bin

I don't really care what the solution is as long
as the solution gets implemented. Are we going to
ask everyone to rename antenna.bin to antenna.ez
before they can use it with EZNEC? Why does qsl.net
handle .EZ files properly and 1and1.com doesn't?
As a simple user, this should NOT be my problem.
--
73, Cecil http://www.w5dxp.com

214. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:13:06 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1178586786.479337.27010@h2g2000hsg.googlegroups.com>
Source record: 41714
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 10:38 am, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> If my location is in southern California, what would I hear on a
> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> between what I would hear at night and what I would hear during the
> day?
>
> On medium-wave station, I notice the interference -- in the form of
> tones -- to be louder at night than the day. Does this difference also
> apply to extreme shortwave frequencies as high as 300 GHz?
>
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
> Thanks,
>
> Radium

Radium - Most likely without the 'right' Antenna
and feed-in-line for your device {Radio} you will
not hear anything. ~ RHF

Point-of-Clarification : Does this Device {Radio} clearly
read {labeled as} 300 GHz or could it be 30 MHz

=IF= 30 MHz then you have a Shortwave Radio.
SW RADIO => http://en.wikipedia.org/wiki/Shortwave_radio
? Radio {Device} Brand Name & Manufacture ?
? Radio {Device} Model Number ?
? Better Description of the Device {Radio} Markings ?

=IF= 300 GHz THEN READ THESE :

RADIO => http://en.wikipedia.org/wiki/Radio

Radio Frequency
RF => http://en.wikipedia.org/wiki/Radio_frequency

USA - Frequency Allocation - The Radio Spectrum
CHART => http://www.ntia.doc.gov/osmhome/allochrt.pdf

MICROWAVES => http://en.wikipedia.org/wiki/Microwave

Extremely High Frequency (EHF) (30-300 GHz) Radio Waves
EHF => http://en.wikipedia.org/wiki/Extremely_high_frequency

* Radio Signals in the EHF Band are Extremely Prone
to Atmospheric Attenuation, making them of very little
use over Long Distances (No DX).
* The EHF Band is commonly used in Radio Astronomy.

RADIO ASTRONOMY => http://en.wikipedia.org/wiki/Radio_astronomy
.
.
. .

215. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:24:09 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1ojf8uco3@nnrp.linuxfan.it>
Source record: 41715

Cecil Moore wrote:
> John Smith I wrote:
>> Cecil: This link:
>> http://www.alvestrand.no/ietf/media-types.html
>> you may find interesting ...
>
> John, I'm a hardware-type guy. What's the bottom line?

Cecil:

Sorry ... well, it looks like Roy should petition to have ".ez file
type" registered with IANA as something like:

.ez application/x-binary

however, I am guessing. But looks like something Roy should do alright
... I have never had to deal with this before ...

Regards,
JS

216. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:30:16 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1oju9$g5p$1@news.service.uci.edu>
Source record: 41717

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> I was therefore surprised when you reported something other than a
>> straight line for the current amplitude along the radiator (let alone
>> an increase at some point).
>
>
> Just proves that you are not omniscient.

I doubt that proof of that is actually required. In fact, I think
you'll find that to be true in general for other people as well.

> For the Nth time, please read and
> understand the IEEE white paper at:
>
> http://www.ttr.com/TELSIKS2001-MASTER-1.pdf

University of Yugoslavia. Yeah, sure thing. Whether it's valid or
not, I'm not convinced that's what you have in your EZNEC printout.
And unless Roy accounts for "current pileup", it's unlikely that it
would show up there.

73, AC6XG

217. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:40:32 UTC
From: labtech_one <labtech_one@yahoo.com>
Message-ID: <2f3f3$463fd443$438c6e36$25989@ALLTEL.NET>
Source record: 41716
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

<nm5k@wt.net> wrote in message
news:1178568225.759446.266000@q75g2000hsh.googlegroups.com...
> I don't even know
> who uses 300 ghz to tell you the truth.. That's a pretty high
> frequency.
> MK

Tanning beds maybe :o)

218. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:43:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1okim$5k7$1@nnrp.linuxfan.it>
Source record: 41718
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Radium wrote:
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
>
> Thanks,
>
> Radium
>
>

Horrible QRM from flickering candles, campfires and forest fires?

Regards,
JS

219. Re: Which modeler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:46:18 UTC
From: RDWeaver <weaver5511@mypacks.net>
Message-ID: <1178588778.607577.145000@o5g2000hsb.googlegroups.com>
Source record: 41719

On May 1, 5:49 pm, 4nec2 <4...@gmx.net> wrote:

>
> I noticed RDW had a budget of some 450 dollars. If I were him I would
> get me a Nec4 license.
>

Where can I learn more about that?

73, RDW

220. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:48:16 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <pblv33d5m6jjofbduf6pfffk9hhu0atkub@4ax.com>
Source record: 41720

On Mon, 07 May 2007 20:45:51 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>The 1and1.com server that I subscribe to for w5dxp.com
>will not process the .EZ files generated by EZNEC. I
>received this reply from support@1and1.com:
>
>"In order to get thee working, we need to have the MIME
>type for the .EZ file extension installed on the server.
>To do this, please contact the company that created the
>EZ filetype and ask them to provide to you the MIME type
>type for that extension. Let us know what it is so we
>can add it."
>
>That leaves me in a quandary. The author of EZNEC has
>ploinked me, asked me not to send him emails, and therefore
>I have zero customer support for EZNEC. Could someone reply
>to this posting so w7el will see it and, hopefully, put aside
>his personal vendetta long enough to answer the customer
>service question which not only affects my web page but
>also the w2du.com web page?

I have no idea what you problem is. I've upload an *.EZ on my site and
I am using 1and1.

http://k6mhe.com/sub/VERT1.EZ

When I go to that URL my browser asks me if I want to save the file to
disk. Which is the way browers handle any file that has no browser
plug in.

What are you trying to do run EZNEC via your browser?

Danny, K6MHE

221. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:56:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qNQ%h.7414$2v1.6719@newssvr14.news.prodigy.net>
Source record: 41721

Jim Kelley wrote:
>
> Cecil Moore wrote:
>> Just proves that you are not omniscient.
>
> I doubt that proof of that is actually required. In fact, I think
> you'll find that to be true in general for other people as well.

Actually, of the three possibilities listed by W7EL for people
not understanding him, none of the possibilities was that he
was not omniscient. :-)
--
73, Cecil http://www.w5dxp.com

222. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 01:59:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eQQ%h.7416$2v1.2805@newssvr14.news.prodigy.net>
Source record: 41722

Danny Richardson wrote:
> I have no idea what you problem is. I've upload an *.EZ on my site and
> I am using 1and1.

OK, then, why doesn't it work for me? All I want is
a solution, not a lot of hand-waving.
--
73, Cecil http://www.w5dxp.com

223. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 02:26:02 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <7dR%h.991$AI5.583@newsfe12.lga>
Source record: 41723

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:f1oju9$g5p$1@news.service.uci.edu...
>
> University of Yugoslavia. Yeah, sure thing. .....

What's that supposed to mean?
If it is not overpriced American Liberal Alma Mater then is "Yeah"????

Nikola Tesla did more for the mankind than anyone produced by US colleges.
Quite an insult to thousands of Slavic engineers immigrants who built IBMs,
GMs, etc.

Can we discuss technical matters or rather play know-it-alls gurus?
Can you point out what is wrong with that paper?

73 Yuri, oK3BU

224. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 02:43:21 UTC
From: richardharrison@webtv.net
Message-ID: <23356-463FE3C9-61@storefull-3255.bay.webtv.net>
Source record: 41724

Cecil, W5DXP wrote:
"No, just that phasing of RF signals is what is confusing the DC gurus, just like AC phasing confused Edison."

In W8JI`s pages I found this on the subject of "Mobile antennas, short verticals, loading" :
It`s long and Tom warns about taking anything from context, so it should be searched out and read in its entirety. I have no quarrel with most of Tom`s pages but find this statement curious:
"When current flows in the transmitter-end of the coil, a magnetic field is created. The time-varying magnetic field causes charges in the other turns to instantly move."

Instant movement of charges is instant current, and everyone knows that current in a coil lags the voltage.

Best regards, Richard Harrison, KB5WZI

225. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 03:10:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zSR%h.20455$JZ3.12599@newssvr13.news.prodigy.net>
Source record: 41725

Richard Harrison wrote:
> "When current flows in the transmitter-end of the coil, a magnetic field
> is created. The time-varying magnetic field causes charges in the other
> turns to instantly move."
>
> Instant movement of charges is instant current, and everyone knows that
> current in a coil lags the voltage.

Instant movement of charges is impossible except in the mind
of someone using the lumped-element model. Apparently, anything
is possible in that kind of mind. As Dr. Corum said: "Lumped
circuit theory fails because it's a *theory* whose presuppositions
are inadequate. Every EE in the world was warned of this in their
first sophomore circuits course. ... Lumped circuit theory isn't
absolute truth, it's only an analytical *theory* - and in those
resonators we have the case where this sophomore *theory* fails
*experimentally. The engineer must either use Maxwell's equations
or distributed elements to model reality."
--
73, Cecil http://www.w5dxp.com

226. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 03:31:38 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <ldrv331v4765a2vh5cic9d3m7d56h3hs61@4ax.com>
Source record: 41726

On Tue, 08 May 2007 01:59:38 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>Danny Richardson wrote:
>> I have no idea what you problem is. I've upload an *.EZ on my site and
>> I am using 1and1.
>
>OK, then, why doesn't it work for me? All I want is
>a solution, not a lot of hand-waving.

Did you try the link I gave? If you did and weren't prompted as to
saving the file then I suggest something is screwed up with your
browser as I had no problems what-so-ever.

Anyone else care to try it? http://k6mhe.com/sub/VERT1.EZ

Danny

227. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 04:04:30 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <iFS%h.115143$VU4.70861@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41627

Danny Richardson wrote:
> On Tue, 08 May 2007 01:59:38 GMT, Cecil Moore <nospam@w5dxp.com>
> wrote:
>
>> Danny Richardson wrote:
>>> I have no idea what you problem is. I've upload an *.EZ on my site and
>>> I am using 1and1.
>> OK, then, why doesn't it work for me? All I want is
>> a solution, not a lot of hand-waving.
>
> Did you try the link I gave? If you did and weren't prompted as to
> saving the file then I suggest something is screwed up with your
> browser as I had no problems what-so-ever.
>
> Anyone else care to try it? http://k6mhe.com/sub/VERT1.EZ
>
> Danny
>
>

Danny,

I tried your link, and it worked fine. I am using Firefox, and I got the option to either download the file or to open with EZNEC. (I guess I must have told my browser about EZNEC at some point.)

I got the same behavior from Cecil's qsl.net file.

73,
Gene
W4SZ

228. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 04:16:27 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <vQS%h.434818$5j1.395416@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41628

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "No, just that phasing of RF signals is what is confusing the DC gurus,
> just like AC phasing confused Edison."
>
> In W8JI`s pages I found this on the subject of "Mobile antennas, short
> verticals, loading" :
> It`s long and Tom warns about taking anything from context, so it should
> be searched out and read in its entirety. I have no quarrel with most of
> Tom`s pages but find this statement curious:
> "When current flows in the transmitter-end of the coil, a magnetic field
> is created. The time-varying magnetic field causes charges in the other
> turns to instantly move."
>
> Instant movement of charges is instant current, and everyone knows that
> current in a coil lags the voltage.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

This is one of those situations where the exact definitions are
critical. In the case of "current lags voltage" the current is measured
through the coil and the voltage is measured between the ends of the coil.

The voltage at the input of the coil (to some reference point) is not
important; only the voltage across the coil matters. Since there is
nothing in the problem statement about the coil output voltage it is not
possible to determine if there is any violation of "current lags
voltage" or not.

I am not saying anything about the assertion from W8JI. The "current
lags voltage" principle simply does not settle anything in this case.

73,
Gene
W4SZ

229. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 04:38:53 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992A95018490Enonenowhere@61.9.191.5>
Source record: 41629

Cecil Moore <nospam@w5dxp.com> wrote in news:3eM%h.21261$Um6.16572
@newssvr12.news.prodigy.net:

> The 1and1.com server that I subscribe to for w5dxp.com
> will not process the .EZ files generated by EZNEC. I
> received this reply from support@1and1.com:

I have no idea what "process" means. In my experience, IT people use the
term to describe something they don't understand in more detail.

If the intimation is that your HSP won't allow you to load arbitrary
files on your webspace for HTTP access, you need another HSP. Better HSPs
will allow you to write your own .htaccess files under Apache and set up
your own associations specific to the directory or tree... if that is
your want.

>
> "In order to get thee working, we need to have the MIME
> type for the .EZ file extension installed on the server.
> To do this, please contact the company that created the
> EZ filetype and ask them to provide to you the MIME type
> type for that extension. Let us know what it is so we
> can add it."

"get thee working" is also not self explanatory.

The usual reason that you would set up an association of extension and
MIME type on a server is for special handling or to supply extended
headers to a browser. The browser doesn't need the headers, it should
consider the headers, and in the absence of a type header, the extension
(Win only) to determine what action to take when such a document is
received.

> That leaves me in a quandary. The author of EZNEC has
> ploinked me, asked me not to send him emails, and therefore
> I have zero customer support for EZNEC. Could someone reply
> to this posting so w7el will see it and, hopefully, put aside
> his personal vendetta long enough to answer the customer
> service question which not only affects my web page but
> also the w2du.com web page?

Don't you ever let a chance go by, go by!

The lack of detail on the "w2du.com problem" leaves one guessing.

Owen

230. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 04:40:28 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1178599228.313805.232300@w5g2000hsg.googlegroups.com>
Source record: 41630

On May 7, 4:04 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> Antonio Vernucci wrote:
> > My question concerns the well known Struthers RF Wattmeter
> > TS-1285/URM-120 which has three big plug-ins (2-30 MHz 1000 Watts,
> > 25-250 MHz 500 Watts, 200-1000 MHz 500 Watts).
>
> > Differently from all common wattmeters, the Struthers meter has a
> > perfectly linear scale. How could they achieve that?
>
> > On QST magazine (May 1996, pag. 77) K3BRS states that replacing the
> > diode with a different type would cause the initial part of the scale to
> > become very inaccurate.
>
> > Does anyone know of special diodes resulting in a linear wattmeter scale?
>
> > 73
>
> > Tony I0JX
>
> If you operate a diode detector in the "square law" region, the voltage
> output is proportional to the incident power. You don't get a huge
> dynamic range where this is true (10-20 dB, perhaps?), but on the other
> hand, people have been building diode detector based power meters for
> decades. Different diodes have different curves, so changing diode type
> would affect the calibration.

Wellllll...I think a bit more than 20dB. The HP zero-bias detector
diode I used quite a few years ago in a field strength meter has
usable output down to about -55dBm input, and as I recall the square
law response holds up to a bit above 0dBm. Admittedly you need a
pretty good amplifier to actually use the low end to that low a level.

On the other hand, I'm not convinced that my Struthers meter is all
that accurate. I should compare it with a good RF power meter
sometime.

Cheers,
Tom

231. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 05:55:19 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178603719.213537.66500@e65g2000hsc.googlegroups.com>
Source record: 41631

On May 7, 7:26 pm, "Yuri Blanarovich" <K...@optonline.net> wrote:
> "Jim Kelley" <jwkel...@uci.edu> wrote in message

> If it is not overpriced American Liberal Alma Mater then is "Yeah"????

You make a good point.

> Nikola Tesla did more for the mankind than anyone produced by US colleges.

Let's not get carried away. And I don't think Tesla was from
Yugoslavia.

> Quite an insult to thousands of Slavic engineers immigrants who built IBMs,
> GMs, etc.

No insult to them was ever intended. They didn't write the paper by
any chance....??

> Can we discuss technical matters or rather play know-it-alls gurus?
> Can you point out what is wrong with that paper?

I wish I understood this obsession you and Cecil have with gurus. I
don't share it.

About the paper; do you believe everything you read in the papers?
As I said, whether it is correct or not, I don't think it is
illustrated in Cecil's EZNEC printout.

73, Jim AC6XG

232. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 06:38:33 UTC
From: "David L. Foreman" <davelf11@cox.net>
Message-ID: <nl6043hf08cg5o3dflpj4t7cjkgsckpi75@4ax.com>
Source record: 41632

On Mon, 07 May 2007 20:31:38 -0700, Danny Richardson <n_group@k6mhe.com> wrote:

>On Tue, 08 May 2007 01:59:38 GMT, Cecil Moore <nospam@w5dxp.com>
>wrote:
>
>>Danny Richardson wrote:
>>> I have no idea what you problem is. I've upload an *.EZ on my site and
>>> I am using 1and1.
>>
>>OK, then, why doesn't it work for me? All I want is
>>a solution, not a lot of hand-waving.
>
>Did you try the link I gave? If you did and weren't prompted as to
>saving the file then I suggest something is screwed up with your
>browser as I had no problems what-so-ever.
>
>Anyone else care to try it? http://k6mhe.com/sub/VERT1.EZ
>
>Danny
>

I just tried it and I got the box Run, Save, or Cancel so nothing wrong there.
Dave Foreman

233. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 07:34:16 UTC
From: Jeff <jeff@local.host>
Message-ID: <464027c8$0$26321$834e42db@reader.greatnowhere.com>
Source record: 41633

I would have thought that the easiest solution would have been to zip the .EZ files, I am sure that the server can handle ZIP files.

73
Jeff

234. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 08:24:52 UTC
From: miso@sushi.com
Message-ID: <1178612692.059426.150370@q75g2000hsh.googlegroups.com>
Source record: 41634
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 10:38 am, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> If my location is in southern California, what would I hear on a
> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> between what I would hear at night and what I would hear during the
> day?
>
> On medium-wave station, I notice the interference -- in the form of
> tones -- to be louder at night than the day. Does this difference also
> apply to extreme shortwave frequencies as high as 300 GHz?
>
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
> Thanks,
>
> Radium

I have an old Microtel "receiver" with a 100GHz limit on the dial.

235. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 10:54:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RFY%h.890$LR5.565@newssvr17.news.prodigy.net>
Source record: 41635

Danny Richardson wrote:
> Did you try the link I gave?

It worked with my browser. I just want my web page
to respond the same as yours.

> Anyone else care to try it? http://k6mhe.com/sub/VERT1.EZ

Try this one and tell me what's wrong. The file is there.

http://www.w5dxp.com/VERT1.EZ
--
73, Cecil http://www.w5dxp.com

236. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 11:05:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9QY%h.891$LR5.629@newssvr17.news.prodigy.net>
Source record: 41636

Jeff wrote:
> I would have thought that the easiest solution would have been to zip the
> .EZ files, I am sure that the server can handle ZIP files.

I'm sure there are a number of workarounds. The question
still remains. Why does http://k6mhe.com/sub/VERT1.EZ
and http://www.w5dxp.com/VERT1.EZ not work?
--
73, Cecil http://www.w5dxp.com

237. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 11:22:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Y3Z%h.893$LR5.172@newssvr17.news.prodigy.net>
Source record: 41637

```
Cecil Moore wrote:
> Jeff wrote:
>> I would have thought that the easiest solution would have been to zip
>> the .EZ files, I am sure that the server can handle ZIP files.
>
> I'm sure there are a number of workarounds. The question
> still remains. Why does http://k6mhe.com/sub/VERT1.EZ
> work and http://www.w5dxp.com/VERT1.EZ not work?
^^^^

Sorry, left out a word above. I tried zipping the EZNEC
file and that worked just fine.
--
73, Cecil http://www.w5dxp.com
```

238. Re: Radiate Power Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 12:05:01 UTC
From: "Dave (from the UK)" <see-my-signature@southminster-branch-line.org.uk>
Message-ID: <4640676f@212.67.96.135>
Source record: 41638

Robert11 wrote:
> Hello:

> About a quarter of a mile from my house, in a direct line, there's a Ham
> operator with a massive mast of what must be pushing 100 feet in height.
> Almost the kind you would see for a small commercial station. Has all sorts
> of antenna and beams mounted to it.
> I have no idea what freq's he operates at, and really don't want to ask him.

He would probably be quite happy to tell you.

> This is obviously a chap who takes his hobby seriously, and probably
> radiates at the max allowable power levels, I would guess.
>
> Is there any possibility that if he points his array at my house, it might
> radiate enough power to cause my problem ?

Yes it is quite possible.

As someone else said, ask him to run a test.

You could also test for RFI yourself by wrapping it in metal foil
(tinfoil). That would make a good Faraday cage and would stop any RF
reaching it - not only his of course.

Of course, that assumes you could hear the alarm.

However, if it is his transmitter that is causing your alarms to go off,
you can be 100% it is a fault on your alarm(s). They should not be
responding to the RF. Unfortunately, although things have improved over
the years, consumer items are not very immune to RF - it costs a few
cents more to add decent RF protection.

It would probably be fairly easy to harden one against RF. Covering the
solid parts of the case with metal paint would help a lot.

> If not, any thoughts on what else might be causing these chirps from two
> different mfg's., and several models ?

RFI seems quite a likely cause, but it could be very local, such as
something arcing in your house.

As I say, screening the alarms would tell you if its RFI.

> Much thanks,
> Bob
>
>

--
Dave (from the UK)

Please note my email address changes periodically to avoid spam.
It is always of the form: month-year@althorne.org
Hitting reply will work for a few months only - later set it manually.

http://chessdb.sourceforge.net/ - a Free open-source Chess Database

239. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 12:29:26 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46406d1a$0$21252$39cecf19@news.twtelecom.net>
Source record: 41639

Cecil Moore wrote:

> Danny Richardson wrote:
>
>> Did you try the link I gave?
>
>
> It worked with my browser. I just want my web page
> to respond the same as yours.
>
>> Anyone else care to try it? http://k6mhe.com/sub/VERT1.EZ
>
>
> Try this one and tell me what's wrong. The file is there.
>
> http://www.w5dxp.com/VERT1.EZ

If it's really there, then perhaps the permissions are incorrect. I
tried with wget, a unix command line tool for pulling individual files
or even whole sites, and got a "404 Not Found" error. That error is
generated on the server end, not mine.

tom
K0TAR

240. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 12:37:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ea_%h.655$mR2.387@newssvr22.news.prodigy.net>
Source record: 41640

Tom Ring wrote:
> Cecil Moore wrote:
>> Try this one and tell me what's wrong. The file is there.
>>
>> http://www.w5dxp.com/VERT1.EZ
>
> If it's really there, then perhaps the permissions are incorrect. I
> tried with wget, a unix command line tool for pulling individual files
> or even whole sites, and got a "404 Not Found" error. That error is
> generated on the server end, not mine.

Thanks Tom, that demonstrates the problem I am having.
Why .EZ files would be handled differently by k6mhe.com
and w5dxp.com is perplexing. Maybe Linux vs Microsoft?

Danny, are you subscribing to Linux hosting?
I am subscribing to Microsoft hosting.
--
73, Cecil http://www.w5dxp.com

241. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 13:08:33 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <58t043d2g343rji2j22tu92vqof53k45pt@4ax.com>
Source record: 41641

On Tue, 08 May 2007 07:37:31 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>Tom Ring wrote:
>> Cecil Moore wrote:
>>> Try this one and tell me what's wrong. The file is there.
>>>
>>> http://www.w5dxp.com/VERT1.EZ
>>
>> If it's really there, then perhaps the permissions are incorrect. I
>> tried with wget, a unix command line tool for pulling individual files
>> or even whole sites, and got a "404 Not Found" error. That error is
>> generated on the server end, not mine.
>
>Thanks Tom, that demonstrates the problem I am having.
>Why .EZ files would be handled differently by k6mhe.com
>and w5dxp.com is perplexing. Maybe Linux vs Microsoft?
>
>Danny, are you subscribing to Linux hosting?
>I am subscribing to Microsoft hosting.

Linux.

242. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 13:17:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GL_%h.2857$RX.600@newssvr11.news.prodigy.net>
Source record: 41642

Danny Richardson wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Danny, are you subscribing to Linux hosting?
>> I am subscribing to Microsoft hosting.
>
> Linux.

Aha, that's probably the best clue yet. Thanks.
--
73, Cecil http://www.w5dxp.com

243. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:10:04 UTC
From: John - KD5YI <groups5not@verizon.net>
Message-ID: <0x%%h.1215$LJ3.880@trnddc02>
Source record: 41643

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:Y3Z%h.893$LR5.172@newssvr17.news.prodigy.net...
> Cecil Moore wrote:
>> Jeff wrote:
>>> I would have thought that the easiest solution would have been to zip
>>> the .EZ files, I am sure that the server can handle ZIP files.
>>
>> I'm sure there are a number of workarounds. The question
>> still remains. Why does http://k6mhe.com/sub/VERT1.EZ
>> work and http://www.w5dxp.com/VERT1.EZ not work?
> ^^^^

Cecil -

I suspect the second link above does not actually exist. My browser says
"The page cannot be found" which has nothing to do with the file type (.ez).

> Sorry, left out a word above. I tried zipping the EZNEC
> file and that worked just fine.
> --
> 73, Cecil http://www.w5dxp.com

I think some browsers may not be set up to automatically ask what to do with
the file and they might try to execute it. Try right-clicking on your link
and then select "save link as". See if that works.

I've had no problems with the coil file.

Good luck.

John

244. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:19:16 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <NF%%h.2151$V01.1489@newsfe12.lga>
Source record: 41644

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:1178603719.213537.66500@e65g2000hsc.googlegroups.com...
> On May 7, 7:26 pm, "Yuri Blanarovich" <K...@optonline.net> wrote:
>> "Jim Kelley" <jwkel...@uci.edu> wrote in message
>
>> If it is not overpriced American Liberal Alma Mater then is "Yeah"????
>
> You make a good point.
>
>> Nikola Tesla did more for the mankind than anyone produced by US
>> colleges.
>
> Let's not get carried away. And I don't think Tesla was from
> Yugoslavia.
>

He was born in Smiljan Lika, Serbia, Yugoslavia, studied at Carl University in Prague. People know more about tinkerer Edison, than about greatest engineering genius who gave us AC and so much.

>> Quite an insult to thousands of Slavic engineers immigrants who built
>> IBMs,
>> GMs, etc.
>
> No insult to them was ever intended. They didn't write the paper by
> any chance....??
>

Seemed to me implied: "Yeah" = mickey-mouse universities in Yugoslavia (or Eastern Eu). For your information and based on my experience, Eu Universities have much more rigorous programs and theoretical depth than NA-U. When I was working for Big Blue, about half of the bright engineers were graduates from Eastern Europe (post war imigration).

>> Can we discuss technical matters or rather play know-it-alls gurus?
>> Can you point out what is wrong with that paper?
>
> I wish I understood this obsession you and Cecil have with gurus. I
> don't share it.
>

It is more like reaction to people who are sometimes wrong and chime in on a subject with: "hey stupid, it can't be" - parading as omnipotent gurus, instead of asking questions and discussing the matter inteligently and either defending their position or admitting that maybe we were not so stupid and they COULD be wrong, and learn and get better.

What we perceive as "gurus" here, is a type of person who is wrong about the subject, tends to get riding on a high horse putting down the opposition, sometimes ridiculing and close minded to any, even elaborate explanation or reasoning. Typically "guru" wants to have their last "right" word, even if realizing that maybe they were wrong, never admitting or giving credit where is due.

Looks like too much Woodstock generation getting into engineering and forcing their "truth" to be the only one standing (Global Warming). If often enough repeated in politics, it catches on with halfbright worshippers, but has no place in science. Reality trumps theory, regardless who is trumpeting it.

I am sorry that sometimes I get provoked and fire back in a like manner, but when someone is trying to convince me that RF is behaving like DC current, when I got burned my fingers on the bottom of the loading coil, then I just react in kind.

> About the paper; do you believe everything you read in the papers?
> As I said, whether it is correct or not, I don't think it is
> illustrated in Cecil's EZNEC printout.
>

If it is New York Times, definitely not. Technical papers? I would read them carefully, take them with grain of salt, and if important to me, try to understand it and I would verify it if possible.

Even if sometimes discussions get tangled here, because some just can't, or don't want to get it, I am gratefull to those involved, because they bring some points, that I would have not paid attention to and missed important link in the chain of knowledge on the subject.

Another outcome is, that some subjects in current literature are not all that properly described and warrant more detailed explanation and proof to get corrected, and some discussions here shed some light at it and highlinght need for more down to earth tutorial to set the record straight.

> 73, Jim AC6XG
>

73 Yuri, oK3BU

245. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:21:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2I%%h.911$LR5.454@newssvr17.news.prodigy.net>
Source record: 41645

John - KD5YI wrote:
> I suspect the second link above does not actually exist. My browser says
> "The page cannot be found" which has nothing to do with the file type (.ez).

Seems it has everything to do with file type .EZ since
every other extension works just fine. If I simply change
the coil505.EZ extension to coil505.bin and leave the file
just as it is, everything works fine. Try it for yourself.

http://w5dxp.com/coil505.bin

The server is reporting that the .EZ file cannot be found even
though it actually exists on the server. It's the Microsoft
server that has the problem. The Linux server works just
fine. Apparently, the Microsoft server doesn't recognize
.EZ as a valid file type. If I ZIP the .EZ file, it also
handles it just fine.
--
73, Cecil http://www.w5dxp.com

246. Re: H F Antenna - BWD-90 VS G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:23:15 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f1q14r$m2i$1@f04n12.cac.psu.edu>
Source record: 41646

Jim Lux wrote:
> Bob D. wrote:
>> I'm still trying to decide on a ready-made HF antenna. I have a couple
>> more questions.
>>
>> Can the Barker & Williamson's BWD-90 really be used without an antenna
>> tuner?
>>
>> Does the G5RV really need an antenna tuner?
>>
>> Wow, there's a 7:1 price difference here! Hope to be QSOing soon,
>> instead of emailing.
>>
> The B&W (and all of the essentially identical antennas which are a
> folded dipole of some sort with a big resistor) are an interesting
> solution to a system engineering problem. Sure, they're hideously
> inefficient, but, they don't require a tuner, and if you're not power
> limited, you can overcome the inefficiency by just turning up the amp.
>
> It's no different than putting a 3dB pads on the ports of a mixer to
> make them less sensitive to the match. You take a efficiency hit, but
> you pick up overall system insensitivity to component variations, etc.
>
>
> A terminated folded dipole and a broadband solid state amp is not a bad
> system solution for someone who needs a broadband (2-30MHz) system that
> is simple to deploy and has essentially instantaneous frequency change
> ability. Hmmm.. folks with ALE or HF frequency hopping radios in a
> tactical environment. And who buys these sorts of things: military and
> diplomatic folks, who aren't power constrained, need fast frequency
> changes and simple installation, and aren't concerned about saving every
> penny. In that market, a few hundred dollars more or less makes almost
> no difference.

Jim, that is an interesting - and correct - outlook on the folded
dipole. That's why it is a good solution for people who aren't
constrained in power.

For Hams, I would think it isn't a great solution, although if run at
full legal power it might be okay.

For Bob:

Don't be afraid of a tuner. Look at it as just another bit of circuitry.
Turning knobs is part of the fun of Ham radio.

That G5RV will need a tuner.

A suggestion for an antenna:

Get a ladder line fed dipole of 130 feet. I think AES sells them for around 35 dollars or so. Use a tuner on it. If you want automation, there are automatic tuners that will handle balanced line. MFJ makes one for example. You'll have a nice all band antenna, if a little "lobey" on the upper bands. And you won't have the loss of the Folded dipole.

- 73 de Mike KB3EIA -

247. 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:42:39 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <z%%%h.34326$G23.22378@newsreading01.news.tds.net>
Source record: 41647

Yes, he spent a few bucks on this project!

http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf

248. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 14:46:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <b300i.918$LR5.461@newssvr17.news.prodigy.net>
Source record: 41648

Yuri Blanarovich wrote:
> What we perceive as "gurus" here, is a type of person who is wrong about the
> subject, tends to get riding on a high horse putting down the opposition,
> sometimes ridiculing and close minded to any, even elaborate explanation or
> reasoning.

What really gets my dander up are the gurus who use their
respected guru status to mount ad hominem attacks against
someone who they know is technically correct. In my book,
that is unethical behavior.
--
73, Cecil http://www.w5dxp.com

249. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 15:03:08 UTC
From: richardharrison@webtv.net
Message-ID: <18308-4640912C-110@storefull-3252.bay.webtv.net>
Source record: 41649

Jim Kelley wrote:
"Let`s not get carried away. And I don`t think Tesla was from Yugoslavia."

WebTV is owned by Microsoft and uses their search engine. Searching for "radio amateur fact of the day from Tigertek" immediately turned up their site. I scrolled down to find Tesla`s boat on their March 3 offering:
"On May 18, 1899, Nikola Tesla demonstrated a six-foot-long radio-controlled boat to members of the Chicago Commercial Club. He had designed and built the boat the previous year, but only few had seen it prior to the Chicago Commercial Club demonstration. Club members saw that could remotely start the boat`s motor, switch flashing boat lights on and off, and navigate around a miniature lake that he created for the demonstration. Individuals in the crowd shouted commands that he sent wirelessly by radio, so that the astonished crowd could see that the boat actually was being wirelessly-remotely-controlled. Copyright 2005 Tigertek, Inc.

It wasn`t until WW-2 and the U.S. invasion of Salerno when the Germans tried to repel it using remotely controlled bombers, that radio control was used so expertly.

I first read about Tesla in "Prodigal Genius", a book supplied by some donor ro relieve the boredom aboard my navy ship in WW-2. I was a fiesel engine nechanic interested in electricity and radio so I read it. Tesla impressed me. He was more famous for his inventions of 3-phase electric power, the induction motor, and harnessing the power of Niagra Falls for electricity than he was for radio control. By all accounts he was born in Yugoslavia, educated in Europe, and came to the U.S. to work for Thomas Edison who was unimpressed with Tesla. So Tesla went to George Westinghouse and made a deal.

Incidently. nothing exceeds the speed of light, not even photons which are supposed to be massless at rest by Einstein`s special law of relativity. You must have current before it creates a magnetic field. Current is not instantaneous in any case in a conductor where the electrons set in motion do have have mass.

Best regards, Richard Harrison, KB5WZI

250. Re: Which modeler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 15:40:16 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f1q5l0$f36$1@nntp1.jpl.nasa.gov>
Source record: 41652

RDWeaver wrote:
> On May 1, 5:49 pm, 4nec2 <4...@gmx.net> wrote:
>
>
>>I noticed RDW had a budget of some 450 dollars. If I were him I would
>>get me a Nec4 license.
>>
>
>
> Where can I learn more about that?
>
> 73, RDW
>
>
>
>
http://www.llnl.gov/IPandC/technology/software/softwaretitles/nec.php

251. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 15:41:48 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178638908.246952.215460@w5g2000hsg.googlegroups.com>
Source record: 41650

On May 8, 7:19 am, "Yuri Blanarovich" <K...@optonline.net> wrote:

> He was born in Smiljan Lika, Serbia, Yugoslavia, studied at Carl University
> in Prague. People know more about tinkerer Edison, than about greatest
> engineering genius who gave us AC and so much.

You may be just a little biased when it comes to Tesla, but
understandably so. I am more of an enthusiast than a fanatic.

> Seemed to me implied: "Yeah" = mickey-mouse universities in Yugoslavia (or
> Eastern Eu).

It was a regretable choice. Cecil has that effect on me
occasionally. I did manage to control myself well enough to avoid
calling him a "guru" though. :-)

> > I wish I understood this obsession you and Cecil have with gurus. I
> > don't share it.
>
> It is more like reaction to people who are sometimes wrong and chime in on a
> subject with: "hey stupid, it can't be" - parading as omnipotent gurus,
> instead of asking questions and discussing the matter inteligently and
> either defending their position or admitting that maybe we were not so
> stupid and they COULD be wrong, and learn and get better.

If only that were a two-way street.

> What we perceive as "gurus" here, is a type of person who is wrong about the
> subject, tends to get riding on a high horse putting down the opposition,
> sometimes ridiculing and close minded to any, even elaborate explanation or
> reasoning. Typically "guru" wants to have their last "right" word, even if
> realizing that maybe they were wrong, never admitting or giving credit where
> is due.

Evidently a matter of perception and partiality. Cecil has more 'last
words' on this newsgroup than any other contributer by an order of
magnitude, and fits the rest of your description to a tee.

> Looks like too much Woodstock generation getting into engineering and
> forcing their "truth" to be the only one standing (Global Warming). If often
> enough repeated in politics, it catches on with halfbright worshippers, but
> has no place in science.

'Current pileup' could be just such a phenomenon.

> I am sorry that sometimes I get provoked and fire back in a like manner, but
> when someone is trying to convince me that RF is behaving like DC current,
> when I got burned my fingers on the bottom of the loading coil, then I just

> react in kind.

Do I stand accused of trying to convince you that RF behaves like DC?
I'm not sure that's entirely fair. I so admit to discouraging belief
that RF behaves like magic.

> Even if sometimes discussions get tangled here, because some just can't, or
> don't want to get it, I am gratefull to those involved, because they bring
> some points, that I would have not paid attention to and missed important
> link in the chain of knowledge on the subject.

> Another outcome is, that some subjects in current literature are not all
> that properly described and warrant more detailed explanation and proof to
> get corrected, and some discussions here shed some light at it and
> highlinght need for more down to earth tutorial to set the record straight.

That's pretty much how I feel about it. I think it helps to keep an
open mind and consider all of the relevant facts.

73, Jim AC6XG

252. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 15:47:49 UTC
From: andreas magun <achmagun@bluewin.ch>
Message-ID: <46409b9c$1_3@news.bluewin.ch>
Source record: 41651
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

pointing a big dish to the sun you might catch the continuum
emission (increased noise) of a solar flare. This has been
observed very rarely so far. Mind that millimeter waves and
especially 300 GHz are strongly absorbed by water vapour in
the earth atmosphere.

Radium schrieb:
> On May 7, 11:02 am, "ralph" <r...@home.com> wrote:
>
>> Night and day no difference at 300 ghz.
>
> Okay.
>
>> There is no such thing as "DXED" on
>> 300 ghz LOL!
>
> Why doesn't DX work at 300 GHz?
>
>> You probably wont hear a thing unless your inside a big city. And then only
>> on FM or spread spectrum that = NOTHING!
>
> But on AM, won't magnetic interference cause tones on the receiver of
> any frequency provided that the disruption is occurring at the
> frequency?
>
> If there is a solar storm causing the emission of electromagnetic
> radiation at 300 GHz wouldn't the 300 GHz receiver pick up the signals
> caused by the solar storms?
>

253. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:26:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Cw10i.846$UU.625@newssvr19.news.prodigy.net>
Source record: 41653

Jim Kelley wrote:
> Evidently a matter of perception and partiality. Cecil has more 'last
> words' on this newsgroup than any other contributer by an order of
> magnitude, and fits the rest of your description to a tee.

Gurus are individuals who already know everything there is
to know and are therefore incapable of learning anything
new. That's not me. That's the arrogant individual who lists
all the possibilities that might cause someone to disagree
with him and none of those possibilities is that he might
be wrong.
--
73, Cecil http://www.w5dxp.com

254. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:30:01 UTC
From: Mark@kb9rqz.org
Message-ID: <nb9143trhqlc81pbeiqtc67hiia6t0vo22@4ax.com>
Source record: 41654
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On 7 May 2007 13:03:45 -0700, nm5k@wt.net wrote:

>On May 7, 12:20 pm, Radium <gluceg...@gmail.com> wrote:
>> On May 7, 11:02 am, "ralph" <r...@home.com> wrote:
>
>>
>> Why doesn't DX work at 300 GHz?
>
>Well, there could be, but at that freq, it would have to be line of
>sight.. Like light rays... So DX isn't gonna happen too often, unless
>one is on the space shuttle, or you each have gazillion foot towers,
>with dishes or whatever aimed exactly at each other..
>BTW, a QSO with the shuttle might qualify as DX, due to the
>high frequency involved, but the actual distance still won't be too
>awful far.. IE: 150-300 nm or so, depending on the orbit..

or you happen to choose the right freq for ET

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woghger you are a Congress all in your own head

http://khkb9rqz.blogspot.com

Given Dloyds interest in me I m opening a furom for real
comment about his post here
http://dloydatkb9rqz.blogspot.com/

--
Posted via a free Usenet account from http://www.teranews.com

255. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:33:13 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4640a649$0$17940$4fafbaef@reader1.news.tin.it>
Source record: 41655

> We are talking about millivolt levels, but the good news is that today,
> stable high gain DC amplifiers are a snack (see chopper stabilised Op
> Amps).

Yes, but to my knowledge, the Struthers wattmeter is purely passive, no amplifier whatsoever.

73

Tony I0JX

256. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:35:30 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4640a6d2$0$17953$4fafbaef@reader1.news.tin.it>
Source record: 41656

> If you operate a diode detector in the "square law" region, the voltage output
> is proportional to the incident power. You don't get a huge dynamic range
> where this is true (10-20 dB, perhaps?), but on the other hand, people have
> been building diode detector based power meters for decades. Different diodes
> have different curves, so changing diode type would affect the calibration.

I am not sure whether, confining operation to the square law region, it would be possible to build a power meter that has no DC amplifier (like the Struthers wattmeter).

73

Tony I0JX

257. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:47:56 UTC
From: "R. Scott" <lintardspamtrap@scotts-home.net>
Message-ID: <JHqEny.3sy@news.boeing.com>
Source record: 41658

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:z%%%h.34326$G23.22378@newsreading01.news.tds.net...
> Yes, he spent a few bucks on this project!
>
> http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf

my question is Why ?

I mean he has the ability to do it obviously, and the technical to do it
yes. But Why. Is it that much more over
a standard 4 elem steppir at say 70 FT. It wont open propagation that
isn't there ?

Just seems a waste to me

Scotty W7PSK

258. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 16:58:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178643539.755848.201440@h2g2000hsg.googlegroups.com>
Source record: 41657

On May 8, 9:26 am, Cecil Moore <nos...@w5dxp.com> wrote:

> Gurus are individuals who already know everything there is
> to know and are therefore incapable of learning anything
> new. That's not me.

So, that makes you the guy who says things like that about a person
just because he disagrees with him on a newsgroup.

ac6xg

259. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 17:47:27 UTC
From: Spam Collector <spam-collector@artair.com>
Message-ID: <slrnf41dtj.2vi.spam-collector@k6.artair.com>
Source record: 41659

On 2007-05-04, Owen Duffy <none@no.where> wrote:
>
> Efficient and effective multi-band antennas don't happen by accident,
> they are a significant challenge, and an efficient and effective 160m to
> 70cm is an extreme challenge. On the other hand, you will see proof that
> "loading up the fencewire works", but it goes to the meaning of 'works',
> which is less specific than 'effective and efficient'.
>
Thanks to all for the insightful replies. Evidently the reason
I couldn't find much information on 'oversized' antennas is that
they aren't very effective. Then again, if you never experiment
with unconventional ideas you'll never discover anything new, so
I may just try it and see what happens. If all else fails I can
always make several smaller narrowband antennas out of the wire.

Thanks again,
Frank
KE5MJZ

260. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 17:48:21 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <FJ20i.34329$G23.21551@newsreading01.news.tds.net>
Source record: 41660

You have raised an interesting question - When do you reach the point of diminishing returns?

"R. Scott" <lintardspamtrap@scotts-home.net> wrote in message news:JHqEny.3sy@news.boeing.com...
> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
> news:z%%%h.34326$G23.22378@newsreading01.news.tds.net...
>> Yes, he spent a few bucks on this project!
>>
>> http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf
>
> my question is Why ?
>
> I mean he has the ability to do it obviously, and the technical to do it
> yes. But Why. Is it that much more over
> a standard 4 elem steppir at say 70 FT. It wont open propagation that
> isn't there ?
>
> Just seems a waste to me
>
>
> Scotty W7PSK
>
>

261. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 17:53:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <AO20i.858$UU.527@newssvr19.news.prodigy.net>
Source record: 41661

Spam Collector wrote:
> Evidently the reason
> I couldn't find much information on 'oversized' antennas is that
> they aren't very effective.

My 130 ft. dipole is 'oversized' on 10m and has a
gain of 10.6 dBi at a take off angle of 12 degrees.
--
73, Cecil http://www.w5dxp.com

262. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:06:25 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4640bc22$0$18879$4c368faf@roadrunner.com>
Source record: 41662

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:FJ20i.34329$G23.21551@newsreading01.news.tds.net...
> You have raised an interesting question - When do you reach the point of
> diminishing returns?
>
> "R. Scott" <lintardspamtrap@scotts-home.net> wrote in message
> news:JHqEny.3sy@news.boeing.com...
>> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
>> news:z%%%h.34326$G23.22378@newsreading01.news.tds.net...
>>> Yes, he spent a few bucks on this project!
>>>
>>> http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf
>>
>> my question is Why ?
>>
>> I mean he has the ability to do it obviously, and the technical to do it
>> yes. But Why. Is it that much more over
>> a standard 4 elem steppir at say 70 FT. It wont open propagation that
>> isn't there ?
>>
>> Just seems a waste to me
>>
>>
>> Scotty W7PSK
>>
>>
>
>

Im glad somebody tried it. Now If we can get the results we will know
whether or not it is worth anyone else doing it.

Jimmie

263. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:09:57 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <stpsuaG1zLQGFw0Y@g3ohx.demon.co.uk>
Source record: 41663

In message <JHqEny.3sy@news.boeing.com>, R. Scott
<lintardspamtrap@scotts-home.net> writes
>"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
>news:z%%%h.34326$G23.22378@newsreading01.news.tds.net...
>> Yes, he spent a few bucks on this project!
>>
>> http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf
>
>my question is Why ?
>
>I mean he has the ability to do it obviously, and the technical to do it
>yes. But Why. Is it that much more over
>a standard 4 elem steppir at say 70 FT. It wont open propagation that
>isn't there ?
>
>Just seems a waste to me
>
>
>Scotty W7PSK
>
>

You don't need 'propagation' with an antenna like that. It produces its
own ionization in the ionosphere.
Ian.
--

264. Difference in field strength reading using different antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:22:55 UTC
From: FG <foreign.goods@gmail.com>
Message-ID: <1178648575.081737.280710@o5g2000hsb.googlegroups.com>
Source record: 41664

We are testing a field strength meter and decided to measure a low power (100mW) FM transmission using an unused frequency. On the first test, we used a dipole antenna connected to a balance-unbalance device before being connected to the field strength meter. The second test we utilized an FM telescoping antenna.

Using the dipole, when we turned off the transmitter, the reference field strength reading remained pretty steady. But when we used the monopole, the reference reading jumped up and down by a few microvolts even with the FM transmitter off.

What would be an explanation to this?

Thank you!

265. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:27:11 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <k8f143t6c5tj3lfirnoev85kmtfma0lrb5@4ax.com>
Source record: 41665
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Mon, 07 May 2007 14:05:37 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>
>> The percussion has the vocalist covered up. I cannot make out any
>> words. If there is a melody mixed in the presentation, I cannot sense
>> it. The flashing lights are a major distraction. The harsh lighting
>> does more to conceal the performance than illuminate it. Twanging a
>> guitar is OK for a sound effect but I find it annoying after a short
>> while.
>> No offense intended, just my reaction.
>>
>> John Ferrell W8CCW
>
>You might like this version from 25 years ago more to your taste...same
>guitarist when he was just a lad......
>
>http://www.youtube.com/watch?v=En_-Iwyypx0
>
Still too much noise covering the vocalist! The huge microphone
blocking the singers mouth keeps me from helping my ears with lip
reading. I believe the technicians are spoiling the work. I went
Upstairs and got my hearing aids but they did not make any perceivable
difference. (note: I normally wear them all the time but Arthritis
Physical Therapy in the pool make it prudent to postpone putting them
on!)

http://www.youtube.com/watch?v=C1h99XYvLsc&mode=related&search=
is much better. In spite of the poor video quality My lip reading adds
a little more to the comprehension.

I like this:
http://www.youtube.com/watch?v=idtid6IJRWU&mode=related&search=
especially the instrumental lead in.

The extreme limit of my appreciation of Rock music is like what is
found in "Jesus Christ Super Star".

I do believe these musicians have talent but they must perform what
sells....

I think I will go play some Kingston Trio to cleanse my palette!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

266. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:45:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1qgfb$48d$1@news.service.uci.edu>
Source record: 41666

Richard Harrison wrote:

> Incidently. nothing exceeds the speed of light, not even photons which
> are supposed to be massless at rest by Einstein`s special law of
> relativity. You must have current before it creates a magnetic field.
> Current is not instantaneous in any case in a conductor where the
> electrons set in motion do have have mass.

Hi Richard,

Perhaps it should be noted that electromagnetic waves and photons
travel neither faster nor slower than the speed of light in their
medium of travel.

73, Jim AC6XG

267. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 18:56:09 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <lJ30i.13$S53.9@newsfe12.lga>
Source record: 41667

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:1178643539.755848.201440@h2g2000hsg.googlegroups.com...
> On May 8, 9:26 am, Cecil Moore <nos...@w5dxp.com> wrote:
>
>> Gurus are individuals who already know everything there is
>> to know and are therefore incapable of learning anything
>> new. That's not me.
>
> So, that makes you the guy who says things like that about a person
> just because he disagrees with him on a newsgroup.
>
> ac6xg
>

It is not matter of disagreeing with person, more like discussing the subject, finding out the reality (truth) and learning, sometimes admitting of being off, or wrong, rather than defending the opposite, just because.....

Many times I see that people do not bother trying to understand the problem, researching it , but fire off "naaah, it can't be" and reduce their comments to personal attacks.

Again, thanks to Cecil, Walt, Richard H and others for their contribution to discussions, their persistence, it opened my antenna horizons and gave me better understanding of wasaaaap with antennas. It will help me in my further exploits and trying to build better arrays and taking advantage of propagation modes and environment.

As a contester, I would encourage "gurus" to proclaim their "wisdom", for it will confuse the competition and allow me to beat them by wider margin :-)
But as engineer, I would rather know the reality and what's behind it.

Just as an example: W8JI proclaims gospel on his web site that Beverage antennas longer than 700 ft (on 160) are useless and waste of effort. When I operated from W8LRL QTH and used his 3000 ft staggered phased JA Beverage, I worked some 25 JAs, when rest of the East Coast hardly worked one or two. Reality trumps over "guru theory" still insisting on his "gospel".

73 Yuri, K3BU

268. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 19:06:48 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <lT30i.14$S53.12@newsfe12.lga>
Source record: 41668

"R. Scott" <lintardspamtrap@scotts-home.net> wrote in message
news:JHqEny.3sy@news.boeing.com...
> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
> news:z%%%h.34326$G23.22378@newsreading01.news.tds.net...
>> Yes, he spent a few bucks on this project!
>>
>> http://www.1982crew.com/PHP-Nuke/PDF/K9LTN.pdf
>
> my question is Why ?
>
> I mean he has the ability to do it obviously, and the technical to do it
> yes. But Why. Is it that much more over
> a standard 4 elem steppir at say 70 FT. It wont open propagation that
> isn't there ?
>
> Just seems a waste to me
>
>
> Scotty W7PSK

"Waste" like difference between magnifying glass and a microscope.

You would not say that if you had a chance to be behind one of those.

Antennas like that make their own propagation, when rest of the 3 - 4 el.
slobs can't hear a thing, the real antennas like that can still do so for
another hour or two, or just do it anytime.
I had "just" couple of my stacked Razors and that extended my propagation
over mortal Yagi variety by hour or two. I figured I had about 14 - 16 dBd
on 15m from stacked 7 el. log Razors http://www.k3bu.us/razor_beams.htm

If K9LTN had 6 Razors that would be a notch higher killer antenna.

269. Help with tower transport from DC to NJ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 19:24:00 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <s740i.15$S53.2@newsfe12.lga>
Source record: 41669

Howdy antenna lovers!

We are looking for transportation of Big Bertha tower and some antennas from the north of DC area to mid NJ. It should be either tractor trailer with 40 - 50 ft bed or perhaps car transportation (or large boat) trailer. The longest piece is 46 ft long, weight total about 10,000 lbs.
This is for Tesla Radioclub N2EE/NT1E location at Bayville, NJ (near Toms River).
Tesla Radio Foundation is not for profit 501 c3 corp, and can give receipts for donations of goods and services and we are looking for gracious helper, perhaps truck returning home empty from delivery and giving us a break. We need to transport the tower within next two weeks, any time.

Any help in this matter will be greatly appreciated and will earn Tesla RC membership and contribute to this worthwhile effort to build small monument to Tesla's radio pioneering achievements.
www.TeslaRadio.org

73 Yuri, K3BU
pres. Tesla RC

270. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:11:25 UTC
From: richardharrison@webtv.net
Message-ID: <1607-4640D96D-19@storefull-3257.bay.webtv.net>
Source record: 41671

Gene, W4SZ wrote:
"The current lags voltage principle does not settle anything in this case."

W8JI claims that current flows into a turn at a coil end/s and is induced without delay into all turns of the coil, overcoming delay that the coil might otherwise impose.

If that were true, Terman would have told us so. In fact, Terman tells us the opposite is true in explaning the traveling wave tube begining on page 678 of his 1955 opus:

"The signal to be amplified is applied to the end of the helix adjacent to the electron gun. Under appropriate operating conditions an amplified signal then appears at the other end of the helix.-------inapplicable info deleted-----. The applied signal propagates around the turns of the helix and produces an electric field that is directed along the helix axis. Since the velocity with which the signal propagates along the helix wire approximates the velocity of light if the frequency is not too low (caveat is unimportant, see footnote in book), the axial field due to the signal advances with a velocity that is very closely the velocity of light multiplied by the ratio of helix pitch to helix circumference."

In other words, the axial advance is much like that of a threaded bolt as the pitch angle is always fractional. Kraus details this in his section on helical antennas.

Best regards, Richard Harrison, KB5WZI

271. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:18:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1qlu8$8kr$1@news.service.uci.edu>
Source record: 41670

Yuri Blanarovich wrote:

> Many times I see that people do not bother trying to understand the problem,
> researching it , but fire off "naaah, it can't be" and reduce their comments
> to personal attacks.

Apparently you don't see it as much of it as some of the rest of us do.

> But as engineer, I would rather know the reality and what's behind it.

It's probably fair to say that's what motivates most of us, Yuri.
It's the one thing most of us here share in common, other than ham radio.

> Just as an example: W8JI proclaims gospel on his web site that Beverage
> antennas longer than 700 ft (on 160) are useless and waste of effort.

I am not Tom, and you are not Tom. Neither of us speaks for Tom. Tom
doesn't even have a dog in this fight as far as I know. So in the
interest of maximizing the signal to noise ratio around here, why
don't we each let the other just speak for himself. It's much too
gossipy otherwise (and not very 'engineer-like').

73, Jim AC6XG

272. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:26:39 UTC
From: richardharrison@webtv.net
Message-ID: <1607-4640DCFF-20@storefull-3257.bay.webtv.net>
Source record: 41672

Uim, AC6XG wrote:
"Perhaps it should be noted that electromagnetic waves and photons travel neither faster nor slower than the speed of light in their medium of travel."

Yes. Corpuscles and waves have the same velocity given the same medium.

Best regards, Richard Harrison, KB5WZI

273. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:44:09 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992B4484B93D7nonenowhere@61.9.191.5>
Source record: 41673

no.spam@no.uce.bellatlantic.net wrote in
news:tog143tj0impi7pdc16pru49jvfl4q6e80@4ax.com:

...
> The rule still holds, for a bigger signal put up more metal.

An appealing rule, isn't it!

I had three QSOs with stations on Saturday on 40m that were using an "80m coax centre fed dipole". I explained to them that if they halved the size of their antenna, it would work ten times as good.

This simple case shows that the "rule" ain't a rule.

Owen

274. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:55:16 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <Us50i.11289$d9.6063@newsfe6-gui.ntli.net>
Source record: 41674
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> http://www.youtube.com/watch?v=C1h99XYvLsc&mode=related&search=
> http://www.youtube.com/watch?v=idtid6IJRWU&mode=related&search=
> John Ferrell W8CCW

all very nice ....

275. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 20:55:24 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992B466CF980Fnonenowhere@61.9.191.5>
Source record: 41675

"Antonio Vernucci" <vernucci@tin.it> wrote in news:4640a649$0$17940
$4fafbaef@reader1.news.tin.it:

>> We are talking about millivolt levels, but the good news is that today,
>> stable high gain DC amplifiers are a snack (see chopper stabilised Op
>> Amps).
>
> Yes, but to my knowledge, the Struthers wattmeter is purely passive, no
> amplifier whatsoever.
>

You have misunderstood me, my post was in answer to your more general
question "Does anyone know of special diodes resulting in a linear
wattmeter scale?" (which I quoted in my post).

If you weren't interested in the answer to the question, why ask it?

Owen

276. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 21:06:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c2p143lhvo3q8dnc2am19v10okcjsr9ce4@4ax.com>
Source record: 41676

On Tue, 8 May 2007 18:35:30 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>I am not sure whether, confining operation to the square law region, it would be
>possible to build a power meter that has no DC amplifier (like the Struthers
>wattmeter).

Hi Tony,

Most of the expense of the unit is in slugs and the base unit.
Certainly the diodes may be precious (I've rebuilt and calibrated
them), but in today's world you can replace them with garden variety
diodes and make up the difference with analog amplifiers with shaping
to conform to the meter scale. There is more than enough room in the
base unit to do this and the investment would pay off when you would
be tempted to just let it gather dust.

There's no such thing as magic diodes, merely mil-spec hand selected
ones that push cost through the roof.

Look at the meter movement for its full scale deflection current. From
there it is a rather simple matter to use one of several diode i/v
curves to reverse-engineer the solution. Buy pallet full of the
appropriate technology (Si/Ge/Tunnel/Avalanche/what-have-you) and
select. OR take one of those garden variety diodes and build a log
amp (or simply buy a log amp). Add a battery clip with battery and
move on.

73's
Richard Clark, KB7QHC

277. Re: Difference in field strength reading using different antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 21:31:38 UTC
From: nm5k@wt.net
Message-ID: <1178659898.720316.175590@n59g2000hsh.googlegroups.com>
Source record: 41577

On May 8, 12:22 pm, FG <foreign.go...@gmail.com> wrote:
> We are testing a field strength meter and decided to measure a low
> power (100mW) FM transmission using an unused frequency. On the first
> test, we used a dipole antenna connected to a balance-unbalance device
> before being connected to the field strength meter. The second test we
> utilized an FM telescoping antenna.
>
> Using the dipole, when we turned off the transmitter, the reference
> field strength reading remained pretty steady. But when we used the
> monopole, the reference reading jumped up and down by a few microvolts
> even with the FM transmitter off.
>
> What would be an explanation to this?
>
> Thank you!

Nearby, or very strong mostly vertically polarized signals would be my
first
guess... Remember that the fs meter is not tuned and responds to most
any frequencies within reason. Maybe a police car was in the
neighborhood
and he was keying his radio.. Could be anyone in the area..
MK

278. Re: Difference in field strength reading using different antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 21:56:50 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4640f222$0$9960$4c368faf@roadrunner.com>
Source record: 41578

"FG" <foreign.goods@gmail.com> wrote in message
news:1178648575.081737.280710@o5g2000hsb.googlegroups.com...
> We are testing a field strength meter and decided to measure a low
> power (100mW) FM transmission using an unused frequency. On the first
> test, we used a dipole antenna connected to a balance-unbalance device
> before being connected to the field strength meter. The second test we
> utilized an FM telescoping antenna.
>
> Using the dipole, when we turned off the transmitter, the reference
> field strength reading remained pretty steady. But when we used the
> monopole, the reference reading jumped up and down by a few microvolts
> even with the FM transmitter off.
>
> What would be an explanation to this?
>
> Thank you!
>

I dont think there is any such ting as an unused frequency in the FM band

There will probably always be a microvolt or two floating around and it
could very well be polarity sensitive.

Jimmie

279. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 22:49:53 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f1quqi$sm0$1@nntp1.jpl.nasa.gov>
Source record: 41582

Richard Clark wrote:
> On Tue, 8 May 2007 18:35:30 +0200, "Antonio Vernucci"
> <vernucci@tin.it> wrote:
>
>
>>I am not sure whether, confining operation to the square law region, it would be
>>possible to build a power meter that has no DC amplifier (like the Struthers
>>wattmeter).
>
>
> Hi Tony,
>
> Most of the expense of the unit is in slugs and the base unit.
> Certainly the diodes may be precious (I've rebuilt and calibrated
> them), but in today's world you can replace them with garden variety
> diodes and make up the difference with analog amplifiers with shaping
> to conform to the meter scale. There is more than enough room in the
> base unit to do this and the investment would pay off when you would
> be tempted to just let it gather dust.
>
> There's no such thing as magic diodes, merely mil-spec hand selected
> ones that push cost through the roof.
>
> Look at the meter movement for its full scale deflection current. From
> there it is a rather simple matter to use one of several diode i/v
> curves to reverse-engineer the solution. Buy pallet full of the
> appropriate technology (Si/Ge/Tunnel/Avalanche/what-have-you) and
> select. OR take one of those garden variety diodes and build a log
> amp (or simply buy a log amp). Add a battery clip with battery and
> move on.

or better than that, buy one of the Analog Devices wideband power
detectors with 90dB dynamic range and linearity better than half a dB
for a few bucks... Check out the AD8307 for $6

You could even fork out the $100 for one of the many eval boards, hook
it up to a $20 DVM, and be ready to go.. measuring phase even.

280. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 22:56:08 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1qv6ffuf1@news.service.uci.edu>
Source record: 41579

Richard Harrison wrote:

> "Since the velocity with which the signal propagates along the
> helix wire approximates the velocity of light if the frequency is not
> too low (caveat is unimportant, see footnote in book), the axial field
> due to the signal advances with a velocity that is very closely the
> velocity of light multiplied by the ratio of helix pitch to helix
> circumference."

Well done, sir.

> Kraus details this in his
> section on helical antennas.

Fig. 7-19 is certainly interesting.

Cecil owes you a fruit basket I think. ;-)

73, Jim AC6XG

281. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 23:00:28 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4641010b$0$36449$4fafbaef@reader5.news.tin.it>
Source record: 41580

> Hi Tony,
>
> Most of the expense of the unit is in slugs and the base unit.
> Certainly the diodes may be precious (I've rebuilt and calibrated
> them), but in today's world you can replace them with garden variety
> diodes and make up the difference with analog amplifiers with shaping
> to conform to the meter scale. There is more than enough room in the
> base unit to do this and the investment would pay off when you would
> be tempted to just let it gather dust.
>
> There's no such thing as magic diodes, merely mil-spec hand selected
> ones that push cost through the roof.
>
> Look at the meter movement for its full scale deflection current. From
> there it is a rather simple matter to use one of several diode i/v
> curves to reverse-engineer the solution. Buy pallet full of the
> appropriate technology (Si/Ge/Tunnel/Avalanche/what-have-you) and
> select. OR take one of those garden variety diodes and build a log
> amp (or simply buy a log amp). Add a battery clip with battery and
> move on.
>
> 73's
> Richard Clark, KB7QHC

I was just interested in the theory of why that scale is linear. I have no interest for modifications of or additions.

73

Tony I0JX

282. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 23:00:32 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46410104$0$21252$39cecf19@news.twtelecom.net>
Source record: 41581

Cecil Moore wrote:

>> If it's really there, then perhaps the permissions are incorrect. I
>> tried with wget, a unix command line tool for pulling individual files
>> or even whole sites, and got a "404 Not Found" error. That error is
>> generated on the server end, not mine.
>
>
> Thanks Tom, that demonstrates the problem I am having.
> Why .EZ files would be handled differently by k6mhe.com
> and w5dxp.com is perplexing. Maybe Linux vs Microsoft?
>
> Danny, are you subscribing to Linux hosting?
> I am subscribing to Microsoft hosting.

Cecil, this utility will pull the file no matter what it is. The
problem has nothing to do with the OS involved. There is something
wrong at the server end. Or maybe I misunderstand what you are saying.

tom
K0TAR

283. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-08 23:22:49 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <46410649$0$36448$4fafbaef@reader5.news.tin.it>
Source record: 41583

"Owen Duffy" <none@no.where> ha scritto nel messaggio
news:Xns992B466CF980Fnonenowhere@61.9.191.5...
> "Antonio Vernucci" <vernucci@tin.it> wrote in news:4640a649$0$17940
> $4fafbaef@reader1.news.tin.it:
>
>>> We are talking about millivolt levels, but the good news is that today,
>>> stable high gain DC amplifiers are a snack (see chopper stabilised Op
>>> Amps).
>>
>> Yes, but to my knowledge, the Struthers wattmeter is purely passive, no
>> amplifier whatsoever.
>>
>
> You have misunderstood me, my post was in answer to your more general
> question "Does anyone know of special diodes resulting in a linear
> wattmeter scale?" (which I quoted in my post).
>
> If you weren't interested in the answer to the question, why ask it?
>
> Owen

I am interested in answers specifically regarding diodes which may cause the
Struthers wattmeter scale to be linear.

Using modern electronics one can do almost everything, no big novelty.

73

Tony I0JX

284. Re: with the punce

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 00:11:44 UTC
From: El Patriota&#65533; <TodoPorLaPatria@zeelandnet.nl>
Message-ID: <46410eaa$0$8678$8d2e0cab@news.newsgroup-binaries.com>
Source record: 41584
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

an_old_friend wrote:
> "Douche Bag" <loumaagsucks@hotmail.com> wrote in message
> news:1178286964.864266.177390@p77g2000hsh.googlegroups.com...
>> U kan go ax sombodi else nigga!
>>
>
> http://www.niggermania.com/
> snip<

Nice movies!

--

FREEDOM OF SPEECH, USE IT OR LOSE IT

http://communities.zeelandnet.nl/data/novamente/index.php?page=13&showpage=52538

----
www.Newsgroup-Binaries.com - *Completion*Retention*Speed*
Access your favorite newsgroups from home or on the road
----

285. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 00:14:34 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1r3pc$aa9$1@nnrp.linuxfan.it>
Source record: 41585

Cecil Moore wrote:
>
> What really gets my dander up are the gurus who use their
> respected guru status to mount ad hominem attacks against
> someone who they know is technically correct. In my book,
> that is unethical behavior.

Cecil:

Which definition of Guru comes closest to your implied meaning:
(BTW, I think your use of "guru" is well justified)

(Literally the word guru means teacher) Second level of its meaning is
that the guru is a spiritual leader, a saint, a Enlightener. GU
(darkness) RU (light); One who brings light into darkness. A teacher..
However, the meaning of the word Guru in Sikh terminology is at a
further higher level, and it stands for the 'prophet'.
www.sikhlink.com/sikh/terms.htm

("he who is heavy, weighty"): a spiritual teacher; cf. acarya
www.yogajournal.com/newtoyoga/159.cfm

a religious percept or teacher, often the person from whom one
receives initiation or consecration.
www.trimondi.de/SDLE/Glossary.htm

Literally teacher refers to one of the ten Sikh prophets, the Sikh
scripture (Guru Granth Sahib), or God.
www.sikhstudy.com/A7terms.html

In general terms, a computer expert. UNIX experts are typically
referred to as gurus in polite company.
teladesign.com/ma-thesis/glossary.html

a teacher who has attained mastery in the Supracosmic Sphere.
www.mudrashram.com/glossarypage.html

"Remover of darkness;" guide. A teacher. Though it can connote a
teacher of any subject, guru usually denotes a spiritual teacher or master.
www.himalayanacademy.com/resources/books/virtue/SVGlossary.html

A teacher, par ticularly of the spiritual kind.
www.well.com/user/jct/sageglo.htm

Somebody who knows a great deal about computers, or some specific
aspect thereof.
associate.com/camsoc/ctt/gloss-g.html

a Sanskrit and pan-Indian word denoting a spiritual master or teacher. It implies an initiatory relation between master and disciple. The guru passes on oral tradition and ascetic regimen to the student.
oregonstate.edu/instruct/anth370/gloss.html

(Sanskrit) Spiritual teacher and guide.
www.buddhanet.net/e-learning/history/glossary_fk.htm

A religious, spiritual teacher or mentor. According to ancient Indian Philosophy, one cannot attain success in the spiritual field without the help of a real Guru or Sadguru.
www.siddhashram.org/glossary.shtml

(Skt. / Tib. lama): Spiritual teacher who guides disciples on the path to liberation or enlightenment. A guru or lama is particularly important in the vajrayana tradition.
www.bodhipath-west.org/glossary.htm

("weighty one") In Indian religion, a spiritual guide. In Sikhism, only God, one of the ten Gurus, or the sacred book (Guru Granth Sahib) may be called Guru.
www.religionfacts.com/sikhism/glossary.htm

a man blessed by God, who is born enlightened, without needing to learn how to be holy. Gu translates as 'evil darkness' and Ru as 'divine light'; a guru is a man perfectly poised above good and evil, who has already transcended to another level. The name is commonly used for a religious teacher.
www.ethnicityonline.net/sikh_glossary.htm

teacher / who helps to gain knowledge
lululemon.com/culture/yoga_info/dictionary_a.php

Literally a teacher or spiritual advisor. However, in India and Tibet it means one at a very high level of consciousness. In fact, worship of Guru is done to develop devotion or adoration, because the teacher is the highest expression of God we know on Earth in our personal experience.
www.reiki.nu/treatment/healing/dictionary2/dictionary2.html

Spiritual preceptor, one who illumines the darkness of spiritual doubt.
www.poweryoga.com/aboutyoga/article.php

A spiritual master who has attained oneness with God and who is able both to initiate seekers and to guide them on the spiritual path to liberation. A true Guru is required to be learned in the scriptures and must belong to a lineage of masters..
www.siddhayoga.org.in/glossary.html

A spriritual preceptor, either a person or the mystical voice of Akal Purkh. In sikhism the term 'Guru' referes to the ten Gurus and Guru Granth Sahib, and no other.
www.info-sikh.com/PageGloss2.html

Literally, 'Gu'= Darkness or ignorance. 'Ru'= Illumination. Guru is therefore the spiritual Master who initiates and guides a seeker across

the sea of Separation to the shore of Union and therefore, liberation. Guru is not simply the psycho/physical human form - the Model. Guru is principally the function of Self Revelation through the power of grace. Direct and continuous contact with the Guru function within ourselves is both the practise and the goal of the Guru/Disciple relationship. ...
www.shantimandir.com/glossary/glossary.htm

The "help person". Expert on which one may rely to help solve problems with software and/or hardware.
www.uta.edu/infosys/e_comm/terms/term_g.htm

(bla ma yi dam mkha' 'gro). The three roots of Vajrayana practice: the guru is the root of blessings, the yidam is the root of accomplishments, and the dakini is the root of activities.
www.rangjung.com/books/lotus-born_glossary.htm

in Hinduism, a spiritual teacher or preceptor, treated with the deepest respect and greatest reverence; one who lights up the Way Godward; a torch-bearer on the way back to the mansion of the Lord.
www.ruhanisatsangusa.org/gloss.htm

(Sanskrit word meaning "weighty one"), gurudev(a): spiritual preceptor in the Hindu and yogic tradition.
www.storytellingmonk.org/ref/glossaries/g.htm

a Hindu or Buddhist religious leader and spiritual teacher
each of the first ten leaders of the Sikh religion
a recognized leader in some field or of some movement; "a guru of genomics"
wordnet.princeton.edu/perl/webwn

A guru (गुरू Sanskrit) is a teacher in Hinduism, Buddhism and Sikhism. It is based on a long line of philosophical understandings of the importance of knowledge and that the teacher, guru, is the sacred conduit to self-realization. Till today in India and among people of Hindu, Buddhist, or Sikh persuasion, the title retains its significant hallowed space.
en.wikipedia.org/wiki/Guru

Regards,
JS

286. dloyd the theif

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 00:30:29 UTC
From: Mark@kb9rqz.org
Message-ID: <ig524358eckn0hbkld0f9n7e9e0libuvou@4ax.com>
Source record: 41586
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.scanner

On Wed, 9 May 2007 02:11:44 +0200, "El Patriotaï¿½"
<TodoPorLaPatria(NoSpam)@zeelandnet.nl> wrote:

>an_old_friend wrote:
>> "Douche Bag" <loumaagsucks@hotmail.com> wrote in message
>> news:1178286964.864266.177390@p77g2000hsh.googlegroups.com...
>>> U kan go ax sombodi else nigga!
>>>
>>
>> http://www.niggermania.com/
>> snip<
>
>Nice movies!

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woghger you are a Congress all in your own head

http://khkb9rqz.blogspot.com

Given Dloyds interest in me I m opening a furom for real
comment about his post here
http://dloydatkb9rqz.blogspot.com/

--
Posted via a free Usenet account from http://www.teranews.com

287. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 00:35:59 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <PH80i.51$yM2.29@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41587

Richard Harrison wrote:
> Gene, W4SZ wrote:
> "The current lags voltage principle does not settle anything in this
> case."
>
> W8JI claims that current flows into a turn at a coil end/s and is
> induced without delay into all turns of the coil, overcoming delay that
> the coil might otherwise impose.
>
> If that were true, Terman would have told us so. In fact, Terman tells
> us the opposite is true in explaning the traveling wave tube begining on
> page 678 of his 1955 opus:
>
> "The signal to be amplified is applied to the end of the helix adjacent
> to the electron gun. Under appropriate operating conditions an amplified
> signal then appears at the other end of the helix.-------inapplicable
> info deleted-----. The applied signal propagates around the turns of the
> helix and produces an electric field that is directed along the helix
> axis. Since the velocity with which the signal propagates along the
> helix wire approximates the velocity of light if the frequency is not
> too low (caveat is unimportant, see footnote in book), the axial field
> due to the signal advances with a velocity that is very closely the
> velocity of light multiplied by the ratio of helix pitch to helix
> circumference."
>
> In other words, the axial advance is much like that of a threaded bolt
> as the pitch angle is always fractional. Kraus details this in his
> section on helical antennas.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

I would never argue with Terman.

You completely changed the subject, so I have nothing further to say.
The line you quoted above is still correct. Feel free to continue on in
whatever new direction you want.

73,
Gene
W4SZ

288. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 00:47:31 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1178671720_51313@sp12lax.superfeed.net>
Source record: 41588

Antonio Vernucci wrote:

>
> I am interested in answers specifically regarding diodes which may cause
> the Struthers wattmeter scale to be linear.
>
> Using modern electronics one can do almost everything, no big novelty.
>
> 73
>
> Tony I0JX
>

Tony, see if this answers your question:

http://www.evaluationengineering.com/archive/articles/0201sensors.htm
The Sharp End of RF Power Measurement

Note Figure 1.

Also, take a look at HP's AN986.

73,

Chuck NT3G

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

289. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 01:16:49 UTC
From: Roadie <hjsjms@cs.com>
Message-ID: <1178673409.225699.220020@e51g2000hsg.googlegroups.com>
Source record: 41589
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 1:38 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> If my location is in southern California, what would I hear on a
> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> between what I would hear at night and what I would hear during the
> day?
>
> On medium-wave station, I notice the interference -- in the form of
> tones -- to be louder at night than the day. Does this difference also
> apply to extreme shortwave frequencies as high as 300 GHz?
>
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
> Thanks,
>
> Radium

Which 300GHZ AM receiver did you have in mind?

290. Re: H F Antenna - BWD-90 VS G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 01:44:10 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <CC90i.6268$0x4.900@bignews4.bellsouth.net>
Source record: 41590

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:wqSdnRpitNYLdazbnZ2dnUVZ_hGdnZ2d@insightbb.com...
> I'm still trying to decide on a ready-made HF antenna. I have a couple
> more questions.
>
> Can the Barker & Williamson's BWD-90 really be used without an antenna
> tuner?
>
> Does the G5RV really need an antenna tuner?
>
> Wow, there's a 7:1 price difference here! Hope to be QSOing soon, instead
> of emailing.
>
> --
> Bob D. ND9B

Just for comparison, take a look at www.k1kek.com. It's called the Cobra Ultralite and comes in 2 versions.
73 feet and 140 feet for 80-10 coverage and 160-10 respectively. I run the longer one with an LDG autotuner. I don't have comparative data, and I'm not trying to argue about which antenna is "best"; just the fact that the Cobra works decently, slightly better than the B & W and is less obtrusive. It carries up to 1000 watts and seems to work smoothely without any objections thru out its range. Most anything is a compromise unless it is a resonant, dedicated antenna; it's all in what you are looking for. The Cobra DOES want a tuner, however. Again, an opinion, but I don't like the B & W.

73

K4KWH

>
>

291. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 03:47:46 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1178682466.540803.204400@l77g2000hsb.googlegroups.com>
Source record: 41591
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 8, 6:16 pm, Roadie <hjs...@cs.com> wrote:

> Which 300GHZ AM receiver did you have in mind?

Any theoretical 300 GHz AM receiver. I want to listen to signals from
far outer space.

Since AM is more susceptible to magnetic disruptions, I'd figure, and
AM radio is more likely to pick up interferences from outer space,
than an FM radio. The question is, which frequency is best for this?
Frequencies that are too low are sealed out of the ionosphere, while
frequencies that are too high rapidly disappear [line of sight].

292. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 06:04:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <smo243lqgf34iubetul5tiog0si6f14ue8@4ax.com>
Source record: 41592

On Tue, 08 May 2007 20:47:31 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>Tony, see if this answers your question:
>
>http://www.evaluationengineering.com/archive/articles/0201sensors.htm
>The Sharp End of RF Power Measurement

Hi Chuck,

Little do you realize (or you are especially diabolical to have
introduced it), but within this monograph offered is the heresy of the
Source mismatching the load (the heresy being that any source of
sufficient power does not embody the nominal 50 Ohms Impedance).

It even contains the classic math introduced by Stephen F. Adam back
in the mid 60s for the National Bureau of Standards - and later
published by Hewlett Packard (both notorious hotbeds of technical
corruption in the matters of source impedance).

73's
Richard Clark, KB7QHC

293. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 07:24:58 UTC
From: Jeff <jeff@local.host>
Message-ID: <46417722$0$26320$834e42db@reader.greatnowhere.com>
Source record: 41593

>
> Cecil, this utility will pull the file no matter what it is. The problem
> has nothing to do with the OS involved. There is something wrong at the
> server end. Or maybe I misunderstand what you are saying.
>
> tom
> K0TAR

I think the problem is that when the user clicks on the hyperlink the server does not know how to respond to a .EZ file extension. It understands that the user wants to download a zip or bin file or display an html file, but no one has told it what to do when asked for an EZ, so it reports that the file is not there.

Jeff

294. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 07:42:10 UTC
From: Jeff <jeff@local.host>
Message-ID: <46417b25$0$26327$834e42db@reader.greatnowhere.com>
Source record: 41594
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"> Since AM is more susceptible to magnetic disruptions, I'd figure, and
> AM radio is more likely to pick up interferences from outer space,
> than an FM radio. The question is, which frequency is best for this?
> Frequencies that are too low are sealed out of the ionosphere, while
> frequencies that are too high rapidly disappear [line of sight].
>

I think you need to understand the basics a little more.

AM and FM are types of modulation and are not susceptible in themselves to magnetic disruptions. You are getting confused by the fact that "medium wave" broadcasts are referred to as "AM" when describing which frequency band they are transmitted on. Although they do use Amplitude Modulation (AM) there is nothing technically to stop you using FM on the same frequency. The same applies the band known as FM, which is a vhf band, you could use AM here if you wished.

300GHz is an extremely high microwave frequency anis absorbed by the atmosphere very quickly, there are few uses for such a high frequency which is difficult and expensive to use. So most likely you would hear nothing.

Your comments about the atmosphere are correct, low frequencies, below vhf, are reflected and generally signals from space do not penetrate that well. vhf and above will. The modulation, AM or FM have no bearing on this.

Jeff

295. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 08:08:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992BB88396904nonenowhere@61.9.191.5>
Source record: 41595

"Jeff" <jeff@local.host> wrote in
news:46417722$0$26320$834e42db@reader.greatnowhere.com:

...
>
> I think the problem is that when the user clicks on the hyperlink the
> server does not know how to respond to a .EZ file extension. It
> understands that the user wants to download a zip or bin file or
> display an html file, but no one has told it what to do when asked for
> an EZ, so it reports that the file is not there.

Apart from special processing specified for some files or file types (extensions), the server just sends the document back in a response under http headers (some of which may be chosen based on extension - MIME type association in the server's config files.

The "action" on receiving a document is entirely in the hands of the browser.

If the file ain't on the server, it ain't there and you will get a 404 error, and it ain't there either because is just ain't there, or it is hidden by permissions that do not expose it to the server's user or group.

Cecil stated that the HSP doesn't "process" the file, perhaps he is hinting that he can't transfer the .EZ file into his web file space. If that is so, he should visit whether his HSP is altogether too clever.

He seems like he is using a IIS server. I wonder why one would use an IIS based server unless using IIS specific applications.

If I click on the link http://www.vk1od.net/7MDipole/7MDipole.ez on my web server, Firefox asks me if I want to open it with EZNEC, use Flasgot, or save it to disk. My web server does not know anything about the .ez extension, and Firefox is not configured for any specific action for .ez file. The reasons Firefox offers the "open with EZNEC" option is that it digs into Windows to see if there is an open action defined for that extension. Different browsers work differently.

If I click on Cecil's link, I get a 404 error: file not found which is a strong indicator the file is not there, or has incorrect permissions, probably the former.

Owen

296. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 08:40:53 UTC
From: Jeff <jeff@local.host>
Message-ID: <4641e035$0$1342$834e42db@reader.greatnowhere.com>
Source record: 41603

```
"> Apart from special processing specified for some files or file types
> (extensions), the server just sends the document back in a response under
> http headers (some of which may be chosen based on extension - MIME type
> association in the server's config files.

I suspect that it is this part that is going wrong, there is no association
for a .ez extension and the server is responding with a 404 error. Hence the
request for a MIME type.

Jeff
```

297. High School Radio Club looking for IRLP School contacts in Asia

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 10:18:56 UTC
From: Mac <vk2evb@hotmail.com>
Message-ID: <4641a00a$1_9@news.peopletelecom.com.au>
Source record: 41596
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew

Hi There,

The Bishop Druit College Radio Club
http://www.qsl.net/mm0axl/mncarg/bdc.html
situated at Coffs Harbour NSW Australia
is hoping to make IRLP contacts on Fridays
0315 - 0345 UTC. (Lunchbreak)

Perhaps areas with similar time zones in Asia,
like Malaysia, Hongkong, Vietnam, China,
Japan, Korea, and parts of Russia are of
interest to the students.

Contacts will be on IRLP node 6625.

Contacts with similar school electronic/radio
groups are of special interest.

If interested please email:
Gary VK2ZKT gryan@bdc.nsw.edu.au
or
Peter VK2EVB vk2evb@wia.org.au

298. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 11:51:47 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <m8d343pm25vj9uihjcvr7joi88ho9de4j2@4ax.com>
Source record: 41597

Well, if i am not mistaken, in order to gain another 3 db, he would
have to setup another similar array. That would be twelve stepirs.
Then for another 3 db, he would have to add yet another twelve
stepirs.

The second three steppirs only gained him 3 db over the first three
and the second steppir only gained him 3 db over the first one.

so, what does that three db mean?

Buck, N4PGW

On Tue, 08 May 2007 17:48:21 GMT, "John, N9JG"
<john@Xremove.MeYgotwals.com> wrote:

>You have raised an interesting question - When do you reach the point of
>diminishing returns?
>

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

299. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 12:12:31 UTC
From: Roadie <hjsjms@cs.com>
Message-ID: <1178712751.067351.245000@l77g2000hsb.googlegroups.com>
Source record: 41598
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 8, 11:47 pm, Radium <gluceg...@gmail.com> wrote:
> On May 8, 6:16 pm, Roadie <hjs...@cs.com> wrote:
>
> > Which 300GHZ AM receiver did you have in mind?
>
> Any theoretical 300 GHz AM receiver. I want to listen to signals from
> far outer space.

Hmm...I'm going to guess the SN ratio will be quite low when tuning in
hypothetical signals on a theoretical receiver.

>
> Since AM is more susceptible to magnetic disruptions, I'd figure, and
> AM radio is more likely to pick up interferences from outer space,
> than an FM radio. The question is, which frequency is best for this?
> Frequencies that are too low are sealed out of the ionosphere, while
> frequencies that are too high rapidly disappear [line of sight].

Look into the SETI project instead. There are established reasons for
tuning around 1420mz and the project is organized.

300. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 13:03:23 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <t5ednVyT6fIPW9zbnZ2dnUVZ_rKvnZ2d@comcast.com>
Source record: 41599

"Buck" <usenet01@lumpuckeroo.com> wrote in message
news:m8d343pm25vj9uihjcvr7joi88ho9de4j2@4ax.com...
> Well, if i am not mistaken, in order to gain another 3 db, he would
> have to setup another similar array. That would be twelve stepirs.
> Then for another 3 db, he would have to add yet another twelve
> stepirs.
>
> The second three steppirs only gained him 3 db over the first three
> and the second steppir only gained him 3 db over the first one.
>
> so, what does that three db mean?
>
> Buck, N4PGW
>
>
Yeah, I especially question the practicality of going from 4 antennas to 6.
It picked him up less than 2 db, but doubled the physical size of the
array - same width, twice as high.

Tam/WB2TT

> On Tue, 08 May 2007 17:48:21 GMT, "John, N9JG"
> <john@Xremove.MeYgotwals.com> wrote:
>
>>You have raised an interesting question - When do you reach the point of
>>diminishing returns?
>>
>
> --
> 73 for now
> Buck, N4PGW
>
> www.lumpuckeroo.com
>
> "Small - broadband - efficient: pick any two."

301. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 13:09:49 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <frCdnXvkjZ2JVdzbnZ2dnUVZ_rGinZ2d@comcast.com>
Source record: 41600
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1178682466.540803.204400@l77g2000hsb.googlegroups.com...
> On May 8, 6:16 pm, Roadie <hjs...@cs.com> wrote:
>
>> Which 300GHZ AM receiver did you have in mind?
>
> Any theoretical 300 GHz AM receiver. I want to listen to signals from
> far outer space.
>
> Since AM is more susceptible to magnetic disruptions, I'd figure, and
> AM radio is more likely to pick up interferences from outer space,
> than an FM radio. The question is, which frequency is best for this?
> Frequencies that are too low are sealed out of the ionosphere, while
> frequencies that are too high rapidly disappear [line of sight].
>
Educate me if I am wrong, but I don't think a receiver capable of receiving
either AM or FM voice signals on 300 GHz exists.

Tam/WB2TT

302. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 13:43:51 UTC
From: Radiola <n9vu@yahoo.com>
Message-ID: <1178718231.413923.268940@h2g2000hsg.googlegroups.com>
Source record: 41601
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 7, 12:38 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> If my location is in southern California, what would I hear on a
> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> between what I would hear at night and what I would hear during the
> day?
>
> On medium-wave station, I notice the interference -- in the form of
> tones -- to be louder at night than the day. Does this difference also
> apply to extreme shortwave frequencies as high as 300 GHz?
>
> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> still curious as to what I would hear on a 300 GHz AM receiver.
>
> Thanks,
>
> Radium

Chances are you will be able to finally confirm the theory that you
can talk to the dead.

303. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 14:19:32 UTC
From: E M F <geocraig@worldnet.att.net>
Message-ID: <ULk0i.1744$yM2.1219@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41602
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

> Reply to group;
>
"Radiola" <n9vu@yahoo.com> wrote in message
news:1178718231.413923.268940@h2g2000hsg.googlegroups.com...
> On May 7, 12:38 pm, Radium <gluceg...@gmail.com> wrote:
>> Hi:
>>
>> If my location is in southern California, what would I hear on a
>> "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
>> between what I would hear at night and what I would hear during the
>> day?
>>
>> On medium-wave station, I notice the interference -- in the form of
>> tones -- to be louder at night than the day. Does this difference also
>> apply to extreme shortwave frequencies as high as 300 GHz?
>>
>> NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
>> still curious as to what I would hear on a 300 GHz AM receiver.
>>
>> Thanks,
>>
>> Radium
>
> Chances are you will be able to finally confirm the theory that you
> can talk to the dead.
>
> Go here; www.millitech.com ....GC

304. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 15:09:14 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <juo34352epgp36th6d0n5o3ss3t25fl93i@4ax.com>
Source record: 41604
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Tue, 08 May 2007 20:55:16 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>
>> http://www.youtube.com/watch?v=C1h99XYvLsc&mode=related&search=
>> http://www.youtube.com/watch?v=idtid6IJRWU&mode=related&search=
>> John Ferrell W8CCW
>
> all very nice ....
I had written off You tube as slapstick and bubble gum. It is
refreshing to find there are some interesting clips posted!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

305. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 15:12:44 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <b5p343994t1fdthktt5gh4c5a27f3n6456@4ax.com>
Source record: 41605

On 08 May 2007 17:47:27 GMT, Spam Collector
<spam-collector@artair.com> wrote:

>On 2007-05-04, Owen Duffy <none@no.where> wrote:
>>
>> Efficient and effective multi-band antennas don't happen by accident,
>> they are a significant challenge, and an efficient and effective 160m to
>> 70cm is an extreme challenge. On the other hand, you will see proof that
>> "loading up the fencewire works", but it goes to the meaning of 'works',
>> which is less specific than 'effective and efficient'.
>>
>Thanks to all for the insightful replies. Evidently the reason
>I couldn't find much information on 'oversized' antennas is that
>they aren't very effective. Then again, if you never experiment
>with unconventional ideas you'll never discover anything new, so
>I may just try it and see what happens. If all else fails I can
>always make several smaller narrowband antennas out of the wire.
>
>Thanks again,
>Frank
>KE5MJZ
I put about 2000 feet of wire in the grass this winter for radials.
There is always another use for extra wire...
John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

306. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 15:13:28 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <1343pa1p035ebfa@corp.supernews.com>
Source record: 41606

Buck wrote:
> Well, if i am not mistaken, in order to gain another 3 db, he would
> have to setup another similar array. That would be twelve stepirs.
> Then for another 3 db, he would have to add yet another twelve
> stepirs.
>
> The second three steppirs only gained him 3 db over the first three
> and the second steppir only gained him 3 db over the first one.
>
> so, what does that three db mean?
>
> Buck, N4PGW
>
>
> On Tue, 08 May 2007 17:48:21 GMT, "John, N9JG"
> <john@Xremove.MeYgotwals.com> wrote:
>
>> You have raised an interesting question - When do you reach the point of
>> diminishing returns?
>>
>
Three Db equals a doubling of power or halving of power depending on
which way you are going.

Dave WD9BDZ

307. Re: 20 dB gain on 20 meters?!?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 15:37:53 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <pO2dnd3seItVd9zbnZ2dnUVZ_gqdnZ2d@comcast.com>
Source record: 41607

"David G. Nagel" <nagel@core.com> wrote in message
news:1343pa1p035ebfa@corp.supernews.com...
> Buck wrote:
>> Well, if i am not mistaken, in order to gain another 3 db, he would
>> have to setup another similar array. That would be twelve stepirs.
>> Then for another 3 db, he would have to add yet another twelve
>> stepirs. The second three steppirs only gained him 3 db over the first
>> three
>> and the second steppir only gained him 3 db over the first one. so, what
>> does that three db mean?
>>
>> Buck, N4PGW
>>
>>
>> On Tue, 08 May 2007 17:48:21 GMT, "John, N9JG"
>> <john@Xremove.MeYgotwals.com> wrote:
>>
>>> You have raised an interesting question - When do you reach the point of
>>> diminishing returns?
>>>
>>
> Three Db equals a doubling of power or halving of power depending on which
> way you are going.
>
> Dave WD9BDZ

If I looked at his numbers right, his vertical stacking is way too close
(1/2 wave), and he won't get 3 DB. OTOH, he got himself a super 6 m antenna.
Possibly enough for moonbounce.

Tam/WB2TT

308. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 16:34:18 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <eKm0i.6628$eY1.4779@newsfe2-win.ntli.net>
Source record: 41608
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> I had written off You tube as slapstick and bubble gum. It is
> refreshing to find there are some interesting clips posted!
>
> John Ferrell W8CCW
> "Life is easier if you learn to
> plow around the stumps"
>

check this baby out......watch out for Roger McGuinn........

http://www.youtube.com/watch?v=MVhnxZej0w4

309. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 17:14:01 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46420159$0$27102$4c368faf@roadrunner.com>
Source record: 41609

"Jeff" <jeff@local.host> wrote in message
news:4641e035$0$1342$834e42db@reader.greatnowhere.com...
>
> "> Apart from special processing specified for some files or file types
>> (extensions), the server just sends the document back in a response under
>> http headers (some of which may be chosen based on extension - MIME type
>> association in the server's config files.
>
> I suspect that it is this part that is going wrong, there is no
> association for a .ez extension and the server is responding with a 404
> error. Hence the request for a MIME type.
>
> Jeff
>
>

You could put it on the server as .EZ.bin and remove the bin from the name
when you dloaded from the server.

Jimmie

310. How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 17:35:31 UTC
From: no spam <no@spam.net>
Message-ID: <DDn0i.34366$G23.14730@newsreading01.news.tds.net>
Source record: 41610

I'm looking for plans for a simple AM antenna to connect to my stereo to replace the little loop antenna that came with it. In the past I have used long wires but they are not very directional.

I have found some fairly good plans online for what looks like wire wound around a box but all of them seem to have potentiometer in the mix somewhere. It would be very little problem to build an aimable 18 to even 48 inch frame.

I only have two AM stations I'd like to come in clearer (690 KHz and 1440 KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one for 1440 then just connect one or the other the radio? How long would be wires need to be and how would I feed it into the connections on the radio (coax)?

311. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 17:49:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h124431ttbalvo9ap9l7enumjq4govfl6d@4ax.com>
Source record: 41611

On Wed, 09 May 2007 17:35:31 GMT, "no spam" <no@spam.net> wrote:

>I'm looking for plans for a simple AM antenna to connect to my stereo to
>replace the little loop antenna that came with it. In the past I have used
>long wires but they are not very directional.
>
>I have found some fairly good plans online for what looks like wire wound
>around a box but all of them seem to have potentiometer in the mix
>somewhere. It would be very little problem to build an aimable 18 to even
>48 inch frame.
>
>I only have two AM stations I'd like to come in clearer (690 KHz and 1440
>KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
>for 1440 then just connect one or the other the radio? How long would be
>wires need to be and how would I feed it into the connections on the radio
>(coax)?
>

The simplest would be to find a variable capacitor from a derelict
radio. The tuning range and size will force you to build the right
size coil - which is vastly simpler to building the coil first and
then finding the right variable capacitor. Using a cap from a
derelict radio will give you the right minimum to maximum range
variation (often with a max in the region of 360 pF just in case you
cannot find a derelict radio). With the capacitor in its maximum mesh
(or nearly so), you wind the box antenna until you find enough
windings to peak the lowest frequency signal. The upper frequency
signal should also peak when you open up the meshed plates. Mark the
two peaks' positions of the variable cap's knob setting.

To couple to the antenna, construct, or simple extend the existing
loop of your current radio to fit inside the box antenna.

73's
Richard Clark, KB7QHC

312. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 18:34:45 UTC
From: amdx <amdx@knology.net>
Message-ID: <26175$46421448$18d6b40c$5824@KNOLOGY.NET>
Source record: 41612

"no spam" <no@spam.net> wrote in message
news:DDn0i.34366$G23.14730@newsreading01.news.tds.net...
> I'm looking for plans for a simple AM antenna to connect to my stereo to
> replace the little loop antenna that came with it. In the past I have
> used long wires but they are not very directional.
>
"not very directional"
A loop will have figure 8 pattern with sharp nulls on axis (both sides)

> I have found some fairly good plans online

How about posting the URL.

>for what looks like wire wound around a box but all of them seem to have
>potentiometer in the mix somewhere. It would be very little problem to
>build an aimable 18 to even 48 inch frame.
>
"seem to have potentiometer in the mix somewhere."
I think you mean a variable capacitor.

> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
> for 1440 then just connect one or the other the radio? How long would be
> wires need to be and how would I feed it into the connections on the radio
> (coax)?
A tap could be done but I think it would be difficult to find the proper
position.
A better way would be to use a switch with two different tuning capacitors.
You
could have the smaller value fixed in the circuit (for 1440) then close a
switch
to put the second larger value in parallel to tune 690 khz.
If the stations are 90 degrees from each other at your location, you might
find one station
in the null of you antenna.
Mike

313. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 18:36:14 UTC
From: nm5k@wt.net
Message-ID: <1178735774.373476.319660@y80g2000hsf.googlegroups.com>
Source record: 41613

On May 9, 11:35 am, "no spam" <n...@spam.net> wrote:
> I'm looking for plans for a simple AM antenna to connect to my stereo to
> replace the little loop antenna that came with it. In the past I have used
> long wires but they are not very directional.
>
> I have found some fairly good plans online for what looks like wire wound
> around a box but all of them seem to have potentiometer in the mix
> somewhere. It would be very little problem to build an aimable 18 to even
> 48 inch frame.
>
> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
> for 1440 then just connect one or the other the radio? How long would be
> wires need to be and how would I feed it into the connections on the radio
> (coax)?

Like Richard says, it's easier to find an old cap, and build the loop
around the cap. The old analog dial stereo receivers have some of
the best variables for this purpose. Most are multi gang caps, which
often can approach 1000 pf or more if you tie all the gangs together.
This can be handy for wide freq use as you can use switches and
switch gangs in or out of the circuit to change freq coverage.
Most stereo caps also had a few small gangs with low pf values,
which are good for extending the coverage higher in frequency.
Most old AM radios used dual 365pf caps, which would total 730 pf
tied together. This will work ok, but not as switchable as using a
several gang cap.
The cap on my 44 inch per side loop is 5 gangs total, and I have a
switch.
You can also "tack" fixed caps in parallel with the variable to drop
in frequency. For that matter, once you determined the amount of
capacitance for the two frequencies, you could switch between two
fixed caps, but who wants to be limited to two freqs? Once you
start playing with a good loop, you'll probably want to dial around
a bit..
Also, using your present loop as the coupling loop to the bigger
loop would be the easiest route. No actual connection is made.
You just hold the present small loop within, or closely in front of
the bigger loop, and vary distance for max signal. You will notice
the sensitivity vary greatly as you move the loop around. Just
find the "hot spot" and nail it down...
Here is one PVC design I've used.. It's about as simple as I could
conjur up, and all parts can be found at any hardware, home depot,
etc..

http://web.wt.net/~nm5k/loop5.jpg
My big loop is even more simple.. It's just a mast of about 2 inch
PVC, and the cross arm is regular 3/4 inch PVC which I drove
through a drilled hole on the 2 inch PVC. I drilled wire holes
directly in the 2 inch PVC at the top and bottom, and used "T's
on the ends of the 3/4 inch PVC. Same as the one in the jpg...
It sit's on a stand in the room here, and rotates.
If you can't find any old variable caps, they can be bought on the
web...Maybe not real cheap, but they can be had.
Myself, I butcher them out of old analog dial stereos...
BTW, I feed my loops with coax, and have a single wire coupling
loop within the bigger main loop, but I built one of the "jpg" loops
for a guy on the shortwave group, and he used his antenna in the
radio as the coupling loop. He just found the hot spot, and
rigged a mount so he could place the radio in that location
on a little stand or whatever..
MK

314. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 18:42:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <cCo0i.1753$UU.1564@newssvr19.news.prodigy.net>
Source record: 41614

Jim Kelley wrote:
> Perhaps it should be noted that electromagnetic waves and photons travel
> neither faster nor slower than the speed of light in their medium of
> travel.

Obviously true for traveling waves. But how about the
"electromagnetic waves and photons" involved in standing
waves? Some folk here would have us believe that they are
not moving at all.
--
73, Cecil http://www.w5dxp.com

315. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 18:43:25 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1178736205.551780.126540@h2g2000hsg.googlegroups.com>
Source record: 41615
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 9, 6:43 am, Radiola <n...@yahoo.com> wrote:

> Chances are you will be able to finally confirm the theory that you
> can talk to the dead.

Reminds me of the film "White Noise"

http://www.imdb.com/title/tt0375210/

316. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 18:49:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2Jo0i.17275$YL5.16068@newssvr29.news.prodigy.net>
Source record: 41616

Jim Kelley wrote:
> Tom doesn't even have a dog in this fight as far as I know.

Tom's web page is in this dog fight. Tom has posted hundreds
of postings in the past in support of his instantaneous
current with no phase shift through a loading coil. He
even "measured" the phase shift through a large coil at
5 nS. Of course, his "measurement" was made with standing-
wave current which doesn't change phase.
--
73, Cecil http://www.w5dxp.com

317. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:00:22 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <5i6443d2ad30du8chkq7tnhnp04240g9ri@4ax.com>
Source record: 41617
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

On Wed, 09 May 2007 16:34:18 GMT, "Jim GM4DHJ"
<jim.gm4dhj@ntlworld.com> wrote:

>
>> I had written off You tube as slapstick and bubble gum. It is
>> refreshing to find there are some interesting clips posted!
>>
>> John Ferrell W8CCW
>> "Life is easier if you learn to
>> plow around the stumps"
>>
>
>check this baby out......watch out for Roger McGuinn........
>
>
>http://www.youtube.com/watch?v=MVhnxZej0w4
>
Good stuff!

I recieved an education with this one though:
http://www.youtube.com/watch?v=INdjRCNcZj0

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

318. Re: High School Radio Club looking for IRLP contacts on Fridays

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:04:55 UTC
From: Jim GM4DHJ <jim.gm4dhj@ntlworld.com>
Message-ID: <rXo0i.672$7l6.381@newsfe7-win.ntli.net>
Source record: 41618
Cross-posted to: alt.radio.amateur,aus.radio.amateur.misc,fr.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,uk.radio.amateur

> I recieved an education with this one though:
> http://www.youtube.com/watch?v=INdjRCNcZj0
>
> John Ferrell W8CCW

I knew all that ....

319. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:10:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <c0p0i.17277$YL5.7469@newssvr29.news.prodigy.net>
Source record: 41619

Jim Kelley wrote:
> Richard Harrison wrote:
>> "Since the velocity with which the signal propagates along the
>> helix wire approximates the velocity of light if the frequency is not
>> too low (caveat is unimportant, see footnote in book), the axial field
>> due to the signal advances with a velocity that is very closely the
>> velocity of light multiplied by the ratio of helix pitch to helix
>> circumference."
>
> Fig. 7-19 is certainly interesting.
>
> Cecil owes you a fruit basket I think. ;-)

Unfortunately, I must disagree (very slightly) with Kraus.
Using Kraus' concepts *verbatim*, the delay through a coil
would be the same whether the wire is coiled up or straightened
out (if I understand correctly what he is saying).

On my web page at w5dxp.com/current2.htm I have a 30 turn
coil with a diameter of 6" causing a 38 degree phase shift
at 3.8 MHz. If the coil were straightened out, it would be
about pi*6"*30 = 565 inches or 47 feet. Since a wavelength
is about 259 feet at that frequency, 47 feet would be about
65 degrees. So Kraus' rule-of-thumb is off by about 70%.
His VF would be about 0.009 where the actual VF is more
like 0.106. 65 degrees of wire doesn't replace 65 degrees
of antenna. In this case, 65 degrees of wire replaces
38 degrees of antenna. The "missing degrees" are in the
impedance discontinuity between the coil and stinger.

There is an interaction between turns that increases the
VF of the coil so there is a very tiny grain of truth in
what Tom says. The interaction between turns increases the
coil VF from Kraus' 0.009 to the actual value of 0.016
but certainly not all the way to 1.0 as W8JI asserts.

Kraus may have been off by 70% but W8JI is off by 6000%
so it seems that Kraus was still a lot closer to the
technical truth that W8JI ever was.
--
73, Cecil http://www.w5dxp.com

320. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:10:03 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f1t6ab$o8e$1@f04n12.cac.psu.edu>
Source record: 41620

Cecil Moore wrote:
> Danny Richardson wrote:
>> I have no idea what you problem is. I've upload an *.EZ on my site and
>> I am using 1and1.
>
> OK, then, why doesn't it work for me? All I want is
> a solution, not a lot of hand-waving.

A Different server or ISP. An EZ solution......

- 73 de Mike KB3EIA -

321. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:13:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <G3p0i.17278$YL5.2959@newssvr29.news.prodigy.net>
Source record: 41621

Tom Ring wrote:
> Cecil, this utility will pull the file no matter what it is. The
> problem has nothing to do with the OS involved. There is something
> wrong at the server end. Or maybe I misunderstand what you are saying.

Tom, I am out of my league concerning this question. Here is
the latest email from support@1and1.com. The server seems to
be working properly now.

"Mime types work differently on Microsoft than they do on a Linux
package. All mime types for MS packages need to be requested through
support to be added to the server. We have added the mime type for the
.ez extension."

Maybe the moral is not to choose a Microsoft server? :-)
--
73, Cecil http://www.w5dxp.com

322. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:20:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <S9p0i.2157$zj3.52@newssvr23.news.prodigy.net>
Source record: 41622

John Smith I wrote:
> Which definition of Guru comes closest to your implied meaning:
> (BTW, I think your use of "guru" is well justified)

Sorta using my own definition for "guru" here, John.
It is an individual who refuses to listen to anything
that mere mortals have to say and either already knows
everything or gets any new information from God Almighty
himself. Anything that I cannot tell from a religion is
being asserted by a "guru". A perfect example is the
assertion by W8JI that current travels the length of
a 75m Texas Bugcatcher coil instantaneously.

If that were true, Intel could speed up its computer
buses by adding a 75m Texas Bugcatcher coil to each
data/control line, i.e. it is a ridiculous assertion.
--
73, Cecil http://www.w5dxp.com

323. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:21:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7bp0i.2159$zj3.454@newssvr23.news.prodigy.net>
Source record: 41623

Jeff wrote:
> I think the problem is that when the user clicks on the hyperlink the server
> does not know how to respond to a .EZ file extension. It understands that
> the user wants to download a zip or bin file or display an html file, but no
> one has told it what to do when asked for an EZ, so it reports that the file
> is not there.

Jeff, it seems that you are 100% correct.
--
73, Cecil http://www.w5dxp.com

324. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:22:58 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1t756dha1@news.service.uci.edu>
Source record: 41625

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> Perhaps it should be noted that electromagnetic waves and photons
>> travel neither faster nor slower than the speed of light in their
>> medium of travel.
>
>
> Obviously true for traveling waves. But how about the
> "electromagnetic waves and photons" involved in standing
> waves?

The only kind of electromagnetic waves I know about are the traveling
kind. Sorry I can't be more help.

73, ac6xg

325. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:26:44 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Ufp0i.17279$YL5.1260@newssvr29.news.prodigy.net>
Source record: 41624

Owen Duffy wrote:
> If I click on Cecil's link, I get a 404 error: file not found which is a
> strong indicator the file is not there, or has incorrect permissions,
> probably the former.

Absolutely not the former. Apparently, Microsoft servers are
sensitive to filename extensions and must be told what to
do with each and every new type or else they get ignored
"as if" they were not there.
--
73, Cecil http://www.w5dxp.com

326. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:30:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Rjp0i.17280$YL5.8344@newssvr29.news.prodigy.net>
Source record: 41626

Michael Coslo wrote:
> A Different server or ISP. An EZ solution......

I should have requested a Linux server, not a
Microsoft server. :-) But the problem has been
solved.
--
73, Cecil http://www.w5dxp.com

327. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:34:47 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1t7rc$e8r$1@news.service.uci.edu>
Source record: 41528

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Tom doesn't even have a dog in this fight as far as I know.
>
>
> Tom has posted hundreds
> of postings in the past in support of his instantaneous
> current with no phase shift through a loading coil.

Tom hasn't posted a single word to this thread that I am aware of.
The point is if you don't like what he says, you should take it up
with him. Know what I mean?

ac6xg

328. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:35:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Enp0i.17281$YL5.5443@newssvr29.news.prodigy.net>
Source record: 41527

Jim Kelley wrote:
> The only kind of electromagnetic waves I know about are the traveling
> kind. Sorry I can't be more help.

Seems to beg the question - are standing-waves electromagnetic
waves? If so, why are they standing? If not, what are they?
(Rhetorical questions AFAIAC)
--
73, Cecil http://www.w5dxp.com

329. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:46:34 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <uyp0i.121964$VU4.63176@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41529

```
Cecil Moore wrote:
> Jim Kelley wrote:
>> Richard Harrison wrote:
>>> "Since the velocity with which the signal propagates along the
>>> helix wire approximates the velocity of light if the frequency is not
>>> too low (caveat is unimportant, see footnote in book), the axial field
>>> due to the signal advances with a velocity that is very closely the
>>> velocity of light multiplied by the ratio of helix pitch to helix
>>> circumference."
>>
>> Fig. 7-19 is certainly interesting.
>>
>> Cecil owes you a fruit basket I think. ;-)
>
> Unfortunately, I must disagree (very slightly) with Kraus.
> Using Kraus' concepts *verbatim*, the delay through a coil
> would be the same whether the wire is coiled up or straightened
> out (if I understand correctly what he is saying).
>
> On my web page at w5dxp.com/current2.htm I have a 30 turn
> coil with a diameter of 6" causing a 38 degree phase shift
> at 3.8 MHz. If the coil were straightened out, it would be
> about pi*6"*30 = 565 inches or 47 feet. Since a wavelength
> is about 259 feet at that frequency, 47 feet would be about
> 65 degrees. So Kraus' rule-of-thumb is off by about 70%.
> His VF would be about 0.009 where the actual VF is more
> like 0.106. 65 degrees of wire doesn't replace 65 degrees
> of antenna. In this case, 65 degrees of wire replaces
> 38 degrees of antenna. The "missing degrees" are in the
> impedance discontinuity between the coil and stinger.
>
> There is an interaction between turns that increases the
> VF of the coil so there is a very tiny grain of truth in
> what Tom says. The interaction between turns increases the
> coil VF from Kraus' 0.009 to the actual value of 0.016
> but certainly not all the way to 1.0 as W8JI asserts.
>
> Kraus may have been off by 70% but W8JI is off by 6000%
> so it seems that Kraus was still a lot closer to the
> technical truth that W8JI ever was.

Cecil,

I don't have the third edition of Kraus' antennas book, but I do have
the second edition. He does not make that simplified statement in the
```

second edition. He has equations and charts showing how the Vf changes with the dimensions of the coil and the wavelength. He also references a paper by Chu and Jackson that is now about 60 years old. In that paper, the authors show that the Vf increases dramatically as the relative wavelength becomes longer with respect to the coil dimensions.

73,
Gene
W4SZ

330. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:49:31 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <fBp0i.121976$VU4.33931@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41530

Cecil Moore wrote:
> Jim Kelley wrote:
>> Perhaps it should be noted that electromagnetic waves and photons
>> travel neither faster nor slower than the speed of light in their
>> medium of travel.
>
> Obviously true for traveling waves. But how about the
> "electromagnetic waves and photons" involved in standing
> waves? Some folk here would have us believe that they are
> not moving at all.

Cecil,

So do you actually believe that standing waves are completely static and inert?

73,
Gene
W4SZ

331. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:55:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <aHp0i.17282$YL5.16349@newssvr29.news.prodigy.net>
Source record: 41531

Jim Kelley wrote:
> Tom hasn't posted a single word to this thread that I am aware of. The
> point is if you don't like what he says, you should take it up with
> him. Know what I mean?

What is your agenda in asserting that the contents of
Tom's web page concerning loading coils and his past
postings on the subject are off limits for this newsgroup?
--
73, Cecil http://www.w5dxp.com

332. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 19:59:47 UTC
From: richardharrison@webtv.net
Message-ID: <18308-46422833-270@storefull-3252.bay.webtv.net>
Source record: 41532

Cecil, W5DXP wrote:
"But how about the electromagnetic waves and photons involved with standing waves?"

Terman has an answer. The standing wave is only a manifestation of interference between two waves traveling in opposite directions, so on page 870 of his 1955 opus Terman writes:

"The directional characteristic of a resonant (standing wave) system is the vector sum of the directional patterns pointed in opposite directions, as illustrated in Fig. 23-8."

In other words, the wave traveling in one direction produces its pattern and the wave traveling in the other direction produces its pattern. The sum of the patterns in both directions is the directional pattern for the rod or wire. Standing waves have nothing to do with it but to stand there and do nothing.

Best regards, Richard Harrison, KB5WZI

333. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:11:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1344amoem6l9f7f@corp.supernews.com>
Source record: 41533

no.spam@no.uce.bellatlantic.net wrote:
>
> Wrong, it just means you didn't read the whole posting. The issue
> with a doublet of two full half waves is feed impedence is very high
> and a very poor match for coax. Feed it properly (voltage feed) and
> it will perform better than a 40m dipole. . .

A full wave dipole has less than 2 dB more gain than a half wave dipole at its best angle. It has gain equal to or more than that of a half wave dipole over only 88 of the 360 degrees of coverage -- at all other angles the full wave dipole has less gain. In fact, over 140 of the total 360 degrees, the gain of a full wave dipole is more than 10 dB less than that of a half wave dipole.

So in what way does the full wave dipole "perform better" than a half wave dipole?

Roy Lewallen, W7EL

334. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:13:27 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <HXp0i.17283$YL5.13095@newssvr29.news.prodigy.net>
Source record: 41534

Gene Fuller wrote:
> I don't have the third edition of Kraus' antennas book, but I do have
> the second edition. He does not make that simplified statement in the
> second edition.

I have the 3rd edition, but I have not been able to find
the previous quotations. I certainly hope that I am not
disagreeing with Kraus. "Coils" or "Loading Coils" are
not even in the index.
--
73, Cecil http://www.w5dxp.com

335. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:19:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Y0q0i.17284$YL5.16976@newssvr29.news.prodigy.net>
Source record: 41535

Gene Fuller wrote:
> So do you actually believe that standing waves are completely static and
> inert?

Of course not, Gene, but some on this newsgroup apparently
believe that. (Hint: I said it was a rhetorical question).

Why do some posters on this newsgroup go out of their way
to deny the photonic nature of the two traveling wave
components that are the cause of the standing wave?
--
73, Cecil http://www.w5dxp.com

336. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:21:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <w3q0i.17285$YL5.15557@newssvr29.news.prodigy.net>
Source record: 41536

Roy Lewallen wrote:
> So in what way does the full wave dipole "perform better" than a half
> wave dipole?

My 20m rotatable dipole gives ~2dB gain on 10m according
to EZNEC.
--
73, Cecil http://www.w5dxp.com

337. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:22:12 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f1tahl$1218$1@f04n12.cac.psu.edu>
Source record: 41537

Cecil Moore wrote:
> Michael Coslo wrote:
>> A Different server or ISP. An EZ solution......
>
> I should have requested a Linux server, not a
> Microsoft server. :-) But the problem has been
> solved.

Good to see it solved, Cecil. I much prefer to run things off a Linux server, seems to be less problems overall. I've always hosted in Linux, but My son went with Windows for a while, and eventually changed to Linux after nothing he wanted to do worked.

- 73 de Mike KB3EIA -

338. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:38:53 UTC
From: richardharrison@webtv.net
Message-ID: <18308-4642315D-273@storefull-3252.bay.webtv.net>
Source record: 41539

Cecil. W5DXP wrote:
"Unfortunately, I must disagree (very slightly) with Kraus."

I had invited readers to the helical antenna pages of Kraus to support my wave advance comparison to the progress of a threaded bolt. I had looked at page 229 in the 3rd edition with its Figs. 8-8 and 8-9 or at similar figures in an earlier edition.

Upon looking agin, I still believe the figs. support my bolt comparison. In any case, I`d study long and hard before sarguing with Kraus.

Best regards, Richard Harrison, KB5WZI

339. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 20:41:13 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Jlq0i.2178$zj3.89@newssvr23.news.prodigy.net>
Source record: 41538

Owen Duffy wrote:
> If I click on Cecil's link, I get a 404 error: file not found which is a
> strong indicator the file is not there, or has incorrect permissions,
> probably the former.

Not to pick on Owen as an individual, but rather on gurus
in general:

This is an example of the combination of arrogance and
ignorance often exhibited by gurus. As a matter of fact,
the most probable explanation was that a file type had
not been defined on a Microsoft server. Ignorance of
Microsoft servers was the problem, not that the file
was not there.

But don't hold your breath for: "Thanks, I was wrong
and I learned something today." from any guru.
--
73, Cecil http://www.w5dxp.com

340. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:12:19 UTC
From: richardharrison@webtv.net
Message-ID: <1606-46423933-209@storefull-3257.bay.webtv.net>
Source record: 41540

Jim Kelley wrote:
"Fig. 7-19 is certainly interesting."

Jim`s cryptic statement sent me on a search.

Eureka! My 1950 version of Kraus has that Fig. 7-19 on page 193. It shows propagarion velocities found by several researchers as a function of helix circumference.

Phase velocity is the velocity at which a point of constant phase is propagated in a progressive (traveling) sinusoidal wave.

Best regards, Richard Harrison, KB5WZI

341. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:22:57 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1te6gjam1@news.service.uci.edu>
Source record: 41543

Richard Harrison wrote:

> Cecil. W5DXP wrote:
> "Unfortunately, I must disagree (very slightly) with Kraus."
>
> I had invited readers to the helical antenna pages of Kraus to support
> my wave advance comparison to the progress of a threaded bolt. I had
> looked at page 229 in the 3rd edition with its Figs. 8-8 and 8-9 or at
> similar figures in an earlier edition.
>
> Upon looking agin, I still believe the figs. support my bolt comparison.
> In any case, I`d study long and hard before sarguing with Kraus.
>
> Best regards, Richard Harrison, KB5WZI

I didn't quite grasp the purpose of your bolt comparison, Richard.
The only limits Kraus puts on helices is that they are helical -
anything between a flat single turn loop at one limit and a straight
line at the other.

73, ac6xg

342. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:24:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992C4B6217B1nonenowhere@61.9.191.5>
Source record: 41541

"Jeff" <jeff@local.host> wrote in
news:4641e035$0$1342$834e42db@reader.greatnowhere.com:

>
> "> Apart from special processing specified for some files or file
> types
>> (extensions), the server just sends the document back in a response
>> under http headers (some of which may be chosen based on extension -
>> MIME type association in the server's config files.
>
> I suspect that it is this part that is going wrong, there is no
> association for a .ez extension and the server is responding with a
> 404 error. Hence the request for a MIME type.

You obviously don't know how web servers, HTTP, and browsers work.

Owen

343. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:29:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <o3r0i.1502$LR5.818@newssvr17.news.prodigy.net>
Source record: 41542

Richard Harrison wrote:
> Cecil. W5DXP wrote:
> "Unfortunately, I must disagree (very slightly) with Kraus."
>
> I had invited readers to the helical antenna pages of Kraus to support
> my wave advance comparison to the progress of a threaded bolt. I had
> looked at page 229 in the 3rd edition with its Figs. 8-8 and 8-9 or at
> similar figures in an earlier edition.
>
> Upon looking agin, I still believe the figs. support my bolt comparison.
> In any case, I`d study long and hard before arguing with Kraus.

No doubt, your bolt comparison is valid when each turn on
the "coil" is one wavelength long. But what happens when
each turn is 0.006 wavelength? Do you reckon something
might change?

Hopefully, I am not disagreeing with Kraus. It appears that
the question is: Does Kraus' one wavelength per turn helical
antenna have the same VF as a 75m Texas Bugcatcher loading coil?

Kraus' own graph shows that if one varies the turn circumference,
the phase velocity is not a linear correspondence. I would suggest
that lack of linear correspondence occurs in the 75m Texas Bugcatcher
coil. We cannot tell what the exact phase difference would be at
0.006 wavelength per turn, but the trend seems obvious to me.
--
73, Cecil http://www.w5dxp.com

344. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:31:17 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992C4C8232700nonenowhere@61.9.191.5>
Source record: 41544

Michael Coslo <mjc5@psu.edu> wrote in news:f1tahl$1218$1
@f04n12.cac.psu.edu:

> Cecil Moore wrote:
>> Michael Coslo wrote:
>>> A Different server or ISP. An EZ solution......
>>
>> I should have requested a Linux server, not a
>> Microsoft server. :-) But the problem has been
>> solved.
>
> Good to see it solved, Cecil. I much prefer to run things off a Linux
> server, seems to be less problems overall. I've always hosted in Linux,
> but My son went with Windows for a while, and eventually changed to
> Linux after nothing he wanted to do worked.

Is the issue the operating system, or the web server. In other words, is
it Windows Vs Linux, or IIS vs Apache? (You can run Apache on Windows.)

It is a long time since I looked after IIS, but then it wasn't a patch on
Apache (if you will pardon the pun... an it is a pun as the name Apache
(with the stange spelling) is a shortening of "a patchy server",
reflecting its origins).

Owen

345. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:35:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <n8r0i.7578$2v1.2869@newssvr14.news.prodigy.net>
Source record: 41545

Richard Harrison wrote:
> Eureka! My 1950 version of Kraus has that Fig. 7-19 on page 193. It
> shows propagation velocities found by several researchers as a function
> of helix circumference.
>
> Phase velocity is the velocity at which a point of constant phase is
> propagated in a progressive (traveling) sinusoidal wave.

My 3rd edition, shows the lack of a 1:1 correspondence between
the circumference of a turn and the phase velocity of that
turn. If one projects Kraus' graph back to 0.006 wavelength
for the circumference of the coil, the lack of correspondence
should become pretty large, maybe even matching my reported
EZNEC results?
--
73, Cecil http://www.w5dxp.com

346. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:36:17 UTC
From: richardharrison@webtv.net
Message-ID: <1606-46423ED1-212@storefull-3257.bay.webtv.net>
Source record: 41546

Cecil, W5DXP wrote:
"---are standing waves electromagnetic waves?"

According to Tigertek they are not. Photons are massless at rest. They cease to exist. Waves made of photons thus don`t exist if they are not in motion. A real electromagnetic wave must be moving to exist. Check out Tigertek`s fact of the day.

Best regards, Richard Harrison, KB5WZI

347. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:48:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <blr0i.7580$2v1.4037@newssvr14.news.prodigy.net>
Source record: 41547

Jim Kelley wrote:
> I didn't quite grasp the purpose of your bolt comparison, Richard. The
> only limits Kraus puts on helices is that they are helical - anything
> between a flat single turn loop at one limit and a straight line at the
> other.

My 3rd edition only shows coil circumferences between 0.6
and 1.5 wavelengths. But the relative phase velocity is
1.0 when the circumference is 1.1 wavelength and the pitch
angle is 5 degrees. If the relative phase velocity is 1.0
when the circumference is 1.1 WL, doesn't that imply a
change in VF away from a straight piece of wire?
--
73, Cecil http://www.w5dxp.com

348. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:50:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Kmr0i.7581$2v1.1725@newssvr14.news.prodigy.net>
Source record: 41548

Owen Duffy wrote:
> "Jeff" <jeff@local.host> wrote in
>> I suspect that it is this part that is going wrong, there is no
>> association for a .ez extension and the server is responding with a
>> 404 error. Hence the request for a MIME type.
>
> You obviously don't know how web servers, HTTP, and browsers work.

Your ignorance and arrogance are showing again, Owen.
Jeff obviously knows exactly how Microsoft servers work.
--
73, Cecil http://www.w5dxp.com

349. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:52:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Dor0i.7582$2v1.5011@newssvr14.news.prodigy.net>
Source record: 41549

Owen Duffy wrote:
> Is the issue the operating system, or the web server.

Apparently, it was a Microsoft operating system problem.
--
73, Cecil http://www.w5dxp.com

350. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 21:54:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Kqr0i.7583$2v1.1005@newssvr14.news.prodigy.net>
Source record: 41550

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "---are standing waves electromagnetic waves?"
>
> According to Tigertek they are not. Photons are massless at rest. They
> cease to exist. Waves made of photons thus don`t exist if they are not
> in motion. A real electromagnetic wave must be moving to exist. Check
> out Tigertek`s fact of the day.

I agree that there is a logical contradiction between standing
waves and electromagnetic waves. Too bad the people using
standing wave current for measuring phase don't realize that.
--
73, Cecil http://www.w5dxp.com

351. East coast tropo DX looks hot right now 22;00 zulu May 9

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:03:39 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <%yr0i.13647$3P3.3426@newsread3.news.pas.earthlink.net>
Source record: 41551

Fire up your 6m rigs, I see lots of tropo on low VHF of TV. I am
receiving a channel 3 WEDU Tampa Florida here in NJ just outside of NYC.
Also seeing interference on NYC's channels 2 and 4. 21:40 zulu May 9.

352. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:10:09 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992C5318F6943nonenowhere@61.9.191.5>
Source record: 41552

Roy Lewallen <w7el@eznec.com> wrote in
news:1344amoem6l9f7f@corp.supernews.com:

> no.spam@no.uce.bellatlantic.net wrote:
>>
>> Wrong, it just means you didn't read the whole posting. The issue
>> with a doublet of two full half waves is feed impedence is very high
>> and a very poor match for coax. Feed it properly (voltage feed) and
>> it will perform better than a 40m dipole. . .
>
> A full wave dipole has less than 2 dB more gain than a half wave dipole
> at its best angle. It has gain equal to or more than that of a half
wave
> dipole over only 88 of the 360 degrees of coverage -- at all other
> angles the full wave dipole has less gain. In fact, over 140 of the
> total 360 degrees, the gain of a full wave dipole is more than 10 dB
> less than that of a half wave dipole.
>
> So in what way does the full wave dipole "perform better" than a half
> wave dipole?

Roy,

We have had discussions about characterising baluns, and I understand the complexity... however, let me try a rough analysis.

Following the discussion with one of the chaps I mentioned in the earlier posting, he was using a full wave dipole, a RAK BL-50A balun and 25m of foam RG58 (cellular) feedline, I have had a rough attempt at characterising the balun (I have one) at 7MHz. It is a 1:1 voltage balun, and o/c it appears to look like 3000 ohms resistance in shunt with 10uH of inductance with very low applied voltage (at 7MHz).

This balun is rated at 1kW CW in 50 ohms, so the rated primary voltage would be 223V RMS. If the apparent shunt resistance remained constant (and it doesn't if flux is high... but flux should be kept low to avoid excessive core loss / temperature), the core loss would be 16W. The package could probably dissipate 40W of core and copper loss, so 16W+ for core loss seems consistent with package size, so maybe 3000 ohms is about right, possibly as low as half of that at full operating flux.

So, in the case of a full wave dipole low over ground, the modelled feedpoint impedance is around 4200+j0 ohms. If this is shunted by something in the range 1500 to 3000 ohms of core loss resistance, efficiency ranges from 35% to 58%, and the antenna can absorb a max of 223^2/4200 or 12W before overheating the balun (perhaps a little more

since there is almost zero copper loss).

Then the feedline will have an efficiency from 20% to 10% due to the high VSWR.

So this "more metal" antenna system, looks like it has some small increase in directivity (1.6 from your posting), an efficiency of 7% to 6%, quite low gain (directivity * efficiency = -10dB compared to a lossless half wave dipole+feed), a maximum input RF power rating of 50W to 100W for a radiated power of around 12W. The EIRP is much lower (almost 10dB lower) than a 100W transmitter feeding the same antenna of half the length.

Gee, that all looks pretty complicated, no wonder people find "rules" like "bigger is better" so appealing, it saves all that thinking and understanding... but wait a minute, isn't that was ham radio was about?

73
Owen

PS: I am thinking about trying to characterise the balun at 223V applied, I will see how time goes today.

353. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:14:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <87h443hsvjtji00j5jpruq5ini2g9smc03@4ax.com>
Source record: 41553

On Wed, 09 May 2007 21:50:34 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>Owen Duffy wrote:
>> "Jeff" <jeff@local.host> wrote in
>>> I suspect that it is this part that is going wrong, there is no
>>> association for a .ez extension and the server is responding with a
>>> 404 error. Hence the request for a MIME type.

"web servers are configured to report a MIME type of text/plain
for unknown content types"

>> You obviously don't know how web servers, HTTP, and browsers work.
>
>Your ignorance and arrogance are showing again, Owen.

And this is from someone who has never written a line of code for
desinging a server.

>Jeff obviously knows exactly how Microsoft servers work.

So, the server is asking (which is what request means) the client for
the MIME type? What a yuk. And using M$ as the gold standard for
providing non-HTTP compliant servers? Yukï¿½ Quite literally, M$ does
not know how HTTP servers are supposed to work.

"MIME is currently defined in RFCs 2045, 2046, 2047, 2048, and
2049 and registered values for MIME types are available in IANA |
MIME Media Types. The HTTP specification defines a superset of
MIME which is used to describe the media types used on the web."

M$ does not conform.

Source:
http://developer.mozilla.org/en/docs/Properly_Configuring_Server_MIME_Types

From one who has written many servers - myself.

354. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:23:06 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eRr0i.646$y_7.459@newssvr27.news.prodigy.net>
Source record: 41554

Richard Clark wrote:
> And this is from someone who has never written a line of code for
> desinging a server.

It would never occur to me that a line of code to make
a server stop singing was required. How did you stumble
upon that pressing need?
--
73, Cecil http://www.w5dxp.com

355. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:27:47 UTC
From: richardharrison@webtv.net
Message-ID: <18262-46424AE3-471@storefull-3253.bay.webtv.net>
Source record: 41556

Jim Kelley wrote:
"I don`t quite grasp the purpose of your bolt comparison, Richard."

My point was that the signal is guided by the wire on the coil and isn`t instantly transported by induction from one end of the coil to the other. How long it takes the signal to travel the length of the coil depends on the length of wire in the coil as well as the velocity factor of the wave on the wire in the coil. If it were not so, Terman`s explanation of the traveling wave tube (TWT) would not be valid. But, GTE Lenkurt gives a similar explanation in its "Demodulator" of the TWT. They manufactured TWT amplifiers and surely knew how they worked.

A coil is a coil whether it is used in a traveling wave tube or used to load an antenna. The velocity factors are surely a function of coil dimensions as illustrated by the research results given by Kraus in Fig.7-19 in the 1950 edition of "Antennas". The variation surprises me. There is probably more research which explains such variations.

Best regards, Richard Harrison, KB5WZI

356. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:34:09 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1178750049.560889.161990@l77g2000hsb.googlegroups.com>
Source record: 41555
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On May 9, 6:43 am, Radiola <n...@yahoo.com> wrote:
> On May 7, 12:38 pm, Radium <gluceg...@gmail.com> wrote:
>
>
>
>
>
> > Hi:
>
> > If my location is in southern California, what would I hear on a
> > "DXed" 300 GHz AM Radio Receiver? Would there be a specific difference
> > between what I would hear at night and what I would hear during the
> > day?
>
> > On medium-wave station, I notice the interference -- in the form of
> > tones -- to be louder at night than the day. Does this difference also
> > apply to extreme shortwave frequencies as high as 300 GHz?
>
> > NOTE: I am aware than 300 GHz is most likely FM, not AM. However, am
> > still curious as to what I would hear on a 300 GHz AM receiver.
>
> > Thanks,
>
> > Radium
>
> Chances are you will be able to finally confirm the theory that you
> can talk to the dead.- Hide quoted text -
>
> - Show quoted text -

Most likely hearing the Dead from a Transmission that
'originated' : One, Ten or a Hundred Million Years Ago.

long ago and far away ~ RHF
.
.
. .

357. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:45:35 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1tj1l$n67$1@news.service.uci.edu>
Source record: 41557

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> I didn't quite grasp the purpose of your bolt comparison, Richard. The
>> only limits Kraus puts on helices is that they are helical - anything
>> between a flat single turn loop at one limit and a straight line at
>> the other.
>
>
> My 3rd edition only shows coil circumferences between 0.6
> and 1.5 wavelengths. But the relative phase velocity is
> 1.0 when the circumference is 1.1 wavelength and the pitch
> angle is 5 degrees. If the relative phase velocity is 1.0
> when the circumference is 1.1 WL, doesn't that imply a
> change in VF away from a straight piece of wire?

Hi Cecil,

The entire point of Richard's citation is that VF is a function of pitch to circumference ratio. It explains the very thing that you need to support your argument about phase delay across a coil. It's what I meant when I said "I still think it would be prudent to explore and understand the precise nature of the delay through the coil more thoroughly before making too many assumptions about this."

Beyond that, I don't understand the question. Kraus is pretty explicit. I didn't see much need to read between the lines. But all I have to look at is the scanned version on the web that someone posted a link to a week or so ago.

You should send Richard H. a fruit basket. Who woulda thought to look under Helical Antennas. :-)

73, Jim AC6XG

358. Re: East coast tropo DX looks hot right now 22;00 zulu May 9

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 22:53:39 UTC
From: ricknj10@hotmail.com
Message-ID: <4642506a.75610343@news.optonline.net>
Source record: 41558

Just plain old E skip, but a great opening.

Well since this is an antenna not a propagation newsgroup, let me say I just worked a fellow in Orlando from here in NJ and he was running a little squalo type of thing and said he has worked all over the eastern US today. I am running a 5 element yagi at 50 ft, and the band is FULL of signals.

Rick K2XT

359. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 23:19:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1ol4439lnn8sgsdkdo7e6g8cfqiloqm9q6@4ax.com>
Source record: 41559

On Wed, 09 May 2007 22:23:06 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>How did you stumble
>upon that pressing need?

Only a pants-presser would be worried about that.

360. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 23:28:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <AOs0i.8119$rO7.6823@newssvr25.news.prodigy.net>
Source record: 41560

Jim Kelley wrote:
> The entire point of Richard's citation is that VF is a function of pitch
> to circumference ratio. It explains the very thing that you need to
> support your argument about phase delay across a coil.

Does "circumference" mean the circumference of the coil or
is it the actual wire length once around the helix?
--
73, Cecil http://www.w5dxp.com

361. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 23:34:52 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46425aa0$0$9928$4c368faf@roadrunner.com>
Source record: 41561

"no spam" <no@spam.net> wrote in message
news:DDn0i.34366$G23.14730@newsreading01.news.tds.net...
> I'm looking for plans for a simple AM antenna to connect to my stereo to
> replace the little loop antenna that came with it. In the past I have
> used long wires but they are not very directional.
>
> I have found some fairly good plans online for what looks like wire wound
> around a box but all of them seem to have potentiometer in the mix
> somewhere. It would be very little problem to build an aimable 18 to
> even 48 inch frame.
>
> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
> for 1440 then just connect one or the other the radio? How long would be
> wires need to be and how would I feed it into the connections on the radio
> (coax)?
>

690 used to be for WAPE a clear channel 50KW station on Jacksonvile FL. I
understand it a 10kw talk radio station now. Is this the 690 you are
refering to.

362. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 23:41:29 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <I_s0i.1532$LR5.714@newssvr17.news.prodigy.net>
Source record: 41562

Jim Kelley wrote:
> But all I
> have to look at is the scanned version on the web that someone posted a
> link to a week or so ago.

Unfortunately, it has been removed. Did you save it?
--
73, Cecil http://www.w5dxp.com

363. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-09 23:42:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rsl443t6opdqkk2v7sb397936ue58oua2q@4ax.com>
Source record: 41563

On Wed, 9 May 2007 17:27:47 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>A coil is a coil whether it is used in a traveling wave tube or used to
>load an antenna.

Hi Richard,

That seems to be hardly so at the frequency under consideration, and the application being described. TWTs and antenna loads vary considerably with regard to this conjunction you are rhetorically drawing.

A coil, in the classic circuit sense, is dimensionless in the face of wavelength employed. (Yes, there are dimensions of length, radius, and pitch etc.; yet and all, these are infinitesimal in comparison to the wavelength of the signal analysis. If you move to the arena of dimension becoming a significant portion of wavelength, then calling it a coil is simply descriptive, not prescriptive. That is, it looks like a coil, but it could in fact act like anything (such as transmission line or antenna) or as a coil (but this would be a rare occurrence). Hence, a coil is not always like a coil when there is enough baggage such as the legacy of coil meaning inductance alone.

Many writers solve this by calling the structure a helix - which is exactly the term used by Terman. So, a coil is a coil, except when it is an helix.

>The velocity factors are surely a function of coil
>dimensions as illustrated by the research results given by Kraus in
>Fig.7-19 in the 1950 edition of "Antennas". The variation surprises me.
>There is probably more research which explains such variations.

I rely on his work in the same volume of 1955 that you have. The velocity factors seem to be the same irrespective of sources or terminology.

Returning to your first statement (taken last, here):
>My point was that the signal is guided by the wire on the coil and isn`t
>instantly transported by induction from one end of the coil to the
>other.
The notion of instantaneous current and inductance is anathema. However, phase lag via coupling should be a trivial computation and the debate becomes one of degree (figuratively and literally). To this point (and through the many years) few seemed interested in quantification that would endanger the appearance of lofty discussion.

73's
Richard Clark, KB7QHC

364. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 00:23:40 UTC
From: Dave <noone@nowhere.com>
Message-ID: <gCt0i.10844$XG1.5847@trndny07>
Source record: 41564

```
"art" <aunwin@insightbb.com> wrote in message
news:1178754956.990582.240700@e51g2000hsg.googlegroups.com...
> What is the ratio of magnetic electrons emitted from a radiator
> compared with
> with the number of electrons emmitted due to current flow?
> What is the combination ratio required of both types of electrons to
> form a radiation field?
> Regards
> Art
>

what is a 'magnetic electron'?? and why would electrons be emmitted due to
current flow?
```

365. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 00:37:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <EPt0i.5342$H_.4063@newssvr21.news.prodigy.net>
Source record: 41565

art wrote:
> What is the ratio of magnetic electrons emitted from a radiator
> compared with with the number of electrons emmitted due to current
> flow?

Art, emitted electrons are corona discharges. What is
emitted from an antenna is primarily photons. Each
photon has both electric and magnetic properties
and the ratio is 377 ohms in the far field.
--
73, Cecil http://www.w5dxp.com

366. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 00:41:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sgp443h1753fv79ij1oajfgdgaj2t6rrs9@4ax.com>
Source record: 41566

On Thu, 10 May 2007 00:23:40 GMT, "Dave" <noone@nowhere.com> wrote:

>
>"art" <aunwin@insightbb.com> wrote in message
>news:1178754956.990582.240700@e51g2000hsg.googlegroups.com...
>> What is the ratio of magnetic electrons emitted from a radiator
>> compared with
>> with the number of electrons emmitted due to current flow?
>> What is the combination ratio required of both types of electrons to
>> form a radiation field?
>> Regards
>> Art
>>
>
>what is a 'magnetic electron'?? and why would electrons be emmitted due to
>current flow?
>

Hi Dave,

All electrons are magnetic. All electrons flow in current. Electrons emmitted (sic) would first have to be accelerated by a potential that exceeds the work function of the metal they inhabit, and then avoid the resistance to their movement found outside that metal. This is called induction current.

Emission, except in a vacuum, is considered to be a nuisance as it causes havoc in the vicinity (such as superheating air to luminescence). There would be electrons of emission only in the first few micrometers from the conductor (not sure why that would be of any particular advantage). Of course, all such terms and their usages are conventional. Their usage and application in this thread probably have meanings that deviate wildly from the norms of accepted usage.

73's
Richard Clark, KB7QHC

367. High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 01:13:06 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <AfydnXdLzuI-7N_bnZ2dnUVZ_qiqnZ2d@comcast.com>
Source record: 41567

Can anyone comment on the performance of the High Sierra HS-1800/Pro antenna used as a base antenna? Due to my area/neighbors, etc..., this is probably the route I'm going to go.

I'm just curious if anyone has any experience using this antenna for their home and it's performance as such.

Thanks!

368. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 01:44:09 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178761449.649882.14820@w5g2000hsg.googlegroups.com>
Source record: 41568

On 9 May, 17:37, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > What is the ratio of magnetic electrons emitted from a radiator
> > compared with with the number of electrons emmitted due to current
>
> > flow?
>
> Art, emitted electrons are corona discharges. What is
> emitted from an antenna is primarily photons. Each
> photon has both electric and magnetic properties
> and the ratio is 377 ohms in the far field.
> --
> 73, Cecil http://www.w5dxp.com

Cecil,
When power is supplied there are two vectors formed by particles that are emitted from the radiator. I am looking for the ratio of particals emitted. You can call them photons, electrons, particles or what ever is fine by me.
The second question is related to the flow or movement of these particles from the enclosed surface to the outside of the surface (I will call this an arbitary boundary unless there is cries of disagreement). The passage of the
two types of particles thru the boundary allows for the combination of their individual energies to form a radiated field. Thus I was asking what the ratio of one type of particle to the other type of particle is required to do that. Obviously if the combination is created by collision it would appear that the ratio is 1:1 but I do not know personally how the combination occurrs.
I understand that the electrons change wavelength to break away from the gravitational field (equilibrium) at the parting point and then change back to the originating wavelength at or before the formation of the radiating field. If this is correct then the number of electrons if any that do NOT escape from the enclosed surface have to be accounted for UNLESS ALL ESCAPE which would infer an equal ratio of electron emmissionfor the formation of a radiative field. If the initial ratio is not equal then obviously the rest will return to the initial gravitational field possibly to form a skin depth since the velocity of return is the same as the initiating velocity. Hopefully the above will apply a clue as to where I am comming from.
Regards
Art

369. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 01:44:22 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <464278ec$0$21250$39cecf19@news.twtelecom.net>
Source record: 41569

Cecil Moore wrote:

> art wrote:
>
>> What is the ratio of magnetic electrons emitted from a radiator
>> compared with with the number of electrons emmitted due to current
>
> > flow?
>
> Art, emitted electrons are corona discharges. What is
> emitted from an antenna is primarily photons. Each
> photon has both electric and magnetic properties
> and the ratio is 377 ohms in the far field.

Art does seem to have some serious problems with basic physics. Not too surprising.

I guess after that remark he'll now characterize me as a guru. ;)

tom
K0TAR

370. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 01:49:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ASu0i.8127$rO7.248@newssvr25.news.prodigy.net>
Source record: 41570

art wrote:
> I am looking for the ratio of particals emitted.

To the best of my knowledge, all coherent photons are
identical.
--
73, Cecil http://www.w5dxp.com

371. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 02:24:37 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178763877.535325.120140@h2g2000hsg.googlegroups.com>
Source record: 41571

On 9 May, 18:49, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > I am looking for the ratio of particals emitted.
>
> To the best of my knowledge, all coherent photons are
> identical.
> --
> 73, Cecil http://www.w5dxp.com

If they are all identical how do they manage to avoid combining energy
prior to escaping from the enclosed surface? I noted that you said
both had
electric and magnetic properties but I could not rationaly deduce that
they were the same. You also stated that the electrons were corona
discharges
which is new to me. If this is all basic physics shouldn't everybody
be in agreement with respect to the transition to a magnetic field.
Tom states I have a problem with the basics so if there is uniformity
in the resposes I would be happy to realigne my thoughts but he
supplied no input
of value only a personal opinion.
Regards
Art

372. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 02:36:39 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178764599.324237.283250@l77g2000hsb.googlegroups.com>
Source record: 41572

On 9 May, 18:44, Tom Ring <news0...@taring.org> wrote:
> Cecil Moore wrote:
> > art wrote:
>
> >> What is the ratio of magnetic electrons emitted from a radiator
> >> compared with with the number of electrons emmitted due to current
>
> > > flow?
>
> > Art, emitted electrons are corona discharges. What is
> > emitted from an antenna is primarily photons. Each
> > photon has both electric and magnetic properties
> > and the ratio is 377 ohms in the far field.
>
> Art does seem to have some serious problems with basic physics. Not too
> surprising.
>
> I guess after that remark he'll now characterize me as a guru. ;)
>
> tom
> K0TAR

As you have stated I seem to have serious problems. If that is the
case the remedy is to familiarise myself to what everybody calls basic
physics.
By asking questions I am seaching for a correction to my so called
erronious views. Is that a no no on this newsgroup? Since it is a
matter of basics the thread should be extremely short as there will be
no disagreement !
I could not classify you as a guru if you are not willing to put a rod
into the ground by giving a response that would prove or not prove to
be in agreement with all.
Art

373. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 02:55:44 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992C8384AFD95nonenowhere@61.9.191.5>
Source record: 41573

Richard Clark <kb7qhc@comcast.net> wrote in
news:87h443hsvjtji00j5jpruq5ini2g9smc03@4ax.com:

...
>>Jeff obviously knows exactly how Microsoft servers work.
>
> So, the server is asking (which is what request means) the client for
> the MIME type?

I doubt it.

> What a yuk. And using M$ as the gold standard for
> providing non-HTTP compliant servers? Yuk Quite literally, M$ does
> not know how HTTP servers are supposed to work.
>
> "MIME is currently defined in RFCs 2045, 2046, 2047, 2048, and
> 2049 and registered values for MIME types are available in IANA |
> MIME Media Types. The HTTP specification defines a superset of
> MIME which is used to describe the media types used on the web."

While some are stressing about getting IANA registration of the ez
extension, it already is, and to another application, and its type is
application/andrew-inset.

So, many web servers (using the IANA MIME media type list) will serve the
file up with a HTTP Content-Type of application/andrew-inset . That won't
affect most users, because their browser will not have any defined action
for that application type.

On a good web server, one could override that MIME association for the
file, files, directory or tree... but it shouldn't be necessary.

Owen

374. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 03:04:09 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <as2543t8dkhfhkm3jjco53gc05lffe3oqf@4ax.com>
Source record: 41574

On Wed, 09 May 2007 13:11:01 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>no.spam@no.uce.bellatlantic.net wrote:
>>
>> Wrong, it just means you didn't read the whole posting. The issue
>> with a doublet of two full half waves is feed impedence is very high
>> and a very poor match for coax. Feed it properly (voltage feed) and
>> it will perform better than a 40m dipole. . .
>
>A full wave dipole has less than 2 dB more gain than a half wave dipole
>at its best angle. It has gain equal to or more than that of a half wave
>dipole over only 88 of the 360 degrees of coverage -- at all other
>angles the full wave dipole has less gain. In fact, over 140 of the
>total 360 degrees, the gain of a full wave dipole is more than 10 dB
>less than that of a half wave dipole.
>
>So in what way does the full wave dipole "perform better" than a half
>wave dipole?
>
>Roy Lewallen, W7EL
In the direction the lobe points. In general for an omnidirectional
antenna, it isn't as good.
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

375. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 03:23:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qew0i.21598$Um6.6688@newssvr12.news.prodigy.net>
Source record: 41575

art wrote:
> I noted that you said both had
> electric and magnetic properties but I could not rationaly deduce that
> they were the same.

Balanis has a pretty good treatment of the
subject but I don't have that book with me.

> You also stated that the electrons were corona discharges
> which is new to me.

Instead of becoming energetic enough to leave the
conductor, electrons normally shed their excess
energy in the form of photons.
--
73, Cecil http://www.w5dxp.com

376. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 04:18:46 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178770726.808137.301750@p77g2000hsh.googlegroups.com>
Source record: 41576

On 9 May, 20:23, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > I noted that you said both had
> > electric and magnetic properties but I could not rationaly deduce that
> > they were the same.
>
> Balanis has a pretty good treatment of the
> subject but I don't have that book with me.
>
> > You also stated that the electrons were corona discharges
> > which is new to me.
>
> Instead of becoming energetic enough to leave the
> conductor, electrons normally shed their excess
> energy in the form of photons.
> --
> 73, Cecil http://www.w5dxp.com

Cecil,
I think that we are all in agreement now on the legitimacy of adding a
time
metric to Gauss's equation unless it was a quirk of luck that two
programs came to agreement. We also know that for a dc current flow we
cannot produce a radiating field because we must have two vectors
created by a time varying field. In other words the particles must be
different in some way
as like particals cannot collide or combine to form a radiative field.
I believe we also know that any combination of particals must occur
after release from the gravitational field and where I could go along
with your corona description
and the interface impedance of 377 ohms. From this analysis the
particles could well have the same properties as you state but of
different polarities which prevents initial collisions or a joining
mechanism. If this conforms with
known basic physics then one should see the importance of the ratio of
emitted particles. If this does not conform to known basic figures I
would like to know why .Then my thinking becomes in conformance with
the elite in this group such that sniping and derision can come to an
end. Gauss gave me the overall picture of the formation of radiation
as a completed jigsaw puzzle picture but I am looking for knoweledge
of the individual connecting parts for a more detailed analysis which
is accepted by those familiar with basic physics
to bring myself inline with those knoweledgable in the arts. All I
need is some answers to my question that evokes agreement from all and

the thread gets closure. If it is basic physics it should not be that hard for the experts to explain. Cecil you are familiar with the many aspects of radiation thus you have a great opportunity to supply the required info that cannot be refuted by others .,So sieze the opportunity where others are shying away.
Best regards
Art
Art

377. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 04:48:37 UTC
From: nx7u <nx7u@cox.net>
Message-ID: <1178772517.235843.33410@h2g2000hsg.googlegroups.com>
Source record: 41427

On May 9, 6:13 pm, "NotMe" <N...@Oops.edu> wrote:
> Can anyone comment on the performance of the High Sierra HS-1800/Pro antenna
> used as a base antenna? Due to my area/neighbors, etc..., this is probably
> the route I'm going to go.
>
> I'm just curious if anyone has any experience using this antenna for their
> home and it's performance as such.
>
> Thanks!

Works fine for me. Throw down as much radial wire as you can get away
with.

378. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 05:18:25 UTC
From: richardharrison@webtv.net
Message-ID: <21716-4642AB21-444@storefull-3254.bay.webtv.net>
Source record: 41428

Art Unwin wrote:
"What is the combination ratio required of both types of electrons to form a radiation field?"

A company called Tigertek, Inc. answers questions such as this. Art can search on "amateur radio fact of the day from Tigertek" and their pages should appear. Click on "Facts of the Day, Software and Forums". Select "November 26, and see: "Electromagnetic E/H Ratio". Click and find:
"----at a distance of several wavelengths or more from any type of electromagnetic radiator the ratio of electric to magnetic field strength (E/H) always becomes equal to approximately 377 ohms, which is the approximate electromagnetic impedance of space."

Jan 3: Electron Facts

July 29: Does Your Antenna Radiate Particles?
"----Unlike protons and neutrons, photons have zero rest mass. (Albert Einstein`s special relativity theory predicted that massless particles travel at the speed of light in a vacuum.) Furthermore, unlike protons and neutrons which are composed of smaller particles called quarks that are bound together with massless smaller particles called gluons, photons (and electrons) are elemental particles that are not composed of smaller particles. Transmitting antennas do indeed radiate particles."

Best regards, Richard Harrison, KB5WZI

379. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 05:45:06 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178775906.396625.31940@q75g2000hsh.googlegroups.com>
Source record: 41429

On May 9, 11:49 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > Tom doesn't even have a dog in this fight as far as I know.
>
> Tom's web page is in this dog fight. Tom has posted hundreds
> of postings in the past in support of his instantaneous
> current with no phase shift through a loading coil. He
> even "measured" the phase shift through a large coil at
> 5 nS. Of course, his "measurement" was made with standing-
> wave current which doesn't change phase.

Then let me put it to you this way. I don't have a dog in your fight
with him. Why don't you go tell it to him?

73, Jim AC6XG

380. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 06:11:30 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178777490.846704.52450@y5g2000hsa.googlegroups.com>
Source record: 41430

On May 9, 2:54 pm, Cecil Moore <nos...@w5dxp.com> wrote:

> I agree that there is a logical contradiction between standing
> waves and electromagnetic waves.

If there is, then there must also be contradiction between traveling waves and destructive interference, and between two dissonant notes and the beat they create. They are all simply the result of superposition. Two things happening at the same time in the same place with one result. But nothing more.

Take two sound waves of identical frequency and superpose them. The result is a single waveform. Now decrease the frequency of one just a bit. They still superpose to create a single waveform but now the net amplitude varies with time according to the difference in frequency. Decrease the frequency even more. We still have a single waveform, and the beat frequency may now be too rapid to easily discern, but now we can begin to discern two distinct pitches. Look at it on a spectrum analyzer and we can see each of the two frequencies individually. Yet all we see on the oscilloscope is one waveform.

Is that the contradiction?

73, Jim AC6XG

381. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 06:13:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <snd543lu9tu0sv5ag68uk7he2obs6s6epo@4ax.com>
Source record: 41431

On Thu, 10 May 2007 00:18:25 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>"----Unlike protons and neutrons, photons have zero rest mass. (Albert >Einstein`s special relativity theory predicted that massless particles >travel at the speed of light in a vacuum.)

It should be added that "particles" accelerated to the speed of light (radiation) have infinite mass requiring infinite energy to get them there.

73's
Richard Clark, KB7QHC

382. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 06:15:20 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178777720.203045.52710@e51g2000hsg.googlegroups.com>
Source record: 41432

On May 9, 4:28 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > The entire point of Richard's citation is that VF is a function of pitch
> > to circumference ratio. It explains the very thing that you need to
> > support your argument about phase delay across a coil.
>
> Does "circumference" mean the circumference of the coil or
> is it the actual wire length once around the helix?
> --
> 73, Cecil http://www.w5dxp.com

2*Pi*radius

ac6xg

383. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 06:29:28 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178778568.330888.312910@u30g2000hsc.googlegroups.com>
Source record: 41433

On May 9, 3:27 pm, richardharri...@webtv.net (Richard Harrison) wrote:
> Jim Kelley wrote:
>
> "I don`t quite grasp the purpose of your bolt comparison, Richard."
>
> My point was that the signal is guided by the wire on the coil and isn`t
> instantly transported by induction from one end of the coil to the
> other. How long it takes the signal to travel the length of the coil
> depends on the length of wire in the coil as well as the velocity factor
> of the wave on the wire in the coil. If it were not so, Terman`s
> explanation of the traveling wave tube (TWT) would not be valid. But,
> GTE Lenkurt gives a similar explanation in its "Demodulator" of the TWT.
> They manufactured TWT amplifiers and surely knew how they worked.
>
> A coil is a coil whether it is used in a traveling wave tube or used to
> load an antenna. The velocity factors are surely a function of coil
> dimensions as illustrated by the research results given by Kraus in
> Fig.7-19 in the 1950 edition of "Antennas". The variation surprises me.
> There is probably more research which explains such variations.
>
> Best regards, Richard Harrison, KB5WZI

Ok. But what I was asking is what does any of that have to do with a
bolt?

73, Jim AC6XG

384. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 07:35:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qpi543tfktv2r6ht6ch59h0vaktatt23p2@4ax.com>
Source record: 41434

On 9 May 2007 23:29:28 -0700, Jim Kelley <jwkelley@uci.edu> wrote:

>On May 9, 3:27 pm, richardharri...@webtv.net (Richard Harrison) wrote:
>> Jim Kelley wrote:
>>
>> "I don`t quite grasp the purpose of your bolt comparison, Richard."
>>
>> My point was that the signal is guided by the wire on the coil and isn`t
>> instantly transported by induction from one end of the coil to the
>> other. How long it takes the signal to travel the length of the coil
>> depends on the length of wire in the coil as well as the velocity factor
>> of the wave on the wire in the coil. If it were not so, Terman`s
>> explanation of the traveling wave tube (TWT) would not be valid. But,
>> GTE Lenkurt gives a similar explanation in its "Demodulator" of the TWT.
>> They manufactured TWT amplifiers and surely knew how they worked.
>>
>> A coil is a coil whether it is used in a traveling wave tube or used to
>> load an antenna. The velocity factors are surely a function of coil
>> dimensions as illustrated by the research results given by Kraus in
>> Fig.7-19 in the 1950 edition of "Antennas". The variation surprises me.
>> There is probably more research which explains such variations.
>>
>> Best regards, Richard Harrison, KB5WZI
>
>Ok. But what I was asking is what does any of that have to do with a
>bolt?

The travel of one turn of a point at the radius (helical distance) in
relation to the travel of the same point in the depth (the linear
displacement after 360 degrees of the turn) is related to pitch. A
simple mechanical relationship. This is the bolt.

The signal flowing in the helix modulates a beam traveling within the
axis of the helix to impose its frequency upon it
(amplification/oscillation) through the pitch. This is the TWT.

The helical distance is supposed to express the linear completion of
the truncated 90 degrees of a quarterwave radiator. This is for the
loading coil.

There is no obvious correlation between the mechanical description,
the harmonic relation of the TWT and the degree relation of the
loading coil beyond the simple, visual metaphor which doesn't really
add any quid-pro-quo.

What is missing for the TWT is the necessary correlation of the beam drift velocity which is wholly lacking from the bolt metaphor.

To say that the coil replaces the missing degrees of the truncated quarterwave has likewise been so sloppily handled in the past, that 60-70% error brushed aside to prove equality provokes "so what?"

73's
Richard Clark, KB7QHC

385. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 08:06:40 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <1m6471drvz.fsf@persaunet.uninett.no>
Source record: 41435

Richard Clark <kb7qhc@comcast.net> writes:

> On Thu, 10 May 2007 00:18:25 -0500, richardharrison@webtv.net (Richard
> Harrison) wrote:
>
>>"----Unlike protons and neutrons, photons have zero rest mass. (Albert
>>Einstein`s special relativity theory predicted that massless particles
>>travel at the speed of light in a vacuum.)
>
> It should be added that "particles" accelerated to the speed of light
> (radiation) have infinite mass requiring infinite energy to get them
> there.

Particles with non zero rest mass, that is.

386. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 10:29:42 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4642f413$0$3184$4c368faf@roadrunner.com>
Source record: 41436

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:1178777490.846704.52450@y5g2000hsa.googlegroups.com...
> On May 9, 2:54 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>
>> I agree that there is a logical contradiction between standing
>> waves and electromagnetic waves.
>
> If there is, then there must also be contradiction between traveling
> waves and destructive interference, and between two dissonant notes
> and the beat they create. They are all simply the result of
> superposition. Two things happening at the same time in the same place
> with one result. But nothing more.
>
> Take two sound waves of identical frequency and superpose them. The
> result is a single waveform. Now decrease the frequency of one just a
> bit. They still superpose to create a single waveform but now the net
> amplitude varies with time according to the difference in frequency.
> Decrease the frequency even more. We still have a single waveform,
> and the beat frequency may now be too rapid to easily discern, but now
> we can begin to discern two distinct pitches. Look at it on a
> spectrum analyzer and we can see each of the two frequencies
> individually. Yet all we see on the oscilloscope is one waveform.
>
> Is that the contradiction?
>
> 73, Jim AC6XG
>

No, Its an illusion. The same thing happens when you view an AM signal. On
an oscilloscope the pattern you see may give you the impression that the
carrier is changing in amplitude with the modulation. Perhaps standing waves
are this same type of illusion.

Jimmie

387. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 10:47:39 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fLC0i.8153$rO7.5193@newssvr25.news.prodigy.net>
Source record: 41437

Jim Kelley wrote:
> Then let me put it to you this way. I don't have a dog in your fight
> with him. Why don't you go tell it to him?

I already did.

But let's extend your logic to John Kraus. He doesn't
have a dog in this fight either. Why is it OK to quote
Kraus and not OK to quote w8ji?
--
73, Cecil http://www.w5dxp.com

388. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 10:56:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JTC0i.2326$zj3.1299@newssvr23.news.prodigy.net>
Source record: 41438

Jim Kelley wrote:
> Cecil Moore <nos...@w5dxp.com> wrote:
>> I agree that there is a logical contradiction between standing
>> waves and electromagnetic waves.
>
> Is that the contradiction?

You obviously misunderstood what I was trying to say
so let me expand my statement:

Since contradictions do not exist in reality, any
apparent contradiction between standing EM waves and
traveling EM waves has to exist only in the human mind.
There is no contradiction in the real world. The photons
in a standing wave are moving at the speed of light,
c*VF, not standing still in the standing wave. Believing
that the component traveling waves cease to exist is
the contradiction and cannot occur in reality.
--
73, Cecil http://www.w5dxp.com

389. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 10:59:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JWC0i.2327$zj3.914@newssvr23.news.prodigy.net>
Source record: 41439

Jim Kelley wrote:
> 2*Pi*radius

Sorry, I'm a little handicapped since I have never seen
"Figure 7-19" and it has been removed from the web site.
--
73, Cecil http://www.w5dxp.com

390. Re: Question on wattmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 11:01:17 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1178794947_2371@sp12lax.superfeed.net>
Source record: 41440

Richard Clark wrote:
> On Tue, 08 May 2007 20:47:31 -0400, Chuck <no.spam@no.spam.at.all>
> wrote:
>
>> Tony, see if this answers your question:
>>
>> http://www.evaluationengineering.com/archive/articles/0201sensors.htm
>> The Sharp End of RF Power Measurement
>
> Hi Chuck,
>
> Little do you realize

Very little, it appears.

(or you are especially diabolical to have
> introduced it), but within this monograph offered is the heresy of the
> Source mismatching the load (the heresy being that any source of
> sufficient power does not embody the nominal 50 Ohms Impedance).
>
> It even contains the classic math introduced by Stephen F. Adam back
> in the mid 60s for the National Bureau of Standards - and later
> published by Hewlett Packard (both notorious hotbeds of technical
> corruption in the matters of source impedance).
>
> 73's
> Richard Clark, KB7QHC

Thanks.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

391. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 11:13:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <E7D0i.2330$zj3.2233@newssvr23.news.prodigy.net>
Source record: 41441

art wrote:
> Cecil you are familiar with the many
> aspects of radiation thus you have a great opportunity to supply the
> required info that cannot be refuted by others .,So sieze the
> opportunity where others are shying away.

Art, I am moving myself to a new QTH and just don't have the
time. To the best of my present knowledge, all of the coherent
photons are identical.
--
73, Cecil http://www.w5dxp.com

392. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 11:43:32 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1178797412.587113.89130@y5g2000hsa.googlegroups.com>
Source record: 41442

Ahhh come on guys, and Art, , get a grip...

Electrons are 'emitted' from the surface of a conductor only under specific circumstances, such as the Photoelectric Effect, in a direct electric arc <such as an arc welder>, off the hot surface of a filament, off the cathode of an electroplating device, etc.... All of these are mass events where the departing electrons will <in time> change/erode the surface material of the emitter...

Electrons do not normally depart the surface of an RF antenna; local corona discharge, or mechanical short circuit, or electric arc, being the main exceptions <and are not germain to the intended purpose of the RF antenna>..
The antenna surface is not eroded or mass altered by the long term emission of electromagetic waves because no electrons are being launched/emitted off the surface <res ipsa loquitor>...

OK, now back to the regularily scheduled reruns of Howdy Doody <you can learn a lot from these>

denny / k8do

393. Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 11:47:24 UTC
From: "R. Rajesh Jeba Anbiah" <ng4rrjanbiah@rediffmail.com>
Message-ID: <1178797644.033768.43470@p77g2000hsh.googlegroups.com>
Source record: 41443

It's my long time wish to view TV channels of all countries. I'm wondering why it isn't possible with TV but which is possible in radio.

Is there any advanced antenna or technology for that? Now, I'm getting know about "Dish TV", but it is still in pay option.

(With the possibility to access the net, I'd thought I could find the answer. But, I couldn't find any with my googling skill)

TIA

--
<?php echo 'Just another PHP saint'; ?>
Email: rrjanbiah-at-Y!com Blog: http://rajeshanbiah.blogspot.com/

394. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 12:50:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1v4favqv1@nnrp.linuxfan.it>
Source record: 41444

Cecil Moore wrote:
>
> Maybe the moral is not to choose a Microsoft server? :-)

I would hope that if an extension is registered with IANA and mime typed that microchit would provide a timely update to inform it's servers how to process it. There have been instances in the past of incorrectly handled mime types able to carry/load malware onto ones' system (JPEG files being exploited, one example.) Probably the cause of microchits paranoia over mime types ...

However, windows can be told how to handle a specific mime type (extension) to where when one clicks upon it on a web site the program to handle it (open?) is automatically invoked and the file ends up being opened by the proper application. (an installer for the original program can edit the registry to accomplish this also--something Roy may wish to do in the future.)

This page gives a hint on how to do some of the above:

http://filext.com/faq/manage_file_extensions.php

I have no allegiance to either windows or linux ... if you are a linux guru--linux is great. If you are something less and you are free and fast with using your computer, you probably will end up with a root kit on your system and someone recording every key stroke you make and with your system violated. Linux takes for granted you are a state-of-the-art user--microchit attempts to "mother you" and keep you protected from the boogey man ... it just does a rather poor job of it ... I use a dual boot system ...

Regards,
JS

395. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 13:16:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f1v5vmvqv2@nnrp.linuxfan.it>
Source record: 41445

Cecil Moore wrote:
> > ...
> If that were true, Intel could speed up its computer
> buses by adding a 75m Texas Bugcatcher coil to each
> data/control line, i.e. it is a ridiculous assertion.
Cecil:

This whole discussion has been interesting. I have loved the debate and analysis ... krist, you guys keep this up and I just may end up finding ham radio fun again!

Let's just remember to all shake hands when this is done :-)

Warmest regards,
JS

396. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 13:22:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_%E0i.3134$RX.1646@newssvr11.news.prodigy.net>
Source record: 41446

Denny wrote:
> Electrons are 'emitted' from the surface of a conductor only under
> specific circumstances, such as the Photoelectric Effect, in a direct
> electric arc <such as an arc welder>, off the hot surface of a
> filament, off the cathode of an electroplating device, etc.... All of
> these are mass events where the departing electrons will <in time>
> change/erode the surface material of the emitter...

Is that because the departing electrons leave "holes"
in the conductor atoms? :-)
--
73, Cecil http://www.w5dxp.com

397. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 13:24:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <H2F0i.3136$RX.2139@newssvr11.news.prodigy.net>
Source record: 41447

John Smith I wrote:
> Let's just remember to all shake hands when this is done :-)

Gurus don't shake hands because they might get contaminated
by the outside world. :-)
--
73, Cecil http://www.w5dxp.com

398. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 13:29:46 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178803786.760151.271990@u30g2000hsc.googlegroups.com>
Source record: 41448

On 10 May, 04:43, Denny <k...@mailblocks.com> wrote:
> Ahhh come on guys, and Art, , get a grip...
>
> Electrons are 'emitted' from the surface of a conductor only under
> specific circumstances, such as the Photoelectric Effect, in a direct
> electric arc <such as an arc welder>, off the hot surface of a
> filament, off the cathode of an electroplating device, etc.... All of
> these are mass events where the departing electrons will <in time>
> change/erode the surface material of the emitter...
>
> Electrons do not normally depart the surface of an RF antenna; local
> corona discharge, or mechanical short circuit, or electric arc, being
> the main exceptions <and are not germain to the intended purpose of
> the RF antenna>..
> The antenna surface is not eroded or mass altered by the long term
> emission of electromagetic waves because no electrons are being
> launched/emitted off the surface <res ipsa loquitor>...
>
> OK, now back to the regularily scheduled reruns of Howdy Doody <you
> can learn a lot from these>
>
> denny / k8do

Denny, I believe you are correct that what is known as basic physics does not have universal consensus in this group which is not all that bad because we are all amateurs.I know that mass is not constant in itself since it is always self adjusting to maintain equilibrium. It would also appear that what is emitted is so small and numourous that it can be seen as a cloud or a field.
I also believe there is some sort of consensus that these two clouds are still somewhat homogenous after they have escaped from the initial gravitational forcesi.e merging of these entities is achieved beyond the arbitary border.
Some have gone off at a tangent by introducing 377 ohms as a ratio which ofcourse is an impossibility which destoys the credability of their whole statement. At the back of my mind I was trying to determine how the makeup of skin depth occurs since at a moment in time the surface of the conductor is seen as composed entirely of static particles and what changes occur when the material conducts since the surface is totally boundduring the radiation process. So Tom this is a good time to bow out, since once again on this group we have encountered a situation where actual knoweledge is piece meal at best and where continuation could only introduce falacies to the subject.
One thing I am assured of is that despite claims offered this is by no

means BASIC physics theory but a collection of fragmentary knoweledge which could easily evolve in what is termed junk science as the many opinions merge.
Gentlemen have a great day and try to concentrate on the beginnings that Gauss has now provided us by the addition of the metric of time and formulate a theory within that context since it presents an avenue of new additional information.than that previously known.
Regards
Art

399. 2m Antenna Designs ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:18:00 UTC
From: ei2gyb@gb7air.ampr.org
Message-ID: <ei2gyb000017@hamradio>
Source record: 41450

R:070510/1418Z @:gb7air.ampr.org HamServ V2.65

Hi ALL,

I was wondering if you know of any good portable 2m antenna designs

all the best

Steve EI2GYB

From: ei2gyb at gb7air.ampr.org (Using HamServ)

400. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:23:45 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1178807025.941209.185370@l77g2000hsb.googlegroups.com>
Source record: 41449

On May 10, 6:29 am, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> No, Its an illusion. The same thing happens when you view an AM signal. On
> an oscilloscope the pattern you see may give you the impression that the
> carrier is changing in amplitude with the modulation. Perhaps standing waves
> are this same type of illusion.

I am unsure why you would call this an illusion.

The modulated waveform can be accurately described by
(f(t)+1)*cos(2*pi*fc*t) where f(t) is the modulating signal

from which it is easy to discern that the amplitude is changing
with the modulation.

There is often more than one way to describe an observation and
the existence of this description in no way detracts from the
alternative which has a carrier plus and minus the modulating
signal.

Many of the arguments here do seem to be of the form "You
say tomatoe and I say tomatoe", but the important point is
that the appropriate description be used for the problem at
hand. Filter design is probably better done with the latter,
while modulators and envelope detectors are likely better
analyzed with the former.

But I find no reason to declare one to be less of an illusion than
the other.

You are correct though; this is exactly like the arguments
about "standing waves" and "travelling waves". The mathematical
expressions for each accurately describe the voltage and
current distribution on the line, yet some wish to argue that one
description is more real than the other.

They are equally real and equally illusions. The important point
is to choose the one that best helps solve whatever problem is
at hand and not to get carried away with a belief that one is more
real than the other.

...Keith

401. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:29:54 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <C%F0i.5023$yM2.387@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41451

Cecil Moore wrote:
> Jim Kelley wrote:
>> Cecil Moore <nos...@w5dxp.com> wrote:
>>> I agree that there is a logical contradiction between standing
>>> waves and electromagnetic waves.
>>
>> Is that the contradiction?
>
> You obviously misunderstood what I was trying to say
> so let me expand my statement:
>
> Since contradictions do not exist in reality, any
> apparent contradiction between standing EM waves and
> traveling EM waves has to exist only in the human mind.
> There is no contradiction in the real world. The photons
> in a standing wave are moving at the speed of light,
> c*VF, not standing still in the standing wave. Believing
> that the component traveling waves cease to exist is
> the contradiction and cannot occur in reality.

Cecil,

Why do you seem to believe that bringing photons into the discussion
adds any light? (pun intended)

Does the word "photon" sound more hifalutin than "wave"?

It is instructive to follow the lead of Kraus. In the second edition of
"Antennas", on page 19, Kraus notes, "In simplest terms an antenna
converts photons to currents or vice versa."

He then goes on to write nearly 900 pages, and it is not apparent that
he ever again mentions "photon". I did not find any cases in a quick review.

Have you ever seen any technical treatment of HF radiation that actually
used photons in the equations?

73,
Gene
W4SZ

402. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:39:03 UTC
From: gsm@mendelson.com
Message-ID: <slrnf46be1.bjc.gsm@cable.mendelson.com>
Source record: 41452

R. Rajesh Jeba Anbiah wrote:
> It's my long time wish to view TV channels of all countries. I'm
> wondering why it isn't possible with TV but which is possible in
> radio.

No. TV signals are mostly line of sight. So are satellite signals.

Look up www.lyngsat.com for information about what satellites you
can "see" from your location. Then there is the issue of proper
antennas, receivers, decoders and for encrypted signals, decryption
keys (usually paid for if available at all).

There is also the issue of PAL and SECAM signals versus NTSC.
Multisystem TV sets are common, but not in the U.S.

Where exactly are you?

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

403. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:54:03 UTC
From: no spam <no@spam.net>
Message-ID: <fmG0i.34386$G23.27212@newsreading01.news.tds.net>
Source record: 41453

>> I'm looking for plans for a simple AM antenna to connect to my stereo to
>> replace the little loop antenna that came with it. In the past I have
>> used long wires but they are not very directional.
>>
>> I have found some fairly good plans online for what looks like wire wound
>> around a box but all of them seem to have potentiometer in the mix
>> somewhere. It would be very little problem to build an aimable 18 to
>> even 48 inch frame.
>>
>> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
>> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and
>> one for 1440 then just connect one or the other the radio? How long
>> would be wires need to be and how would I feed it into the connections on
>> the radio (coax)?
>>
>
> 690 used to be for WAPE a clear channel 50KW station on Jacksonvile FL. I
> understand it a 10kw talk radio station now. Is this the 690 you are
> refering to.

Yes, 690 out of Jax and 1440 out of Brunswick.

404. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:54:03 UTC
From: no spam <no@spam.net>
Message-ID: <fmG0i.34387$G23.30614@newsreading01.news.tds.net>
Source record: 41454

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:h124431ttbalvo9ap9l7enumjq4govfl6d@4ax.com...
> On Wed, 09 May 2007 17:35:31 GMT, "no spam" <no@spam.net> wrote:
>
>>I'm looking for plans for a simple AM antenna to connect to my stereo to
>>replace the little loop antenna that came with it. In the past I have
>>used
>>long wires but they are not very directional.
>>
>>I have found some fairly good plans online for what looks like wire wound
>>around a box but all of them seem to have potentiometer in the mix
>>somewhere. It would be very little problem to build an aimable 18 to
>>even
>>48 inch frame.
>>
>>I only have two AM stations I'd like to come in clearer (690 KHz and 1440
>>KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
>>for 1440 then just connect one or the other the radio? How long would be
>>wires need to be and how would I feed it into the connections on the radio
>>(coax)?
>>
>
> The simplest would be to find a variable capacitor from a derelict
> radio. The tuning range and size will force you to build the right
> size coil - which is vastly simpler to building the coil first and
> then finding the right variable capacitor. Using a cap from a
> derelict radio will give you the right minimum to maximum range
> variation (often with a max in the region of 360 pF just in case you
> cannot find a derelict radio). With the capacitor in its maximum mesh
> (or nearly so), you wind the box antenna until you find enough
> windings to peak the lowest frequency signal. The upper frequency
> signal should also peak when you open up the meshed plates. Mark the
> two peaks' positions of the variable cap's knob setting.

Simple for you. My electronic education is limited to some high school and
college physics and some 'playing' on my on. IOW, I know a cap isn't
something you wear on your head but 'maximum mesh' sounds like either the
gears in your transmission are working very well or your girl friend is
wearing something sexy.

405. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:54:03 UTC
From: no spam <no@spam.net>
Message-ID: <fmG0i.34388$G23.3729@newsreading01.news.tds.net>
Source record: 41455

```
>> I'm looking for plans for a simple AM antenna to connect to my stereo to
>> replace the little loop antenna that came with it. In the past I have
>> used long wires but they are not very directional.
>>
> "not very directional"
> A loop will have figure 8 pattern with sharp nulls on axis (both sides)

Long wires aren not very directional.

>> I have found some fairly good plans online
>
> How about posting the URL.

In no particular order. . .

http://www.mindspring.com/~loop_antenna/
http://www.dxzone.com/catalog/Antennas/Loop/
http://www.mtmscientific.com/loop.html
http://www.frontiernet.net/~jadale/Loop.htm
http://www.dxzone.com/catalog/Antennas/Shortwave/
http://www.schmarder.com/radios/misc-stuff/loops.htm

>
>>for what looks like wire wound around a box but all of them seem to have
>>potentiometer in the mix somewhere. It would be very little problem to
>>build an aimable 18 to even 48 inch frame.
>>
> "seem to have potentiometer in the mix somewhere."
> I think you mean a variable capacitor.

One or the other depending on the plans

>
>> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
>> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and
>> one for 1440 then just connect one or the other the radio? How long
>> would be wires need to be and how would I feed it into the connections on
>> the radio (coax)?
> A tap could be done but I think it would be difficult to find the proper
> position.
> A better way would be to use a switch with two different tuning
> capacitors. You
> could have the smaller value fixed in the circuit (for 1440) then close a
> switch
> to put the second larger value in parallel to tune 690 khz.
> If the stations are 90 degrees from each other at your location, you
```

> might find one station
> in the null of you antenna.

I think a simple measurement would do it. For 690KHz you could tap it at 1425 feet or at any fraction thereof. For 1440KHz you just use 919 feet.

That was my original plan. To take a 4 foot square frame and put 22 winds of wire on it. That would give me about 1/4 of a wavelenght of 690. I could put a tap at the 14th winding to give me a 1/4 wavelenght for 1440.

> Mike
>

406. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:54:04 UTC
From: no spam <no@spam.net>
Message-ID: <gmG0i.34389$G23.19781@newsreading01.news.tds.net>
Source record: 41456

>> I'm looking for plans for a simple AM antenna to connect to my stereo to
>> replace the little loop antenna that came with it. In the past I have
>> used
>> long wires but they are not very directional.
>>
>> I have found some fairly good plans online for what looks like wire wound
>> around a box but all of them seem to have potentiometer in the mix
>> somewhere. It would be very little problem to build an aimable 18 to
>> even
>> 48 inch frame.
>>
>> I only have two AM stations I'd like to come in clearer (690 KHz and 1440
>> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and
>> one
>> for 1440 then just connect one or the other the radio? How long would be
>> wires need to be and how would I feed it into the connections on the
>> radio
>> (coax)?
>
>
> Like Richard says, it's easier to find an old cap, and build the loop
> around the cap. The old analog dial stereo receivers have some of
> the best variables for this purpose. Most are multi gang caps, which
> often can approach 1000 pf or more if you tie all the gangs together.
> This can be handy for wide freq use as you can use switches and
> switch gangs in or out of the circuit to change freq coverage.
> Most stereo caps also had a few small gangs with low pf values,

<good stuff cut)

Almost anything is easy if you know how to do it. I was looking for
something really simple w/o any electronic parts in it. I posted several
URLs with plans for building a loop like the one you are talking about. I
naively thought I might just be able to take piece of wire that was a
fraction of the wavelength of the freq and wrap it around a frame and aim it
in the correct direction. But I didn't want to do all the work only to find
out it wouldn't work.

407. Re: 2m Antenna Designs ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:57:33 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <jmc6431otnsqornk3ja11mkemci9f1lf3h@4ax.com>
Source record: 41458

On 10 May 07 14:18 GMT, ei2gyb@gb7air.ampr.org wrote:

>R:070510/1418Z @:gb7air.ampr.org HamServ V2.65
>
>Hi ALL,
>
>I was wondering if you know of any good portable 2m antenna designs
>
>
>all the best
>
>
>Steve EI2GYB
>
http://k6mhe.com/files/ssfm.pdf

408. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 14:57:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <FmG0i.1948$UU.1111@newssvr19.news.prodigy.net>
Source record: 41457

Gene Fuller wrote:
> Why do you seem to believe that bringing photons into the discussion
> adds any light? (pun intended)
>
> Does the word "photon" sound more hifalutin than "wave"?

Using "photons" instead of "EM waves" makes things a little
more obvious. While "standing EM waves" may imply EM waves
that are standing still, "standing photons" are obviously
impossible. Photons cannot stand still. EM waves cannot
stand still for the same reason. A "standing EM wave" is
a human abstraction that doesn't really exist in reality.

The only people with something to gain by objecting to
the use of "EM waves" and "photons" interchangeably are the
people trying to hoodwink the uninitiated into believing
that photons can stand still. :-)
--
73, Cecil, w5dxp.com

409. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:04:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7tG0i.1952$UU.1097@newssvr19.news.prodigy.net>
Source record: 41459

no spam wrote:
> Long wires aren't not very directional.

From Wikipedia: "The Beverage Antenna is an inexpensive
long wire receiving antenna ... Beverage antennas are
highly directional.
--
73, Cecil, w5dxp.com

410. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:25:10 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1178810776_3191@sp12lax.superfeed.net>
Source record: 41460

Keith Dysart wrote:
> On May 10, 6:29 am, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> No, Its an illusion. The same thing happens when you view an AM signal. On
>> an oscilloscope the pattern you see may give you the impression that the
>> carrier is changing in amplitude with the modulation. Perhaps standing waves
>> are this same type of illusion.
>
> I am unsure why you would call this an illusion.
>
> The modulated waveform can be accurately described by
> (f(t)+1)*cos(2*pi*fc*t) where f(t) is the modulating signal
>
> from which it is easy to discern that the amplitude is changing
> with the modulation.
>
> There is often more than one way to describe an observation and
> the existence of this description in no way detracts from the
> alternative which has a carrier plus and minus the modulating
> signal.
>
> Many of the arguments here do seem to be of the form "You
> say tomatoe and I say tomatoe", but the important point is
> that the appropriate description be used for the problem at
> hand. Filter design is probably better done with the latter,
> while modulators and envelope detectors are likely better
> analyzed with the former.
>
> But I find no reason to declare one to be less of an illusion than
> the other.
>
> You are correct though; this is exactly like the arguments
> about "standing waves" and "travelling waves". The mathematical
> expressions for each accurately describe the voltage and
> current distribution on the line, yet some wish to argue that one
> description is more real than the other.
>
> They are equally real and equally illusions. The important point
> is to choose the one that best helps solve whatever problem is
> at hand and not to get carried away with a belief that one is more
> real than the other.
>
> ...Keith
>

Thank you for nicely elucidating the distinctions in emphasis between "science" and engineering, Keith.

I believe a perfect (just to keep this at an abstract level) SA reveals the underlying reality of the modulated AM carrier.

An oscilloscope displays a waveform that can be mathematically derived from the underlying reality. On the scope, it is produced by electronically combining three (assumed) sine waves. Without the mathematical or electronic operations, I suggest the waveform displayed by the scope does not exist.

Mathematical equivalence between time and frequency domains does not demonstrate (in my humble opinion) a duality in the underlying reality.

In reality, there are only the original three frequencies which can be demonstrated by selective filtering. Whether the oscilloscope waveform is an illusion is perhaps a semantic issue since it is an artifact constructed from, and convertible at will back into the three continuously existing sine waves which never surrender their independent qualities.

Quite a bit of difference from transmission line standing waves, no?

My $02.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

411. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:30:47 UTC
From: richardharrison@webtv.net
Message-ID: <21716-46433AA7-464@storefull-3254.bay.webtv.net>
Source record: 41462

Cecil, W5DXP wrote:
"Beverage antennas are highly directional."

Living in Portugal in the 1950`s, I used a Beverage antenna to listen to the CBS Evening News from WCBS in New York, and WWL in New Orleans. Whenever one station faded, I just rocked the dial and the other station would be there. Portugal is on Greenwich time so the Evening News was around midnight local time. By then, most of the Europeans had signed off.

All you must have for a Beverage antenna is a long wire, say 2 wavelengths long, aimed at the targeted broadcaster.

Best regards, Richard Harrison, KB5WZI

412. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:37:24 UTC
From: HankG <hank@invalid.com>
Message-ID: <UtqdnThBmtCzod7bnZ2dnUVZ_hudnZ2d@comcast.com>
Source record: 41461

"R. Rajesh Jeba Anbiah" <ng4rrjanbiah@rediffmail.com> wrote in message
news:1178797644.033768.43470@p77g2000hsh.googlegroups.com...
> It's my long time wish to view TV channels of all countries. I'm
> wondering why it isn't possible with TV but which is possible in
> radio.
>
> Is there any advanced antenna or technology for that? Now, I'm getting
> know about "Dish TV", but it is still in pay option.
>
> (With the possibility to access the net, I'd thought I could find the
> answer. But, I couldn't find any with my googling skill)
>
> TIA
>
> --
> <?php echo 'Just another PHP saint'; ?>
> Email: rrjanbiah-at-Y!com Blog: http://rajeshanbiah.blogspot.com/

Try this link.

http://mediahopper.com/portal.htm

Works for me.

HankG
>

413. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:46:19 UTC
From: HankG <hank@invalid.com>
Message-ID: <3u6dnQLUY-vZo97bnZ2dnUVZ_j6dnZ2d@comcast.com>
Source record: 41463

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f1oem6$b6b$1@nntp1.jpl.nasa.gov...
> Dave (from the UK) wrote:
> > There is a scanned copy of a book you may find interesting:
> >
> > ----
> > Antennas, John D. Kraus, Ph.D.., 1950, 553 pages
> >
> > This book is a college text and engineering reference on antennas. A
> > pretty thorough theoretical treatment along with practical information
> > on antenna design.
> > -----
> >
> > See
> >
> > http://www.pmillett.com/Books/Kraus_antennas.pdf (7.9 MB)
> >
> > More books at
> >
> > http://www.pmillett.com/technical_books_online.htm
> >
> > Apparently the copyright has expired on these books, so they are not
> > pirated. I actually own a copy of the Kraus book, but it is attractive
> > to have a copy on my laptop.
>
> The copyright on that edition was renewed in 13 November 1978
> (Registration # RE-7-717, original reg# A47618), so it's still in
> copyright (until 95 years after publication: year 2045). This isn't
> particularly unusual, since it's a standard textbook, and the second
> edition didn't come out until 1988, so the publisher would have made
> sure the copyright was renewed, even if W8JK didn't.
>
> Jim

Couldn't find anything regarding antennas at either link.

HankG

414. Unusual 40M "Capacitor" antenna (Compact)

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 15:58:38 UTC
From: gene@csl.uiuc.edu
Message-ID: <f1vffekgi1@news.ks.uiuc.edu>
Source record: 41464

Unusual capacitor Vertical Antenna (Compact)

This version provides enhanced performance over the 40M antenna described in an earlier post (Google>more>groups>rec.radio.amateur.antenna>search-160M small city lot>. I used the same "capacitive hat" at the top, and insulated aluminum sheet at the bottom . This design provides essentially constant-current to be distributed over the entire 35 feet of vertical antenna wire (hanging from a pulley and nylon rope to a high tree branch) on 40M, (and current in a conductor is what does the radiating!).
I modeled this theory on EZNEC thusly:
A vertical wire 0.1" diameter, 0.05' off the ground at the bottom to 35' high:
At the top end (35'), selected 30 radials of 5' x 0.25" diameter:
At the bottom (.05'), selected 30 radials of 6' x 0.25" diameter:
Placed a Load (capacitor, Xc= -585) at 40% up the vertical wire:
Placed a Source (I) at 1% up the vertical wire:
Used Real/High Accuracy Ground, and 7.2 MHz.

Results showed that current in the entire 35' remained fairly constant (plus or minus 8%), and phase varied (plus or minus 4-1/2 degrees).

The omni-directional maximum lobe was 15-30 deg at -.86 dbi which is down about 3 or 4 db compared to a half-wave dipole at 1/2 wl high, but would equal or exceed the dipole in some other directions.

EZNEC showed a feed impedance of 98 ohms, but in my real world construction, it measured 1.1 to 1 SWR at 50 ohms. (The Halo loop that I used for a capacitive hat probably added some linear length).

I had a modest size dual-space, split-stator capacitor that I placed in a half-gallon plastic jug for weather protection. EZNEC indicated a capacitance of 35-40 pf, but mine was considerably less than that, probably about 20 pf. You have to run the pulley up and down to tune the capacitor by trial and error. Setting the center frequency seems quite critical, but after that, it offers a wide band match, remains 1:1 to 1 over the entire 40M band.

On-the-air tests with 100 watts PEP gave very satisfactory results. I also can run the power up to 1 Kw without my capacitor arcing over (I connect stator to stator, and leave the rotor floating, for low loss and High voltage spacing), and it performs Very well at 1Kw (Competes well in pileups).

This antenna requires no ground (or radials in the usual sense).
Requires only about 4' x 8' of real estate (such as a 4x8 sytrofoam sheet

with aluminum foil).

I used RG-58 coax to feed the antenna, and looped 3 or 4 turns thru a
toroid to act as current balun, although this did not seem to be necessary.
(It made no difference in the SWR, with the coax laying on the grass).

415. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:00:45 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <SkH0i.229447$ZA5.89585@newsfe15.phx>
Source record: 41465

```
"HankG" <hank@invalid.com> wrote in message
news:UtqdnThBmtCzod7bnZ2dnUVZ_hudnZ2d@comcast.com...
>
> "R. Rajesh Jeba Anbiah" <ng4rrjanbiah@rediffmail.com> wrote in message
> news:1178797644.033768.43470@p77g2000hsh.googlegroups.com...
>> It's my long time wish to view TV channels of all countries. I'm
>> wondering why it isn't possible with TV but which is possible in
>> radio.
>>
>> Is there any advanced antenna or technology for that? Now, I'm getting
>> know about "Dish TV", but it is still in pay option.
>>
>> (With the possibility to access the net, I'd thought I could find the
>> answer. But, I couldn't find any with my googling skill)
>>
>> TIA
>>
>> --
>> <?php echo 'Just another PHP saint'; ?>
>> Email: rrjanbiah-at-Y!com Blog: http://rajeshanbiah.blogspot.com/
>
> Try this link.
>
> http://mediahopper.com/portal.htm
>
> Works for me.
>
> HankG
>>
>
>
Also this link
Click here to watch 2300+ TV Channels
URL:
http://wwitv.com/
Lamont
```

416. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:03:17 UTC
From: richardharrison@webtv.net
Message-ID: <23357-46434245-59@storefull-3255.bay.webtv.net>
Source record: 41466

Gene, W4SZ wrote:
"It is instructive to follow the lead of Kraus. In the second edition of "Antennas", on page 19, Kraus notes, "In simplest terms an antenna converts photons to currents or vice versa."

In the paperback 3rd edition, which I think Cecil has, I was pleased to find a similar quotation at the top of page 12.

Best regards, Richard Harrison, KB5WZI

417. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:13:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1vgjvcbh1@news.service.uci.edu>
Source record: 41468

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Cecil Moore <nos...@w5dxp.com> wrote:
>>
>>> I agree that there is a logical contradiction between standing
>>> waves and electromagnetic waves.
>>
>>
>> Is that the contradiction?

> There is no contradiction in the real world.

My point exactly.

ac6xg

418. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:14:45 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <VxH0i.8201$rO7.6105@newssvr25.news.prodigy.net>
Source record: 41467

HankG wrote:
> Couldn't find anything regarding antennas at either link.

If you will go up one level, you will find it has been
removed.
--
73, Cecil, w5dxp.com

419. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:23:19 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1178814199.552473.197070@e51g2000hsg.googlegroups.com>
Source record: 41469

On May 10, 11:25 am, Chuck <no.s...@no.spam.at.all> wrote:
> Thank you for nicely elucidating the
> distinctions in emphasis between
> "science" and engineering, Keith.
>
> I believe a perfect (just to keep this
> at an abstract level) SA reveals the
> underlying reality of the modulated AM
> carrier.

Let me offer two examples.

I turn on my RF signal generator. I turn up the RF Level,
then I turn it down, then up, then down, ...
I can see this varying RF level on my oscilloscope (slow
sweep), and even on my RF voltmeter.
I know I am varying the level of the RF.
But I also know that I could produce exactly the same
output by adding 3 signals of slightly different frequency
together. I am not at all comfortable with saying the latter
is 'real' while the former isn't. I know I was varying the RF
Level.

Or,
I turn on my RF signal generator with some level for 1
minute. I turn it off for a week. I turn it on for one minute.
I turn it off. I compute the Fourier transform. I can create
exactly the same signal by adding all the Fourier terms,
extending forward and backwards in time, forever.
But is this more real than: I turn it on, then off, then
on, then off?

Using these examples, I can find no reason why the
multiple signal explanation is more real than the
varying amplitude explanation. And I suggest, that for
these two cases, the varying amplitude explanation
is probably more useful.

...Keith

420. OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:28:52 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1178814532.207062.89230@h2g2000hsg.googlegroups.com>
Source record: 41470

I just aquired an MFJ 259b analyzer. I'm using it to measure the impedance at the input of the 300 ohm twin lead I have feeding a sloping off center fed dipole. I measured 75 -j236 at 3.94 Mhz. When i reverse the txmsn line leads where they connect to the 259b I get 175 -j237. Does anyone have an explanation as to why the resistance value changes simply by reversing the way the txsmsn line is attached to the analyzer? I have repeated this numerous times, attaching and reattaching always with very near the same results. Does the fact that the antenna has unequal leg lengths somehow explain this? If it matters, there is a 1:1 current balun between the txmsn line and the antenna feedpoints.

421. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:33:24 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <oPH0i.8204$rO7.7753@newssvr25.news.prodigy.net>
Source record: 41471

Jim Kelley wrote:
>
> Cecil Moore wrote:
>> There is no contradiction in the real world.
>
> My point exactly.

My point exactly first! Contradictions exist *only*
in human minds.
--
73, Cecil, w5dxp.com

422. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:34:32 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <sQH0i.127131$VU4.31349@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41472

Cecil Moore wrote:
> Gene Fuller wrote:
>> Why do you seem to believe that bringing photons into the discussion
>> adds any light? (pun intended)
>>
>> Does the word "photon" sound more hifalutin than "wave"?
>
> Using "photons" instead of "EM waves" makes things a little
> more obvious. While "standing EM waves" may imply EM waves
> that are standing still, "standing photons" are obviously
> impossible. Photons cannot stand still. EM waves cannot
> stand still for the same reason. A "standing EM wave" is
> a human abstraction that doesn't really exist in reality.
>
> The only people with something to gain by objecting to
> the use of "EM waves" and "photons" interchangeably are the
> people trying to hoodwink the uninitiated into believing
> that photons can stand still. :-)
> --
> 73, Cecil, w5dxp.com

Cecil,

There seems to be a pretty fundamental disconnect here. Waves don't create radiation; photons don't create radiation; accelerating charges do create radiation.

You seem to be placing some sort of restriction on the motion of those charges. They can move or stand still as they please. Some folks around here appear to think that standing waves are totally inert, and therefore totally useless or even fictitious. There are most definitely accelerating charges in a standing wave, and that accelerated charge generates the desired radiation. Call it "sloshing" if you wish, but it still works.

What difference does it make if the wave on the antenna and the radiated wave in space can be defined as photons?

Answer: None whatsoever, and there is not even any insight gained into the radiation mechanism at HF.

In case there is any doubt, let me say it again;

Adding photons into the discussion of HF radiation adds absolutely nothing but confusion.

73,
Gene
W4SZ

423. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 16:51:50 UTC
From: richardharrison@webtv.net
Message-ID: <23356-46434DA6-378@storefull-3255.bay.webtv.net>
Source record: 41473

Cecil, W5DXP wrote:
"If you will go up one level, you will find it has been removed."

Too bad, but it is well worthwhile to obtain the new expanded 3rd
edition of "Antennas" which may still be in print. Mine is dated 2002.

Best regards, Richard Harrison, KB5WZI

424. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:13:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uak6435nv6gv5jnm30ean374ihqrh68tun@4ax.com>
Source record: 41474

On Thu, 10 May 2007 16:34:32 GMT, Gene Fuller <W4SZzzzzzz@att.net>
wrote:

>Adding photons into the discussion of HF radiation adds absolutely
>nothing but confusion.

Hi Gene,

I seriously doubt that, the confusion is already super-saturated.
Perhaps you meant it might add more precipitate.

73's
Richard Clark, KB7QHC

425. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:17:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ksk6431auuuu938hhv5s15e6tcgf72ua7t@4ax.com>
Source record: 41475

On Thu, 10 May 2007 14:54:03 GMT, "no spam" <no@spam.net> wrote:

>Simple for you. My electronic education is limited to some high school and
>college physics and some 'playing' on my on. IOW, I know a cap isn't
>something you wear on your head but 'maximum mesh' sounds like either the
>gears in your transmission are working very well or your girl friend is
>wearing something sexy.

Sorry about your limitations. Sounds like you will have some
difficulty.

73's
Richard Clark, KB7QHC

426. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:20:58 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1178817728_3735@sp12lax.superfeed.net>
Source record: 41476

Keith Dysart wrote:
> On May 10, 11:25 am, Chuck <no.s...@no.spam.at.all> wrote:
>> Thank you for nicely elucidating the
>> distinctions in emphasis between
>> "science" and engineering, Keith.
>>
>> I believe a perfect (just to keep this
>> at an abstract level) SA reveals the
>> underlying reality of the modulated AM
>> carrier.
>
> Let me offer two examples.
>
> I turn on my RF signal generator. I turn up the RF Level,
> then I turn it down, then up, then down, ...
> I can see this varying RF level on my oscilloscope (slow
> sweep), and even on my RF voltmeter.
> I know I am varying the level of the RF.
> But I also know that I could produce exactly the same
> output by adding 3 signals of slightly different frequency
> together. I am not at all comfortable with saying the latter
> is 'real' while the former isn't. I know I was varying the RF
> Level.
>
> Or,
> I turn on my RF signal generator with some level for 1
> minute. I turn it off for a week. I turn it on for one minute.
> I turn it off. I compute the Fourier transform. I can create
> exactly the same signal by adding all the Fourier terms,
> extending forward and backwards in time, forever.
> But is this more real than: I turn it on, then off, then
> on, then off?
>
> Using these examples, I can find no reason why the
> multiple signal explanation is more real than the
> varying amplitude explanation. And I suggest, that for
> these two cases, the varying amplitude explanation
> is probably more useful.
>
> ...Keith
>
>
Well, if I understand, and I often
don't, you are saying that the spectrum

produced by method 1 is
indistinguishable from the spectrum
produced by method 2 and THEREFORE,
neither spectrum alone can be considered
true reality.

I grant immediately that it doesn't
matter how you produce the spectrum.

What is at issue, if I am not mistaken,
is whether the reality is that which is
observed on the scope, vs. that which is
observed on the SA (in the case of an
amplitude modulated carrier, of course).

Abstracting, there are three (by
assumption) coherent sinusoids in the AM
modulation case. Each can be directly
measured and characterized.

A composite of these sinusoids can be
displayed on a scope. Any number of
mathematical or electronic operations
can be performed on the sinusoids, and
the results displayed on a scope.

Usefulness, like convenience, may share
a bed with veracity, but its intentions
should be suspect.

I guess I can continue to assert that
mathematical equivalence between
frequency and time domains is not
evidence to me of an underlying duality
in reality, and you can continue to
assert that to you, it is. And I guess
we could still be friends. ;-)

73,

Chuck

----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

427. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:25:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <exI0i.1993$UU.1348@newssvr19.news.prodigy.net>
Source record: 41477

Gene Fuller wrote:
> There seems to be a pretty fundamental disconnect here. Waves don't
> create radiation; photons don't create radiation; accelerating charges
> do create radiation.

Who cares? Photons can form standing waves in free space.
Where are your accelerating charges in a vacuum? Everything
that happens to EM waves in a wire, or a waveguide, also
happen to EM waves in free space.

You want to talk about the ocean and ignore the Tsunami.

> What difference does it make if the wave on the antenna and the radiated
> wave in space can be defined as photons?
>
> Answer: None whatsoever, ...

That's your agenda and you're sticking to it. Like
I said, some people apparently enjoy hoodwinking the
uninitiated. What else do you have to gain by ignoring
the photonic nature of EM waves?

Accelerating charges do not morph into EM waves.
Accelerating charges release photons that are the
wave. Ignoring the photonic nature of EM waves is
the cause of the present mass confusion about
standing waves. Why on earth would you want that
mass confusion to continue?
--
73, Cecil, w5dxp.com

428. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:35:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mJI0i.3156$RX.2154@newssvr11.news.prodigy.net>
Source record: 41478

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "If you will go up one level, you will find it has been removed."
>
> Too bad, but it is well worthwhile to obtain the new expanded 3rd
> edition of "Antennas" which may still be in print. Mine is dated 2002.

The Kraus antenna book price plus shipping is less than $20.
There's no better bargain anywhere.

http://www.abebooks.com/servlet/SearchResults?isbn=0072321032&sts=t&y=6&x=35
--
73, Cecil, w5dxp.com

429. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:41:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1vlojgbl1@news.service.uci.edu>
Source record: 41480

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> 2*Pi*radius
>
>
> Sorry, I'm a little handicapped since I have never seen
> "Figure 7-19" and it has been removed from the web site.

I have the file. It's 7.5 megabytes. Do you have a broadband connection?

73 jk

430. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:47:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <inl6431jcv5befd892dia0td2ilecokn45@4ax.com>
Source record: 41479

Hi Art,

If you are, as you say, interested in where you depart from simple
physics; then an enumeration follows:

On 10 May 2007 06:29:46 -0700, art <aunwin@insightbb.com> wrote:

1)
>I know that mass is not constant in
>itself since it is always self adjusting to maintain equilibrium.
Mass is constant unless you are performing nuclear reactions. You
don't have sufficient energy to do that at home.

2)
>would also appear that what is emitted is so small and numourous that
>it can be seen as a cloud or a field.
You don't have sufficient energy at home to force emission. An
incandescent antenna is one that would be readily obvious to everyone
for miles around.

3)
>I also believe there is some sort of consensus that these two clouds
There are not two of anything in emission.

4)
>are still somewhat homogenous after they have escaped from the initial
>gravitational forcesi.e merging of these entities is achieved beyond
>the arbitary border.
Gravity is fundamentally one of the weakest forces in nature, emission
requires considerable energy and would easily eclipse its influence.

5)
>Some have gone off at a tangent by introducing 377 ohms as a ratio
>which ofcourse is an impossibility which destoys the credability of
>their whole statement.
This ratio is a fact of nature. You could, of course, change it by
changing nature, or having invented an underwater CB antenna.

73's
Richard Clark, KB7QHC

431. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:53:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5um643l46sjhm0t8j44l7nkdhvouiskjaq@4ax.com>
Source record: 41481

On 10 May 2007 09:28:52 -0700, dykesc <cupstidd@bellsouth.net> wrote:

>Does the fact that
>the antenna has unequal leg lengths somehow explain this?

That, and it is sloping (compounding asymmetry).

>If it
>matters, there is a 1:1 current balun between the txmsn line and the
>antenna feedpoints.

It may not be very useful.

73's
Richard Clark, KB7QHC

432. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:54:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178819683.123441.308220@u30g2000hsc.googlegroups.com>
Source record: 41482

On 10 May, 06:29, art <aun...@insightbb.com> wrote:
> On 10 May, 04:43, Denny <k...@mailblocks.com> wrote:
>
>
>
>
>
> > Ahhh come on guys, and Art, , get a grip...
>
> > Electrons are 'emitted' from the surface of a conductor only under
> > specific circumstances, such as the Photoelectric Effect, in a direct
> > electric arc <such as an arc welder>, off the hot surface of a
> > filament, off the cathode of an electroplating device, etc.... All of
> > these are mass events where the departing electrons will <in time>
> > change/erode the surface material of the emitter...
>
> > Electrons do not normally depart the surface of an RF antenna; local
> > corona discharge, or mechanical short circuit, or electric arc, being
> > the main exceptions <and are not germain to the intended purpose of
> > the RF antenna>..
> > The antenna surface is not eroded or mass altered by the long term
> > emission of electromagetic waves because no electrons are being
> > launched/emitted off the surface <res ipsa loquitor>...
>
> > OK, now back to the regularily scheduled reruns of Howdy Doody <you
> > can learn a lot from these>
>
> > denny / k8do
>
> Denny, I believe you are correct that what is known as basic physics
> does not have universal consensus in this group which is not all that
> bad because we are all amateurs.I know that mass is not constant in
> itself since it is always self adjusting to maintain equilibrium. It
> would also appear that what is emitted is so small and numourous that
> it can be seen as a cloud or a field.
> I also believe there is some sort of consensus that these two clouds
> are still somewhat homogenous after they have escaped from the initial
> gravitational forcesi.e merging of these entities is achieved beyond
> the arbitary border.
> Some have gone off at a tangent by introducing 377 ohms as a ratio
> which ofcourse is an impossibility which destoys the credability of
> their whole statement. At the back of my mind I was trying to
> determine how the makeup of skin depth occurs since at a moment in
> time the surface of the conductor is seen as composed entirely of

> static particles and what changes occur when the material conducts
> since the surface is totally boundduring the radiation process. So Tom
> this is a good time to bow out, since once again on this group we have
> encountered a situation where actual knoweledge is piece meal at best
> and where continuation could only introduce falacies to the subject.
> One thing I am assured of is that despite claims offered this is by no
> means BASIC physics theory but a collection of fragmentary knoweledge
> which could easily evolve in what is termed junk science as the many
> opinions merge.
> Gentlemen have a great day and try to concentrate on the beginnings
> that Gauss has now provided us by the addition of the metric of time
> and formulate a theory within that context since it presents an avenue
> of new additional information.than that previously known.
> Regards
> Art- Hide quoted text -
>
> - Show quoted text -

For those who are interested in the finite details of radiation I just
read in a industrial magazine that it has been determined that the
electric field in the near zone is transformed into a electric field
of an opposite polarity in the far zone.
This by implication upsets the idea that surrounds radiation emmission
from the far zone if there is still in existence an electric field.
Thus it would appear that basic physics has still not determined the
inter relative actions from a dormant static field to a mobile
radiative field. Note that the introduction of the word of ' polarity'
into the subject of antennas is not unusual in the antenna
industry.i.e. it is their words not mine.
Regards
Arthur
Art

433. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 17:55:47 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1vmk9$h5k$1@news.service.uci.edu>
Source record: 41484

Richard Clark wrote:
> On 9 May 2007 23:29:28 -0700, Jim Kelley <jwkelley@uci.edu> wrote:

>>Ok. But what I was asking is what does any of that have to do with a
>>bolt?
>
>
> The travel of one turn of a point at the radius (helical distance) in
> relation to the travel of the same point in the depth (the linear
> displacement after 360 degrees of the turn) is related to pitch. A
> simple mechanical relationship. This is the bolt.

Thanks so much, Richard. I'm going to keep this on file somewhere in
case I ever forget what a bolt is. :-)

73, ac6xg

434. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:09:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <0aJ0i.1999$UU.1853@newssvr19.news.prodigy.net>
Source record: 41483

Jim Kelley wrote:
>
> Cecil Moore wrote:
>> Sorry, I'm a little handicapped since I have never seen
>> "Figure 7-19" and it has been removed from the web site.
>
> I have the file. It's 7.5 megabytes. Do you have a broadband connection?

Yes, I have DSL but I also have the 3rd edition of "Antennas".
I think "Figure 8-32: Relative phase velocity p for different
pitch angles as a function of the helix circumference, C(lamda),
for the condition of in-phase fields in the axial direction",
is probably the same graph as Figure 7-19 in the 1st edition.
I'm assuming that the "relative phase velocity" is the same
thing as the VF of the coil.
--
73, Cecil, w5dxp.com

435. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:24:57 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <ZrJ0i.5664$296.701@newsread4.news.pas.earthlink.net>
Source record: 41485

art wrote:
> What is the ratio of magnetic electrons emitted from a radiator
> compared with
> with the number of electrons emmitted due to current flow?
> What is the combination ratio required of both types of electrons to
> form a radiation field?
> Regards
> Art
>

You mean the radiation from an antenna driven by a radio transmitter?
It doesn't emit electrons, but it does emit photons at that radio
frequency.

Go find a book on electromagnetism and fields, but be prepared for
calculus level math in that book. I took such a class 30 years ago, and
got a "C", and remember even less now. A high school physics book might
be enough depending on your needs.

436. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:28:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f1voh4ion1@news.service.uci.edu>
Source record: 41486

Chuck wrote:

> Keith Dysart wrote:
>> Using these examples, I can find no reason why the
>> multiple signal explanation is more real than the
>> varying amplitude explanation. And I suggest, that for
>> these two cases, the varying amplitude explanation
>> is probably more useful.
>>
>> ...Keith
>>
>>
> Well, if I understand, and I often don't, you are saying that the
> spectrum produced by method 1 is indistinguishable from the spectrum
> produced by method 2 and THEREFORE, neither spectrum alone can be
> considered true reality.

What he said is neither case is less real than the other. It's simply two different ways of describing the same thing. Have a look at a table of trigonometric identities. It is a list of different ways of saying the same thing, mathematically. Each is real in one way or another, but not necessarily in the same way.

> I guess I can continue to assert that mathematical equivalence between
> frequency and time domains is not evidence to me of an underlying
> duality in reality, and you can continue to assert that to you, it is.

I guess that would depend on what underlying duality you are inferring from the mathematical equivalence. Not that it necessarily applies here, but one of the problems we frequently face here on the newsgroup is a direct result of incorrect inference.

> And I guess we could still be friends. ;-)

One of the great contributors to the ham radio newsgroups used to remind us that "a gentleman is a man who can disagree without being disagreeable". The challenge then is to remain agreeable amidst a barrage of disagreeable comments.

73, Jim AC6XG

437. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:42:02 UTC
From: no spam <no@spam.net>
Message-ID: <_HJ0i.34403$G23.29967@newsreading01.news.tds.net>
Source record: 41487

> "Beverage antennas are highly directional."
>
> Living in Portugal in the 1950`s, I used a Beverage antenna to listen to
> the CBS Evening News from WCBS in New York, and WWL in New Orleans.
> Whenever one station faded, I just rocked the dial and the other station
> would be there. Portugal is on Greenwich time so the Evening News was
> around midnight local time. By then, most of the Europeans had signed
> off.
>
> All you must have for a Beverage antenna is a long wire, say 2
> wavelengths long, aimed at the targeted broadcaster.

For 690 KHz that would be 2,850 feet of wire, just over 1/2 a mile of wire.

438. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:45:07 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bk5ch4-v5m.ln1@mail.specsol.com>
Source record: 41488

robert casey <wa2ise@ix.netcom.com> wrote:
> art wrote:
> > What is the ratio of magnetic electrons emitted from a radiator
> > compared with
> > with the number of electrons emmitted due to current flow?
> > What is the combination ratio required of both types of electrons to
> > form a radiation field?
> > Regards
> > Art
> >

> You mean the radiation from an antenna driven by a radio transmitter?
> It doesn't emit electrons, but it does emit photons at that radio
> frequency.

> Go find a book on electromagnetism and fields, but be prepared for
> calculus level math in that book. I took such a class 30 years ago, and
> got a "C", and remember even less now. A high school physics book might
> be enough depending on your needs.

The current (May/June) issue of QEX contains the article:

Electromagnetic Radiation: A Brief Tutorial

It contains equations but no calculus that I noticed.

"magnetic electrons emitted from a radiator" isn't mentioned, but
that isn't a surprise to most people.

--
Jim Pennino

Remove .spam.sux to reply.

439. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 18:57:48 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <f1vpvcjcq1@theodyn.ncf.ca>
Source record: 41489

"no spam" (no@spam.net) writes:
>> "Beverage antennas are highly directional."
>>
>> Living in Portugal in the 1950`s, I used a Beverage antenna to listen to
>> the CBS Evening News from WCBS in New York, and WWL in New Orleans.
>> Whenever one station faded, I just rocked the dial and the other station
>> would be there. Portugal is on Greenwich time so the Evening News was
>> around midnight local time. By then, most of the Europeans had signed
>> off.
>>
>> All you must have for a Beverage antenna is a long wire, say 2
>> wavelengths long, aimed at the targeted broadcaster.
>
> For 690 KHz that would be 2,850 feet of wire, just over 1/2 a mile of wire.
>
>
WHen he said "all you need" I was tempted to add "and space for that antenna".

Of course, some people are lucky. You do hear of people doing really well
with really long wire antennas, and presumably they have such great success
because few have the space to have similar antennas.

There was a guy in Australia forty years ago, Ray Knaughton (I'm sure
I've misspelled that), who did moonbounce with rhombic antennas. He
lived in the outback, so he had the space. Got enough gain to overcome
Australia's 150W power limit at the time (I think it was that low). He
had enough space for putting up high gain rhombics for various VHF bands.
The big problem was that since they weren't steerable, he had a big limit
on when he could do moonbounce, since the moon wasn't in the right place
most of the time.

Michael VE2BVW

440. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:06:13 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178823973.510048.199600@n59g2000hsh.googlegroups.com>
Source record: 41490

```
On 10 May, 11:45, j...@specsol.spam.sux.com wrote:
> robert casey <wa2...@ix.netcom.com> wrote:
> > art wrote:
> > > What is the ratio of magnetic electrons emitted from a radiator
> > > compared with
> > > with the number of electrons emmitted due to current flow?
> > > What is the combination ratio required of both types of electrons to
> > > form a radiation field?
> > > Regards
> > > Art
>
> > You mean the radiation from an antenna driven by a radio transmitter?
> > It doesn't emit electrons, but it does emit photons at that radio
> > frequency.
> > Go find a book on electromagnetism and fields, but be prepared for
> > calculus level math in that book. I took such a class 30 years ago, and
> > got a "C", and remember even less now. A high school physics book might
> > be enough depending on your needs.
>
> The current (May/June) issue of QEX contains the article:
>
> Electromagnetic Radiation: A Brief Tutorial
>
> It contains equations but no calculus that I noticed.
>
> "magnetic electrons emitted from a radiator" isn't mentioned, but
> that isn't a surprise to most people.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.- Hide quoted text -
>
> - Show quoted text -

Jim, you have no legitamacy in the subject of radiation, your past
posts prove that. On top of that you do not talk for most people as
you intimate.
You haven't yet capitulated on the static subject or negated the truth
of the mathematics and examples supplied. Just stating consistently
that you can't this or you can't that just doesn't elevate your
stature.
```

441. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:19:34 UTC
From: no spam <no@spam.net>
Message-ID: <afK0i.34406$G23.33085@newsreading01.news.tds.net>
Source record: 41491

>>> Living in Portugal in the 1950`s, I used a Beverage antenna to listen to
>>> the CBS Evening News from WCBS in New York, and WWL in New Orleans.
>>> Whenever one station faded, I just rocked the dial and the other station
>>> would be there. Portugal is on Greenwich time so the Evening News was
>>> around midnight local time. By then, most of the Europeans had signed
>>> off.
>>>
>>> All you must have for a Beverage antenna is a long wire, say 2
>>> wavelengths long, aimed at the targeted broadcaster.
>>
>> For 690 KHz that would be 2,850 feet of wire, just over 1/2 a mile of
>> wire.
>>
>>
> WHen he said "all you need" I was tempted to add "and space for that
> antenna".
>
> Of course, some people are lucky. You do hear of people doing really well
> with really long wire antennas, and presumably they have such great
> success
> because few have the space to have similar antennas.

In TN I had 25 acres and ran a 200+ ft long wire which was enough to pick up the Nashville stations. I once connected my antenna to the electric fence wire (after disconnecting the charger) that ran around about 1/2 of the place. Didn't do much.

Here I have 16 acres which means I could, in theory, run about 2,000 ft of wire. Still I was thinking of something a little smaller.

442. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:28:38 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178825318.640544.92640@w5g2000hsg.googlegroups.com>
Source record: 41492

```
On 10 May, 12:06, art <aun...@insightbb.com> wrote:
> On 10 May, 11:45, j...@specsol.spam.sux.com wrote:
>
>
>
>
>
> > robert casey <wa2...@ix.netcom.com> wrote:
> > > art wrote:
> > > > What is the ratio of magnetic electrons emitted from a radiator
> > > > compared with
> > > > with the number of electrons emmitted due to current flow?
> > > > What is the combination ratio required of both types of electrons to
> > > > form a radiation field?
> > > > Regards
> > > > Art
>
> > > You mean the radiation from an antenna driven by a radio transmitter?
> > > It doesn't emit electrons, but it does emit photons at that radio
> > > frequency.
> > > Go find a book on electromagnetism and fields, but be prepared for
> > > calculus level math in that book. I took such a class 30 years ago, and
> > > got a "C", and remember even less now. A high school physics book might
> > > be enough depending on your needs.
>
> > The current (May/June) issue of QEX contains the article:
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> > It contains equations but no calculus that I noticed.
>
> > "magnetic electrons emitted from a radiator" isn't mentioned, but
> > that isn't a surprise to most people.
>
> > --
> > Jim Pennino
>
> > Remove .spam.sux to reply.- Hide quoted text -
>
> > - Show quoted text -
>
> Jim, you have no legitamacy in the subject of radiation, your past
> posts prove that. On top of that you do not talk for most people as
> you intimate.
```

> You haven't yet capitulated on the static subject or negated the truth
> of the mathematics and examples supplied. Just stating consistently
> that you can't this or you can't that just doesn't elevate your
> stature.- Hide quoted text -
>
> - Show quoted text -

Some have stated that 377 ohms is a ratio. I don't understand that
assertion
since I understood that a ratio is not confined to a specific unit and
in fact
does not have units. I am aware that the impedance of a particular
atmosphere is 377 ohms but that is certainly not a ratio. Some say one
must have a knoweledge of calculus to understand radiation. Another
declares he read a book on radiation that did not use calculus which
is just as well if one becomes careless with terms such as a ratio.
But no matter, this newsgroup is a living example of the use of free
speech where amateurs can take on the guise of professionalism despite
their lowly education level.

443. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:30:13 UTC
From: herbert.don@gmail.com
Message-ID: <1178825413.063016.284530@y5g2000hsa.googlegroups.com>
Source record: 41493

Particels of what?

On May 9, 6:44 pm, art <aun...@insightbb.com> wrote:
> On 9 May, 17:37, Cecil Moore <nos...@w5dxp.com> wrote:
>
> > art wrote:
> > > What is the ratio of magnetic electrons emitted from a radiator
> > > compared with with the number of electrons emmitted due to current
>
> > > flow?
>
> > Art, emitted electrons are corona discharges. What is
> > emitted from an antenna is primarily photons. Each
> > photon has both electric and magnetic properties
> > and the ratio is 377 ohms in the far field.
> > --
> > 73, Cecil http://www.w5dxp.com
>
> Cecil,
> When power is supplied there are two vectors formed by particles that
> are emitted from the radiator. I am looking for the ratio of particals
> emitted. You can call them photons, electrons, particles or what ever
> is fine by me.
> The second question is related to the flow or movement of these
> particles from the enclosed surface to the outside of the surface (I
> will call this an arbitary boundary unless there is cries of
> disagreement). The passage of the
> two types of particles thru the boundary allows for the combination of
> their individual energies to form a radiated field. Thus I was asking
> what the ratio of one type of particle to the other type of particle
> is required to do that. Obviously if the combination is created by
> collision it would appear that the ratio is 1:1 but I do not know
> personally how the combination occurrs.
> I understand that the electrons change wavelength to break away from
> the gravitational field (equilibrium) at the parting point and then
> change back to the originating wavelength at or before the formation
> of the radiating field. If this is correct then the number of
> electrons if any that do NOT escape from the enclosed surface have to
> be accounted for UNLESS ALL ESCAPE which would infer an equal ratio of
> electron emmissionfor the formation of a radiative field. If the
> initial ratio is not equal then obviously the rest will return to the
> initial gravitational field possibly to form a skin depth since the
> velocity of return is the same as the initiating velocity. Hopefully
> the above will apply a clue as to where I am comming from.

> Regards
> Art

444. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:31:34 UTC
From: herbert.don@gmail.com
Message-ID: <1178825494.456340.85060@p77g2000hsh.googlegroups.com>
Source record: 41494

That is really simple cap=capacitor mesh=how much the plates overlap
On May 10, 7:54 am, "no spam" <n...@spam.net> wrote:
> "Richard Clark" <kb7...@comcast.net> wrote in message
>
> news:h124431ttbalvo9ap9l7enumjq4govfl6d@4ax.com...
>
>
>
>
>
> > On Wed, 09 May 2007 17:35:31 GMT, "no spam" <n...@spam.net> wrote:
>
> >>I'm looking for plans for a simple AM antenna to connect to my stereo to
> >>replace the little loop antenna that came with it. In the past I have
> >>used
> >>long wires but they are not very directional.
>
> >>I have found some fairly good plans online for what looks like wire wound
> >>around a box but all of them seem to have potentiometer in the mix
> >>somewhere. It would be very little problem to build an aimable 18 to
> >>even
> >>48 inch frame.
>
> >>I only have two AM stations I'd like to come in clearer (690 KHz and 1440
> >>KHz). Would it be possible to make a 'box' with one 'tap' for 690 and one
> >>for 1440 then just connect one or the other the radio? How long would be
> >>wires need to be and how would I feed it into the connections on the radio
> >>(coax)?
>
> > The simplest would be to find a variable capacitor from a derelict
> > radio. The tuning range and size will force you to build the right
> > size coil - which is vastly simpler to building the coil first and
> > then finding the right variable capacitor. Using a cap from a
> > derelict radio will give you the right minimum to maximum range
> > variation (often with a max in the region of 360 pF just in case you
> > cannot find a derelict radio). With the capacitor in its maximum mesh
> > (or nearly so), you wind the box antenna until you find enough
> > windings to peak the lowest frequency signal. The upper frequency
> > signal should also peak when you open up the meshed plates. Mark the
> > two peaks' positions of the variable cap's knob setting.
>
> Simple for you. My electronic education is limited to some high school and
> college physics and some 'playing' on my on. IOW, I know a cap isn't
> something you wear on your head but 'maximum mesh' sounds like either the

> gears in your transmission are working very well or your girl friend is
> wearing something sexy.- Hide quoted text -
>
> - Show quoted text -

445. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:32:53 UTC
From: herbert.don@gmail.com
Message-ID: <1178825573.059386.10820@e51g2000hsg.googlegroups.com>
Source record: 41495

do you now how to explain this so normal people can understand?
On May 6, 6:27 am, Cecil Moore <nos...@w5dxp.com> wrote:
> If a Texas Bugcatcher Coil could be turned into a
> traveling wave device instead of a standing wave
> device, the inherent phase shift through the coil
> would become obvious. I used the Helix option in
> EZNEC to generate a reasonably close model of a
> 75m Texas Bugcatcher coil and loaded it with a
> resistance equal to the coil's characteristic impedance
> which essentially eliminated the reflected current,
> leaving the forward current intact and visible. All
> of the data points on the following web page came from
> EZNEC. All of the files are available for downloading.
> Please take a look at:
>
> http://www.w5dxp.com/current2.htm
> --
> 73, Cecil http://www.w5dxp.com

446. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:34:44 UTC
From: herbert.don@gmail.com
Message-ID: <1178825684.600426.15110@e51g2000hsg.googlegroups.com>
Source record: 41496

what does the squiggly line mean?
On May 9, 1:21 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Roy Lewallen wrote:
> > So in what way does the full wave dipole "perform better" than a half
> > wave dipole?
>
> My 20m rotatable dipole gives ~2dB gain on 10m according
> to EZNEC.
> --
> 73, Cecil http://www.w5dxp.com

447. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:53:10 UTC
From: richardharrison@webtv.net
Message-ID: <16304-46437826-554@storefull-3256.bay.webtv.net>
Source record: 41500

Cecil, W5DXP wrote:
"I`m assuming that the "relative phase velocity" is the same thing as the VF of the coil."

Back a couple of pages on 251, Kraus defines v/c as equal to "relative phase velocity of the wave propagating along the helical conductor, v being the phase velocity along the helical conductor and c being the velocity of light in free space."

Repetition of "along the helical conductor" implies to me, thal like Terman, Kraus says the signal follows the actual wire, not sprinting across the coil as if it were a straight rod.

Best regards, Richard Harrison, KB5WZI

448. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:58:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <WLK0i.2421$zj3.1035@newssvr23.news.prodigy.net>
Source record: 41497

art wrote:
> I am aware that the impedance of a particular
> atmosphere is 377 ohms but that is certainly not a ratio.

From: http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html

Mathematically, the Zo of free space is equal to the square root of the
ratio of the permeability of free space (ï¿½o) in henrys per meter (H/m)
to the permittivity of free space (o) in farads per meter (F/m):

Zo = (ï¿½o/o)1/2

= [(1.257 x 10-6 H/m)/(8.85 x 10-12 F/m)]1/2

= 377 ohms (approximately)

The exact value of the Zo of free space is 120 pi ohms, where pi is the
ratio of the circumference of a circle to its diameter.
--
73, Cecil, w5dxp.com

449. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 19:59:14 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <mQK0i.5867$yM2.2267@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41499

Cecil Moore wrote:
> Gene Fuller wrote:
>> There seems to be a pretty fundamental disconnect here. Waves don't
>> create radiation; photons don't create radiation; accelerating charges
>> do create radiation.
>
> Who cares? Photons can form standing waves in free space.
> Where are your accelerating charges in a vacuum? Everything
> that happens to EM waves in a wire, or a waveguide, also
> happen to EM waves in free space.
>
> You want to talk about the ocean and ignore the Tsunami.
>
>> What difference does it make if the wave on the antenna and the
>> radiated wave in space can be defined as photons?
>>
>> Answer: None whatsoever, ...
>
> That's your agenda and you're sticking to it. Like
> I said, some people apparently enjoy hoodwinking the
> uninitiated. What else do you have to gain by ignoring
> the photonic nature of EM waves?
>
> Accelerating charges do not morph into EM waves.
> Accelerating charges release photons that are the
> wave. Ignoring the photonic nature of EM waves is
> the cause of the present mass confusion about
> standing waves. Why on earth would you want that
> mass confusion to continue?
> --
> 73, Cecil, w5dxp.com

Cecil,

So sorry. I thought that your 75m Bugcatcher Coil was a real, metallic object. If it is really nothing but free space, then I will agree with your assertions. The waves on your free space coil therefore have no connection to charges on a wire.

I also forgot that all standing waves are identical, whether in free space or on a wire.

I particularly love the wording you used, "Accelerating charges do not morph into EM waves. Accelerating charges release photons that are the wave."

Did you ever hear of wave-particle duality? Did you ever read a serious treatment of radiation from antennas. Did you find lots of references to photon release, say, in Kraus or Balanis?

Reversing the question you posed above, what do you gain by including the photonic nature of EM waves?

I will try harder to follow the change of topic in the future.

8-)

73,
Gene
W4SZ

450. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:00:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <XNK0i.2422$zj3.1927@newssvr23.news.prodigy.net>
Source record: 41498

herbert.don@gmail.com wrote:
> what does the squiggly line mean?

Approximately
--
73, Cecil, w5dxp.com

451. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:15:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hlach4-2q5.ln1@mail.specsol.com>
Source record: 41501

art <aunwin@insightbb.com> wrote:
> On 10 May, 11:45, j...@specsol.spam.sux.com wrote:
> > robert casey <wa2...@ix.netcom.com> wrote:
> > > art wrote:
> > > > What is the ratio of magnetic electrons emitted from a radiator
> > > > compared with
> > > > with the number of electrons emmitted due to current flow?
> > > > What is the combination ratio required of both types of electrons to
> > > > form a radiation field?
> > > > Regards
> > > > Art
> > >
> > > You mean the radiation from an antenna driven by a radio transmitter?
> > > It doesn't emit electrons, but it does emit photons at that radio
> > > frequency.
> > > Go find a book on electromagnetism and fields, but be prepared for
> > > calculus level math in that book. I took such a class 30 years ago, and
> > > got a "C", and remember even less now. A high school physics book might
> > > be enough depending on your needs.
> > >
> > The current (May/June) issue of QEX contains the article:
> >
> > Electromagnetic Radiation: A Brief Tutorial
> >
> > It contains equations but no calculus that I noticed.
> >
> > "magnetic electrons emitted from a radiator" isn't mentioned, but
> > that isn't a surprise to most people.
> >
> > --
> > Jim Pennino
> >
> > Remove .spam.sux to reply.- Hide quoted text -
> >
> > - Show quoted text -

> Jim, you have no legitamacy in the subject of radiation, your past
> posts prove that. On top of that you do not talk for most people as
> you intimate.

As for "legitamacy" (sic), I have an EE degree and 35 years experience
in the field, do you?

As for speaking for others, I mearly noted that babbling nonsense
about "magnetic electrons emitted from a radiator" not being in the

article will not be a surprise to most of the people who post here.

> You haven't yet capitulated on the static subject or negated the truth
> of the mathematics and examples supplied. Just stating consistently
> that you can't this or you can't that just doesn't elevate your
> stature.

I haven't a clue what all that babble means as with most of your
babbling, strung on sentence structured, non-paragraph formatted,
rambling, postings.

--
Jim Pennino

Remove .spam.sux to reply.

452. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:18:54 UTC
From: richardharrison@webtv.net
Message-ID: <16304-46437E2E-558@storefull-3256.bay.webtv.net>
Source record: 41502

no spam wrote:
"For 690 KHz that would be 2850 feet of wire, just over 1/2 mile of wire."

Something like that. The site was a shortwave broadcast plant that had a rhombic aimed at New York for last ditch program relay in case all else failed. It was located at a far corner of many acres to be well out of the shortwave field. As we were not last ditching it, I borrowed its open wire transmission line, shorted it and fed it to my medium wave receiver. It worked like a champ.

Best regards, Richard Harrison, KB5WZI

453. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:36:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2nL0i.21653$Um6.11016@newssvr12.news.prodigy.net>
Source record: 41503

Richard Harrison wrote:
> Repetition of "along the helical conductor" implies to me, thal like
> Terman, Kraus says the signal follows the actual wire, not sprinting
> across the coil as if it were a straight rod.

Yes, I believe you are right about that.
--
73, Cecil, w5dxp.com

454. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:38:47 UTC
From: richardharrison@webtv.net
Message-ID: <18262-464382D7-610@storefull-3253.bay.webtv.net>
Source record: 41504

Gene Fuller wrote:
"Waves don`t cause radiation."

Waves induce current into an antenna. Any mismatched antenna reradiates most of the energy induced into it. A perfectly matched antnna only reradiates 50% of the energy it receives.

Best regards, Richard Harrison, KB5WZI

455. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:45:30 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178829930.313852.280950@w5g2000hsg.googlegroups.com>
Source record: 41506

On 10 May, 12:58, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > I am aware that the impedance of a particular
> > atmosphere is 377 ohms but that is certainly not a ratio.
>
> From:http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html
>
> Mathematically, the Zo of free space is equal to the square root of the
> ratio of the permeability of free space (µo) in henrys per meter (H/m)
> to the permittivity of free space (o) in farads per meter (F/m):
>
> Zo = (µo/o)1/2
>
> = [(1.257 x 10-6 H/m)/(8.85 x 10-12 F/m)]1/2
>
> = 377 ohms (approximately)
>
> The exact value of the Zo of free space is 120 pi ohms, where pi is the
> ratio of the circumference of a circle to its diameter.
> --
> 73, Cecil, w5dxp.com

O.k. Cecil I will for the moment embrace that a ratio must have a unit
of measurement which puts me in line with all the amateurs of this
newsgroup (see I am flexible). I will also change from particles now,
to electrons and now to protons as requested (see I am flexible
again)
For my interest, what is the unit that must be used for the front to
back ratio of a directive antenna?
Regards
Art

456. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:46:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GtL0i.2021$UU.1108@newssvr19.news.prodigy.net>
Source record: 41505

Gene Fuller wrote:
> I also forgot that all standing waves are identical, whether in free
> space or on a wire.

The same laws of physics apply to both. There are not, as you are
trying to imply, a separate set of laws for EM waves on a wire
and EM waves in free space.

> Reversing the question you posed above, what do you gain by including
> the photonic nature of EM waves?

It keeps some people from sweeping the photonic nature of EM waves
under the old standing wave rug. I won't mention any names.
--
73, Cecil, w5dxp.com

457. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:52:28 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992D45EDFAECnonenowhere@61.9.191.5>
Source record: 41350

dykesc <cupstidd@bellsouth.net> wrote in news:1178814532.207062.89230
@h2g2000hsg.googlegroups.com:

> I just aquired an MFJ 259b analyzer. I'm using it to measure the
> impedance at the input of the 300 ohm twin lead I have feeding a
> sloping off center fed dipole. I measured 75 -j236 at 3.94 Mhz. When i
> reverse the txmsn line leads where they connect to the 259b I get 175 -
> j237. Does anyone have an explanation as to why the resistance value
> changes simply by reversing the way the txsmsn line is attached to the
> analyzer? I have repeated this numerous times, attaching and
> reattaching always with very near the same results. Does the fact that
> the antenna has unequal leg lengths somehow explain this? If it
> matters, there is a 1:1 current balun between the txmsn line and the
> antenna feedpoints.

You haven't mentioned a balun at the 259B, or any other device to float
the measurement terminals to make a true differential mode impedance
measurment without significantly disturbing the thing you are measuring.

There are issues regarding balance of the feedline with an OCF dipole,
but reversing the meter for different readings suggests that the meter
terminals are not sufficiently isolated from the environment (ground, the
adjacent transmission line, possibly a power cord).

What have you done to make the 259B appear as an isolated impedance
meter?

Owen

458. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 20:58:55 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <jIL0i.44631$KN6.13147@edtnps89>
Source record: 41507

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:WLK0i.2421$zj3.1035@newssvr23.news.prodigy.net...
> art wrote:
>> I am aware that the impedance of a particular
>> atmosphere is 377 ohms but that is certainly not a ratio.
>
> From: http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html
>
> Mathematically, the Zo of free space is equal to the square root of the
> ratio of the permeability of free space (�o) in henrys per meter (H/m) to
> the permittivity of free space (o) in farads per meter (F/m):
>
> Zo = (�o/o)1/2
>
> = [(1.257 x 10-6 H/m)/(8.85 x 10-12 F/m)]1/2
>
> = 377 ohms (approximately)
>
> The exact value of the Zo of free space is 120 pi ohms, where pi is the
> ratio of the circumference of a circle to its diameter.
> --
> 73, Cecil, w5dxp.com

```
Also the ratio of E/H. [(V/m)/(A/m)] = [ohms].

Frank
```

459. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:08:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <uRL0i.848$y_7.820@newssvr27.news.prodigy.net>
Source record: 41508

art wrote:
> For my interest, what is the unit that must be used for the front to
> back ratio of a directive antenna?

Power ratios are commonly stated in dB.
--
73, Cecil http://www.w5dxp.com

460. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:10:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <iTL0i.849$y_7.270@newssvr27.news.prodigy.net>
Source record: 41509

Frank's wrote:
> Also the ratio of E/H. [(V/m)/(A/m)] = [ohms].

Is that a cause or an effect? :-)
--
73, Cecil http://www.w5dxp.com

461. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:13:15 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178831595.143237.182390@y5g2000hsa.googlegroups.com>
Source record: 41510

On 10 May, 13:38, richardharri...@webtv.net (Richard Harrison) wrote:
> Gene Fuller wrote:
>
> "Waves don`t cause radiation."
>
> Waves induce current into an antenna. Any mismatched antenna reradiates
> most of the energy induced into it. A perfectly matched antnna only
> reradiates 50% of the energy it receives.
>
> Best regards, Richard Harrison, KB5WZI

Richard,
Some time ago I stated that a yagi antenna operated under a
mathematical binomial function. This was termed as junk science in
this group which raises the question again as where does the energy
that is not reradiated go ?

" A perfectly matched antenna only reradiates 50 % of the energy that
it receives"

This also suggests that an array without parasitics required for
reradiation is a lot more efficient than an antenna with parasitics.
Seems like this group is going around in circles unless this 50% finds
a way to radiate in some alternative way !
Is the 'perfectly matched' statement of any importance that demands
it's inclusion with respect to re-radiation efficiency of an antenna?
Regards
Art

462. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:14:34 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992D49ACC5B79nonenowhere@61.9.191.5>
Source record: 41511

Owen Duffy <none@no.where> wrote in
news:Xns992D45EDFAECnonenowhere@61.9.191.5:

> What have you done to make the 259B appear as an isolated impedance
> meter?

I did mean to add that in this case, the impedance at the end of the
isolated feed line is not necessarily (and not likely to be) the same as
when it is connected to your transmitter. Again the same issue arises about
the path to ground for common mode current, and the influence that has on
the antenna feed point impedance transformed by the transmission line.

You need to think about the purpose of the measurement.

Owen

463. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:16:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992D4A0944757nonenowhere@61.9.191.5>
Source record: 41512

herbert.don@gmail.com wrote in news:1178825684.600426.15110
@e51g2000hsg.googlegroups.com:

> what does the squiggly line mean?

Approximately, a shortening of the notation and adaptation to the ASCII
character set for "approximately equal to" being a "squiggly" equals
symbol.

Owen

464. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:41:04 UTC
From: richardharrison@webtv.net
Message-ID: <18308-46439170-406@storefull-3252.bay.webtv.net>
Source record: 41514

Art wrote:
"For my interest, what is the unit that must be used for front to back ratio of a directive antenna?"

I must be an idiot for venturing an answer, but ratios can be just numbers, but numbers have origins. If radiated power in one direction is twice that in another (reference), we can say it has a directive gain of two or we can say it has a 3 dB gain. Front to back ratios have the same origins and units. For legitimacy, Terman says on page 871 of his 1955 opus:
"The directive gain can be expressed either as a power ratio, or in terms of the equivalent number of decibels.

Best regards, Richard Harrison, KB5WZI

465. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 21:47:03 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <rpM0i.128517$VU4.84815@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41513

Richard Harrison wrote:
> Gene Fuller wrote:
> "Waves don`t cause radiation."
>
> Waves induce current into an antenna. Any mismatched antenna reradiates
> most of the energy induced into it. A perfectly matched antnna only
> reradiates 50% of the energy it receives.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

That is a well-known factoid. Do you think it differs from something I said? You note that current is involved in the reradiation.

73,
Gene
W4SZ

466. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:07:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f205dlsqs1@news.service.uci.edu>
Source record: 41517

Richard Harrison wrote:

> Repetition of "along the helical conductor" implies to me, thal like
> Terman, Kraus says the signal follows the actual wire, not sprinting
> across the coil as if it were a straight rod.

It seems to me there is more than just one way to use a wire to convey a signal. In fact it can be difficult to prevent a wire from using more than just one, especially when there are other wires nearby.

73, Jim AC6XG

467. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:17:02 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178835422.425649.265510@p77g2000hsh.googlegroups.com>
Source record: 41515

On 10 May, 14:41, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "For my interest, what is the unit that must be used for front to back
> ratio of a directive antenna?"
>
> I must be an idiot for venturing an answer, but ratios can be just
> numbers, but numbers have origins. If radiated power in one direction is
> twice that in another (reference), we can say it has a directive gain of
> two or we can say it has a 3 dB gain. Front to back ratios have the same
> origins and units. For legitimacy, Terman says on page 871 of his 1955
> opus:
> "The directive gain can be expressed either as a power ratio, or in
> terms of the equivalent number of decibels.
>
> Best regards, Richard Harrison, KB5WZI

So it is now the norm not to cancel units of measurement in physics?
Woe is me. Free speech takes on a new meaning for some but not
acceptable from others meaning a term for a formula can now be called
a ratio with units of one's choice. Still, this is amateur radio after
all, it does not have to follow professional standards as most was
learned in the CB era

468. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:17:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eSM0i.856$y_7.194@newssvr27.news.prodigy.net>
Source record: 41516

Gene Fuller wrote:
> Richard Harrison wrote:
>> Gene Fuller wrote:
>> "Waves don`t cause radiation."
>>
>> Waves induce current into an antenna. Any mismatched antenna reradiates
>> most of the energy induced into it. A perfectly matched antnna only
>> reradiates 50% of the energy it receives.
>
> That is a well-known factoid. Do you think it differs from something I
> said? You note that current is involved in the reradiation.

Hint: If waves cause currents that in turn, cause
re-radiation, then Richard has proved your, "waves
don't cause radiation", assertion to be false.
--
73, Cecil http://www.w5dxp.com

469. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:24:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <IYM0i.2042$UU.198@newssvr19.news.prodigy.net>
Source record: 41518

art wrote:
> So it is now the norm not to cancel units of measurement in physics?
> Woe is me. Free speech takes on a new meaning for some but not
> acceptable from others meaning a term for a formula can now be called
> a ratio with units of one's choice. Still, this is amateur radio after
> all, it does not have to follow professional standards as most was
> learned in the CB era

Art, maybe you should take time to study "dimensional
analysis". It really opened my eyes a half-century ago.
If you want to divide joules by amps, just put the most
elementary dimensions into the division and see what
are the results.
--
73, Cecil http://www.w5dxp.com

470. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:28:39 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <r0N0i.857$y_7.462@newssvr27.news.prodigy.net>
Source record: 41519

Jim Kelley wrote:
> It seems to me there is more than just one way to use a wire to convey a
> signal. In fact it can be difficult to prevent a wire from using more
> than just one, especially when there are other wires nearby.

Yep, I'm afraid that Kraus was wrong to a certain degree.
Of course, he didn't have NEC in 1950. If we double Kraus'
calculated relative phase velocity for loading coils, we
will be closer to the results predicted by EZNEC.
--
73, Cecil http://www.w5dxp.com

471. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:36:35 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <13477kd9ng9o775@corp.supernews.com>
Source record: 41521

herbert.don@gmail.com wrote:
> what does the squiggly line mean?

Approximately....

> On May 9, 1:21 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> Roy Lewallen wrote:
>>> So in what way does the full wave dipole "perform better" than a half
>>> wave dipole?
>> My 20m rotatable dipole gives ~2dB gain on 10m according
>> to EZNEC.
>> --
>> 73, Cecil http://www.w5dxp.com
>
>

472. loking for a couple of details about a colinear desgin

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:36:38 UTC
From: an_old_friend <konstans@hotmail.com>
Message-ID: <1178836598.540964.79310@l77g2000hsb.googlegroups.com>
Source record: 41520

```
---------- ---------- -------- ----------
.5l II .5l II .5L II .5l

can't ell from the drawings I find hi the stub 1.4 wave each are
terminated at the end and thus the outer end fed by induction or
shorted togather at the botom (most likely IMO) or shorted at the top
I suppose is possible

sorry folks just not quite making out the drawing of of this for that
detail

Help is asked some abuse is expected (please feel free to disapoint)
```

473. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:46:59 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <DhN0i.128751$VU4.87441@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41522

Cecil Moore wrote:
> Gene Fuller wrote:
>> I also forgot that all standing waves are identical, whether in free
>> space or on a wire.
>
> The same laws of physics apply to both. There are not, as you are
> trying to imply, a separate set of laws for EM waves on a wire
> and EM waves in free space.
>
>> Reversing the question you posed above, what do you gain by including
>> the photonic nature of EM waves?
>
> It keeps some people from sweeping the photonic nature of EM waves
> under the old standing wave rug. I won't mention any names.
> --
> 73, Cecil, w5dxp.com

What rug? What are you talking about? How does the (unnecessary) use of photons change anything?

73,
Gene
W4SZ

474. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:48:55 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <rjN0i.128759$VU4.65164@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41523

```
Cecil Moore wrote:
> Gene Fuller wrote:
>> Richard Harrison wrote:
>>> Gene Fuller wrote:
>>> "Waves don`t cause radiation."
>>>
>>> Waves induce current into an antenna. Any mismatched antenna reradiates
>>> most of the energy induced into it. A perfectly matched antnna only
>>> reradiates 50% of the energy it receives.
>>
>> That is a well-known factoid. Do you think it differs from something I
>> said? You note that current is involved in the reradiation.
>
> Hint: If waves cause currents that in turn, cause
> re-radiation, then Richard has proved your, "waves
> don't cause radiation", assertion to be false.

Cecil,

Back to playing the moron role? If you no longer want to discuss
anything in technical terms, then I will go away again for a while.

Is there a lot of current in your free space world?

73,
Gene
W4SZ
```

475. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 22:56:30 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1178837790.611438.258960@y80g2000hsf.googlegroups.com>
Source record: 41524

On May 10, 4:14 pm, Owen Duffy <n...@no.where> wrote:
> Owen Duffy <n...@no.where> wrote innews:Xns992D45EDFAECnonenowhere@61.9.191.5:
>
> > What have you done to make the 259B appear as an isolated impedance
> > meter?
>
> I did mean to add that in this case, the impedance at the end of the
> isolated feed line is not necessarily (and not likely to be) the same as
> when it is connected to your transmitter. Again the same issue arises about
> the path to ground for common mode current, and the influence that has on
> the antenna feed point impedance transformed by the transmission line.
>
> You need to think about the purpose of the measurement.
>
> Owen

Owen I am operating the 259b on battery power and keeping the meter away from all conductors including myself (hands). I have searched posts on the internet about using unbalanced analyzers to measure balanced line input impedances with little success other than one post which spoke to the need to measure impedance in 3 connection configurations and then mathematically solving for the final impedance value. The 3 configurations were balanced line lead A to ground with B gounded. B to ground with A grounded. And A &B connected together to ground. (Ground was defined as the common on the analyzer.) The author then mentioned some mathematical determination of impedance which he didn't elaborate on. Are you familiar with this method? What is the mathematical solution once you have the data?

476. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:00:53 UTC
From: herbert.don@gmail.com
Message-ID: <1178838053.384410.82380@y5g2000hsa.googlegroups.com>
Source record: 41525

ok not much to worry about then. I had the imprssion it was.
On May 10, 1:00 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> herbert....@gmail.com wrote:
> > what does the squiggly line mean?
>
> Approximately
> --
> 73, Cecil, w5dxp.com

477. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:04:48 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178838288.797985.276170@y80g2000hsf.googlegroups.com>
Source record: 41526

```
On 10 May, 15:24, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > So it is now the norm not to cancel units of measurement in physics?
> > Woe is me. Free speech takes on a new meaning for some but not
> > acceptable from others meaning a term for a formula can now be called
> > a ratio with units of one's choice. Still, this is amateur radio after
> > all, it does not have to follow professional standards as most was
> > learned in the CB era
>
> Art, maybe you should take time to study "dimensional
> analysis". It really opened my eyes a half-century ago.
> If you want to divide joules by amps, just put the most
> elementary dimensions into the division and see what
> are the results.
> --
> 73, Cecil http://www.w5dxp.com
```

478. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:07:09 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1178838429.832832.227030@o5g2000hsb.googlegroups.com>
Source record: 41377

On May 10, 4:14 pm, Owen Duffy <n...@no.where> wrote:
> Owen Duffy <n...@no.where> wrote innews:Xns992D45EDFAECnonenowhere@61.9.191.5:
>
> > What have you done to make the 259B appear as an isolated impedance
> > meter?
>
> I did mean to add that in this case, the impedance at the end of the
> isolated feed line is not necessarily (and not likely to be) the same as
> when it is connected to your transmitter. Again the same issue arises about
> the path to ground for common mode current, and the influence that has on
> the antenna feed point impedance transformed by the transmission line.
>
> You need to think about the purpose of the measurement.
>
> Owen

One more question Owen. If I measure the complex impedance on the low
side of a 4:1 current balun. Is the impedance on the high side simply
4 times the low side? Can I just multiply the resistive term by 4 and
the complex term by 4?

479. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:08:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZBN0i.859$y_7.351@newssvr27.news.prodigy.net>
Source record: 41378

Gene Fuller wrote:
> What rug? What are you talking about?

Oh yeah, when all else fails, feign ignorance.
Old diversion, doesn't work.
--
73, Cecil http://www.w5dxp.com

480. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:10:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yDN0i.860$y_7.258@newssvr27.news.prodigy.net>
Source record: 41379

Gene Fuller wrote:
> Cecil Moore wrote:
>> Hint: If waves cause currents that in turn, cause
>> re-radiation, then Richard has proved your, "waves
>> don't cause radiation", assertion to be false.
>
> Back to playing the moron role?

Nope, just back to quoting the classical rules of logic.
--
73, Cecil http://www.w5dxp.com

481. Re: loking for a couple of details about a colinear desgin

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:13:45 UTC
From: herbert.don@gmail.com
Message-ID: <1178838825.204489.295450@y80g2000hsf.googlegroups.com>
Source record: 41380

what hel pdo you need? i dont see a question? mark
nevermind i don't think i could help but someone else sure needs a ?
mark
On May 10, 3:36 pm, an_old_friend <konst...@hotmail.com> wrote:
> ---------- ---------- -------- ----------
> .5l II .5l II .5L II .5l
>
> can't ell from the drawings I find hi the stub 1.4 wave each are
> terminated at the end and thus the outer end fed by induction or
> shorted togather at the botom (most likely IMO) or shorted at the top
> I suppose is possible
>
> sorry folks just not quite making out the drawing of of this for that
> detail
>
> Help is asked some abuse is expected (please feel free to disapoint)

482. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:19:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8MN0i.2127$LR5.441@newssvr17.news.prodigy.net>
Source record: 41381

Gene Fuller wrote:
> Back to playing the moron role?

I forgot to recommend, "Logic, an Introduction", by Ruby.

> Is there a lot of current in your free space world?

No, and that is exactly the point. How do your rules-
of-thumb current short-cuts work when there is no
current? Hint: Maybe Maxwell's equations?
--
73, Cecil http://www.w5dxp.com

483. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:31:00 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178839860.356407.210920@n59g2000hsh.googlegroups.com>
Source record: 41382

On 10 May, 15:24, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > So it is now the norm not to cancel units of measurement in physics?
> > Woe is me. Free speech takes on a new meaning for some but not
> > acceptable from others meaning a term for a formula can now be called
> > a ratio with units of one's choice. Still, this is amateur radio after
> > all, it does not have to follow professional standards as most was
> > learned in the CB era
>
> Art, maybe you should take time to study "dimensional
> analysis". It really opened my eyes a half-century ago.
> If you want to divide joules by amps, just put the most
> elementary dimensions into the division and see what
> are the results.
> --
> 73, Cecil http://www.w5dxp.com

Cecil, this augument is an old one. I remember Roy really get his
knickers
in a twist when some of the group referred to F/B db. Sometimes you
just have to go with the flow. Many antenna experts have given up on
this group
since they could not or would not do what you have done succesfully
i.e. record posts in response to everybody and anybody. I prefer to
provide a subject where I know that those who visualise themselves as
pro's in the business of antennas expose their limitations to the
World. It really is like politics everybody can spout about what is
incorrect but few can offer an explanation of what is correct. Many
just evoke memories of what they did in yesteryearat work or what they
achieved in memory tests at exams when the truth is that the
experience that they refer to is ones that they repeated year after
year but never where they have advanced in technical proweress from
times over 50 years ago, as if the World has stood still. Give me
strength. We really are just a bunch of old men speaking of the old
times with the same stories time over time again as if we are at a
coffee break and where the majority moved over years ago from CB radio
with appliance and technical mentality learned on channel 13 or what
ever it was. Seems like for some over time see their experience of
employment grew to the proportions of giants in industry as they grew
older when in fact they are living in illusions.
Thanks for the free advice as to what I should do but I already have a
life.
Art

484. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:31:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f20abv$3kk$1@news.service.uci.edu>
Source record: 41383

Cecil Moore wrote:

> Yep, I'm afraid that Kraus was wrong to a certain degree.

Ordinarily I'd be inclined to call it the other way to be honest,
Cecil. What equations are you using for both cases? Perhaps you
wouldn't mind showing your work.

73, Jim AC6XG

485. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-10 23:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <0gnch4-lba.ln1@mail.specsol.com>
Source record: 41384

art <aunwin@insightbb.com> wrote:
> On 10 May, 14:41, richardharri...@webtv.net (Richard Harrison) wrote:
> > Art wrote:
> >
> > "For my interest, what is the unit that must be used for front to back
> > ratio of a directive antenna?"
> >
> > I must be an idiot for venturing an answer, but ratios can be just
> > numbers, but numbers have origins. If radiated power in one direction is
> > twice that in another (reference), we can say it has a directive gain of
> > two or we can say it has a 3 dB gain. Front to back ratios have the same
> > origins and units. For legitimacy, Terman says on page 871 of his 1955
> > opus:
> > "The directive gain can be expressed either as a power ratio, or in
> > terms of the equivalent number of decibels.
> >
> > Best regards, Richard Harrison, KB5WZI

> So it is now the norm not to cancel units of measurement in physics?
> Woe is me. Free speech takes on a new meaning for some but not
> acceptable from others meaning a term for a formula can now be called
> a ratio with units of one's choice. Still, this is amateur radio after
> all, it does not have to follow professional standards as most was
> learned in the CB era

Example:

Forward gain = 12db
Reverse gain = 2db

Front to back ratio = 12db/2db = 6; no units as they cancel.

5th grade mathematics.

--
Jim Pennino

Remove .spam.sux to reply.

486. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:00:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992D65D44474Anonenowhere@61.9.191.5>
Source record: 41385

dykesc <cupstidd@bellsouth.net> wrote in
news:1178838429.832832.227030@o5g2000hsb.googlegroups.com:

> On May 10, 4:14 pm, Owen Duffy <n...@no.where> wrote:
>> Owen Duffy <n...@no.where> wrote
>> innews:Xns992D45EDFAECnonenowhere@61.9.191.5:
>>
>> > What have you done to make the 259B appear as an isolated impedance
>> > meter?
>>
>> I did mean to add that in this case, the impedance at the end of the
>> isolated feed line is not necessarily (and not likely to be) the same
>> as when it is connected to your transmitter. Again the same issue
>> arises about the path to ground for common mode current, and the
>> influence that has on the antenna feed point impedance transformed by
>> the transmission line.
>>
>> You need to think about the purpose of the measurement.
>>
>> Owen
>
> One more question Owen. If I measure the complex impedance on the low
> side of a 4:1 current balun. Is the impedance on the high side simply
> 4 times the low side? Can I just multiply the resistive term by 4 and
> the complex term by 4?
>

If the balun was ideal, you could do that. To the extent that it isn't,
error will be introduced.

I think some of this comes back to the question "what do you want to
know".

If you want to know the load as connected to your transmitter, simulate
that connection including baluns, earth connections etc.

If you want to make an isolated measurement for some reason, I would have
expected that the 259B on batteries at low HF frequencies and supported
clear of other objects would be sufficiently isolated to not get the
differences you observed.

My suspicion is that if you follow the calculation path you described,
the inherent range / accuracy of the 259B will be a problem, and the
precision introduced by the measurement approach will be lost due to
instrument error, indeed you might be worse off.

Owen

487. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:10:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CvO0i.8251$rO7.2828@newssvr25.news.prodigy.net>
Source record: 41386

Jim Kelley wrote:
> Ordinarily I'd be inclined to call it the other way to be honest,
> Cecil. What equations are you using for both cases? Perhaps you
> wouldn't mind showing your work.

I have explained it multiple times before, Jim, over the
past few years. Please forgive me for getting tired of
explaining the basics of physics to people with less than
average IQs. Maybe I will be in a better mood tomorrow.
--
73, Cecil http://www.w5dxp.com

488. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:19:07 UTC
From: John <vk2kce@yahoo.com.au>
Message-ID: <%DO0i.36177$M.12386@news-server.bigpond.net.au>
Source record: 41387

I bought one for mobiling, but circumstances have changed.
If I were to use it for a base antenna, would I have to remove the
inductor/coil which is connected to earth at the base of the bracket?

VK2KCE

"nx7u" <nx7u@cox.net> wrote in message
news:1178772517.235843.33410@h2g2000hsg.googlegroups.com...
: On May 9, 6:13 pm, "NotMe" <N...@Oops.edu> wrote:
: > Can anyone comment on the performance of the High Sierra HS-1800/Pro
antenna
: > used as a base antenna? Due to my area/neighbors, etc..., this is
probably
: > the route I'm going to go.
: >
: > I'm just curious if anyone has any experience using this antenna for
their
: > home and it's performance as such.
: >
: > Thanks!
:
:
: Works fine for me. Throw down as much radial wire as you can get away
: with.
:

489. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:20:58 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <1347dnbc6ccrh5a@corp.supernews.com>
Source record: 41388

NotMe wrote:
> Can anyone comment on the performance of the High Sierra HS-1800/Pro antenna
> used as a base antenna? Due to my area/neighbors, etc..., this is probably
> the route I'm going to go.
>
> I'm just curious if anyone has any experience using this antenna for their
> home and it's performance as such.
>
> Thanks!
>
>
I think you would be far better off to get the Hi-Q.

Butch KF5DE

490. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:22:00 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178842920.671136.287220@l77g2000hsb.googlegroups.com>
Source record: 41389

On 10 May, 13:58, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrote in message
>
> news:WLK0i.2421$zj3.1035@newssvr23.news.prodigy.net...
>
>
>
>
>
> > art wrote:
> >> I am aware that the impedance of a particular
> >> atmosphere is 377 ohms but that is certainly not a ratio.
>
> > From:http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html

Frank, you got my attention when you pointed to the above link.
I read it a few times and 377 ohms was refered to as Zo. I can't find
any reference
that states Zo is a ratio. Did you intend to point to another link
that specifically points
to Zo is a ratio? Surely you are not following in the steps of others
where anything can be written
right or wrong as long as it creats an augument or distress? You
disapoint me!
Some in this group are already thinking it is legal for a ratio to
have units assigned
because of the inference that the link say's it's so which is an
untruth and
you are perpetuating the spread of untruths. This is similar to
another untruth
that is being perpetuated with respect to photons just because one
person
it be so stated. It is getting to the point that if you read it on the
net don't believe it
unless it can be verified

Art

>
> > Mathematically, the Zo of free space is equal to the square root of the
> > ratio of the permeability of free space (µo) in henrys per meter (H/m) to
> > the permittivity of free space (o) in farads per meter (F/m):
>
> > Zo = (µo/o)1/2

>
> > = [(1.257 x 10-6 H/m)/(8.85 x 10-12 F/m)]1/2
>
> > = 377 ohms (approximately)
>
> > The exact value of the Zo of free space is 120 pi ohms, where pi is the
> > ratio of the circumference of a circle to its diameter.
> > --
> > 73, Cecil, w5dxp.com
>
> Also the ratio of E/H. [(V/m)/(A/m)] = [ohms].
>
> Frank- Hide quoted text -
>
> - Show quoted text -

491. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:22:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1347dppqf4d88b7@corp.supernews.com>
Source record: 41390

Richard Harrison wrote:
> Art wrote:
> "For my interest, what is the unit that must be used for front to back
> ratio of a directive antenna?"
>
> I must be an idiot for venturing an answer, but ratios can be just
> numbers, but numbers have origins. If radiated power in one direction is
> twice that in another (reference), we can say it has a directive gain of
> two or we can say it has a 3 dB gain. . .

Forgive me for picking a nit here, but the front/back ratio is the ratio of radiated *field strength* or radiated *power density*, not radiated power. Strictly speaking, there is zero power radiated in any single direction.

Roy Lewallen, W7EL

492. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:40:03 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178844003.866208.141400@w5g2000hsg.googlegroups.com>
Source record: 41391

```
On 10 May, 16:55, j...@specsol.spam.sux.com wrote:
> art <aun...@insightbb.com> wrote:
> > On 10 May, 14:41, richardharri...@webtv.net (Richard Harrison) wrote:
> > > Art wrote:
>
> > > "For my interest, what is the unit that must be used for front to back
> > > ratio of a directive antenna?"
>
> > > I must be an idiot for venturing an answer, but ratios can be just
> > > numbers, but numbers have origins. If radiated power in one direction is
> > > twice that in another (reference), we can say it has a directive gain of
> > > two or we can say it has a 3 dB gain. Front to back ratios have the same
> > > origins and units. For legitimacy, Terman says on page 871 of his 1955
> > > opus:
> > > "The directive gain can be expressed either as a power ratio, or in
> > > terms of the equivalent number of decibels.
>
> > > Best regards, Richard Harrison, KB5WZI
> > So it is now the norm not to cancel units of measurement in physics?
> > Woe is me. Free speech takes on a new meaning for some but not
> > acceptable from others meaning a term for a formula can now be called
> > a ratio with units of one's choice. Still, this is amateur radio after
> > all, it does not have to follow professional standards as most was
> > learned in the CB era
>
> Example:
>
> Forward gain = 12db
> Reverse gain = 2db
>
> Front to back ratio = 12db/2db = 6; no units as they cancel.
>
> 5th grade mathematics.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.- Hide quoted text -
>
> - Show quoted text -

Not so fast! It would appear that we have some real experts in the
group
that would disagree with you on this, probably because they judge
```

your
performance on your postings and not on the extensive experiences.
I suspect that some did not go along with your lengthy verbal
launchings
on the illigitimacy of adding a time metric to Gaussian law
regardless
of mathematical proof given, You were not able to pinpoint a
mathematical error and relied on the word "can't" around which
many of your utterings revolve. There was a fable written about
a person who called "wolf" once to often who had nobody to
blame but himself. If you make a habit of lying then the truth
get's a hard time in obtaining belief.

493. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 00:54:00 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992D6EE0FF1CCnonenowhere@61.9.191.5>
Source record: 41392

richardharrison@webtv.net (Richard Harrison) wrote in news:18308-46439170-406@storefull-3252.bay.webtv.net:

> Art wrote:
> "For my interest, what is the unit that must be used for front to back
> ratio of a directive antenna?"
>
> I must be an idiot for venturing an answer, but ratios can be just
> numbers, but numbers have origins. If radiated power in one direction is
> twice that in another (reference), we can say it has a directive gain of
> two or we can say it has a 3 dB gain. Front to back ratios have the same
> origins and units. For legitimacy, Terman says on page 871 of his 1955
> opus:
> "The directive gain can be expressed either as a power ratio, or in
> terms of the equivalent number of decibels.

This seems to introduce a new concept of "directive gain", which isn't Directivity as it is commonly used / understood, and it isn't Gain as it is commonly used / understood. It also seems to be based on a flexible reference (being "another" direction).

What is wrong with the concept that Directivity (either the maximum, or in a specific direction) is the ratio of the power density (more correctly) in that case to the power density averaged over all directions, and that Gain=Directivity/Loss.

Richard, you seem to have used a textbook to define something that it didn't.

Owen

494. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:05:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <fgrch4-2ql.ln1@mail.specsol.com>
Source record: 41393

art <aunwin@insightbb.com> wrote:
> On 10 May, 16:55, j...@specsol.spam.sux.com wrote:
> > art <aun...@insightbb.com> wrote:
> > > On 10 May, 14:41, richardharri...@webtv.net (Richard Harrison) wrote:
> > > > Art wrote:
> >
> > > > "For my interest, what is the unit that must be used for front to back
> > > > ratio of a directive antenna?"
> >
> > > > I must be an idiot for venturing an answer, but ratios can be just
> > > > numbers, but numbers have origins. If radiated power in one direction is
> > > > twice that in another (reference), we can say it has a directive gain of
> > > > two or we can say it has a 3 dB gain. Front to back ratios have the same
> > > > origins and units. For legitimacy, Terman says on page 871 of his 1955
> > > > opus:
> > > > "The directive gain can be expressed either as a power ratio, or in
> > > > terms of the equivalent number of decibels.
> >
> > > > Best regards, Richard Harrison, KB5WZI
> > > So it is now the norm not to cancel units of measurement in physics?
> > > Woe is me. Free speech takes on a new meaning for some but not
> > > acceptable from others meaning a term for a formula can now be called
> > > a ratio with units of one's choice. Still, this is amateur radio after
> > > all, it does not have to follow professional standards as most was
> > > learned in the CB era
> >
> > Example:
> >
> > Forward gain = 12db
> > Reverse gain = 2db
> >
> > Front to back ratio = 12db/2db = 6; no units as they cancel.
> >
> > 5th grade mathematics.
> >
> > --
> > Jim Pennino
> >
> > Remove .spam.sux to reply.- Hide quoted text -
> >
> > - Show quoted text -

> Not so fast! It would appear that we have some real experts in the
> group

People beyond 5th grade math? I expect most posters are.

<snip rambling babble>

--
Jim Pennino

Remove .spam.sux to reply.

495. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:09:59 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <HnP0i.28$Xh3.7@edtnps90>
Source record: 41394

> >> I am aware that the impedance of a particular
> >> atmosphere is 377 ohms but that is certainly not a ratio.
>
> > From:http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html

Frank, you got my attention when you pointed to the above link.
I read it a few times and 377 ohms was refered to as Zo. I can't find
any reference
that states Zo is a ratio. Did you intend to point to another link
that specifically points
to Zo is a ratio? Surely you are not following in the steps of others
where anything can be written
right or wrong as long as it creats an augument or distress? You
disapoint me!
Some in this group are already thinking it is legal for a ratio to
have units assigned
because of the inference that the link say's it's so which is an
untruth and
you are perpetuating the spread of untruths. This is similar to
another untruth
that is being perpetuated with respect to photons just because one
person
it be so stated. It is getting to the point that if you read it on the
net don't believe it
> unless it can be verified.

I think you are confusing a posting by Cecil. Anyway, quoting
from "Engineering Electromagnetics" by Nathan Ida, 2nd ed. p 743:
"....the reference field is E (an arbitrary choice used in
electromagnetics as a convention). Thus we define the ratio between
Ex(z) and Hy(z) as eta = Ex(z)/Ey(z) = ... sqrt(mu/epsilon) [ohms]
This quantity is an impedance because the electric field intensity is
given in [V/m] and the magnetic field intensity is given in [A/m].
The quantity eta is called the intrinsic impedance or wave impedance
of the material.....".

Frank

496. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <e4tch4-5gp.ln1@mail.specsol.com>
Source record: 41395

jimp@specsol.spam.sux.com wrote:
> art <aunwin@insightbb.com> wrote:
> > On 10 May, 14:41, richardharri...@webtv.net (Richard Harrison) wrote:
> > > Art wrote:
> > >
> > > "For my interest, what is the unit that must be used for front to back
> > > ratio of a directive antenna?"
> > >
> > > I must be an idiot for venturing an answer, but ratios can be just
> > > numbers, but numbers have origins. If radiated power in one direction is
> > > twice that in another (reference), we can say it has a directive gain of
> > > two or we can say it has a 3 dB gain. Front to back ratios have the same
> > > origins and units. For legitimacy, Terman says on page 871 of his 1955
> > > opus:
> > > "The directive gain can be expressed either as a power ratio, or in
> > > terms of the equivalent number of decibels.
> > >
> > > Best regards, Richard Harrison, KB5WZI

> > So it is now the norm not to cancel units of measurement in physics?
> > Woe is me. Free speech takes on a new meaning for some but not
> > acceptable from others meaning a term for a formula can now be called
> > a ratio with units of one's choice. Still, this is amateur radio after
> > all, it does not have to follow professional standards as most was
> > learned in the CB era

> Example:

> Forward gain = 12db
> Reverse gain = 2db

> Front to back ratio = 12db/2db = 6; no units as they cancel.

> 5th grade mathematics.

I've been reading Cecil's posts too long and thought I'd play some
gotcha games, but my conscience got the better of me.

Since db is logarithmic, you subtract to divide, so it would
be:

12db - 2db = 10db

If using say power density or field strength in linear units, then
you divide, the units cancel, and you get a unitless number.

--
Jim Pennino

Remove .spam.sux to reply.

497. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:28:38 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178846918.840693.155360@e65g2000hsc.googlegroups.com>
Source record: 41396

On 10 May, 18:09, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > >> I am aware that the impedance of a particular
> > >> atmosphere is 377 ohms but that is certainly not a ratio.
>
> > > From:http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html
>
> Frank, you got my attention when you pointed to the above link.
> I read it a few times and 377 ohms was refered to as Zo. I can't find
> any reference
> that states Zo is a ratio. Did you intend to point to another link
> that specifically points
> to Zo is a ratio? Surely you are not following in the steps of others
> where anything can be written
> right or wrong as long as it creats an augument or distress? You
> disapoint me!
> Some in this group are already thinking it is legal for a ratio to
> have units assigned
> because of the inference that the link say's it's so which is an
> untruth and
> you are perpetuating the spread of untruths. This is similar to
> another untruth
> that is being perpetuated with respect to photons just because one
> person
> it be so stated. It is getting to the point that if you read it on the
> net don't believe it
>
> > unless it can be verified.
>
> I think you are confusing a posting by Cecil. Anyway, quoting
> from "Engineering Electromagnetics" by Nathan Ida, 2nd ed. p 743:
> "....the reference field is E (an arbitrary choice used in
> electromagnetics as a convention). Thus we define the ratio between
> Ex(z) and Hy(z) as eta = Ex(z)/Ey(z) = ... sqrt(mu/epsilon) [ohms]
> This quantity is an impedance because the electric field intensity is
> given in [V/m] and the magnetic field intensity is given in [A/m].
> The quantity eta is called the intrinsic impedance or wave impedance
> of the material.....".
>
> Frank

O.K. I will go with the majority and bedamned to those who oppose us.
I now know what the new or modern mathematics is all about and
called for by educationists. I suppose the next generation will be

completely at home with these new conventions unlike the mixture
that we presently have. Shame that they didn't introduce modern math
some 50 years ago which would have shortened this thread by 90%.
Regards
Art

498. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:35:10 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178847310.723515.241710@y80g2000hsf.googlegroups.com>
Source record: 41397

On 10 May, 13:58, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrote in message
>
> news:WLK0i.2421$zj3.1035@newssvr23.news.prodigy.net...
>
>
>
>
>
> > art wrote:
> >> I am aware that the impedance of a particular
> >> atmosphere is 377 ohms but that is certainly not a ratio.
>
> > From:http://whatis.techtarget.com/definition/0,,sid9_gci845268,00.html
>
> > Mathematically, the Zo of free space is equal to the square root of the
> > ratio of the permeability of free space (µo) in henrys per meter (H/m) to
> > the permittivity of free space (o) in farads per meter (F/m):
>
> > Zo = (µo/o)1/2
>
> > = [(1.257 x 10-6 H/m)/(8.85 x 10-12 F/m)]1/2
>
> > = 377 ohms (approximately)
>
> > The exact value of the Zo of free space is 120 pi ohms, where pi is the
> > ratio of the circumference of a circle to its diameter.
> > --
> > 73, Cecil, w5dxp.com
>
> Also the ratio of E/H. [(V/m)/(A/m)] = [ohms].
>
> Frank- Hide quoted text -
>
> - Show quoted text -

Wow, this is exciting. There is a whole new World out there
and we have books that say's it is so. This modern mathematics
is going to make thing a lot easier for all book readers.
Art

499. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 01:57:48 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <w4Q0i.34$Xh3.13@edtnps90>
Source record: 41398

```
>> I think you are confusing a posting by Cecil. Anyway, quoting
>> from "Engineering Electromagnetics" by Nathan Ida, 2nd ed. p 743:
>> "....the reference field is E (an arbitrary choice used in
>> electromagnetics as a convention). Thus we define the ratio between
>> Ex(z) and Hy(z) as eta = Ex(z)/Ey(z) = ..... sqrt(mu/epsilon) [ohms]
>> This quantity is an impedance because the electric field intensity is
>> given in [V/m] and the magnetic field intensity is given in [A/m].
>> The quantity eta is called the intrinsic impedance or wave impedance
>> of the material.....".
>>
>> Frank
>
> O.K. I will go with the majority and bedamned to those who oppose us.
> I now know what the new or modern mathematics is all about and
> called for by educationists. I suppose the next generation will be
> completely at home with these new conventions unlike the mixture
> that we presently have. Shame that they didn't introduce modern math
> some 50 years ago which would have shortened this thread by 90%.
> Regards
> Art

Checking an older textbook: "Electromagnetic Theory"
by Julius Adams Stratton, published in 1941, pp 283,
284: "..... the intrinsic impedance of the medium for plane waves is
defined by Schelkunoff* as the quantity Zo = sqrt(Z/Y) ..... In free
space this impedance reduces to Zo = sqrt(mu/epsilon) = 376.6 ohms.

*Schelkunoff, Bell System Tech. J., 17, 17, January, 1938.

Where mu and epsilon are defined by Cecil in an earlier posting.

Frank
```

500. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:02:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0aj7439pn9rqg82mbv3qh7jjpiollh4h6e@4ax.com>
Source record: 41399

On 10 May 2007 18:28:38 -0700, art <aunwin@insightbb.com> wrote:

>Shame that they didn't introduce modern math
>some 50 years ago which would have shortened this thread by 90%.

Hi Art,

You will have to go back nearly three times that many years, 1864 - to
Maxwell once again.
>> The quantity eta is called the intrinsic impedance or wave impedance
>> of the material.....".
120 * pi (roughly 377) Ohms is a fact of nature.

73's
Richard Clark, KB7QHC

501. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:10:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <44k743d6vj451tqb5nb8ng8vq623rfc93b@4ax.com>
Source record: 41400

On 10 May 2007 14:13:15 -0700, art <aunwin@insightbb.com> wrote:

>where does the energy
>that is not reradiated go ?

Hi Art,

Into the load.

73's
Richard Clark, KB7QHC

502. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:12:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <98k743p22tppdsu25ovsdqfnqf7lb36f40@4ax.com>
Source record: 41401

On Thu, 10 May 2007 10:55:47 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>
>
>Richard Clark wrote:
>> On 9 May 2007 23:29:28 -0700, Jim Kelley <jwkelley@uci.edu> wrote:
>
>>>Ok. But what I was asking is what does any of that have to do with a
>>>bolt?
>>
>>
>> The travel of one turn of a point at the radius (helical distance) in
>> relation to the travel of the same point in the depth (the linear
>> displacement after 360 degrees of the turn) is related to pitch. A
>> simple mechanical relationship. This is the bolt.
>
>Thanks so much, Richard. I'm going to keep this on file somewhere in
>case I ever forget what a bolt is. :-)

Hi Jim,

So it's the only thing in this thread that makes sense....

73's
Richard Clark, KB7QHC

503. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:14:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p9k743tn3mlfjk567pp3t1pf9dfl69lvgm@4ax.com>
Source record: 41402

On 10 May 2007 12:32:53 -0700, herbert.don@gmail.com wrote:

>do you now how to explain this so normal people can understand?

Ah! The triumph of hope over experience.

Sorry Herbert,

Your questions are just too hard for this crew. Stick with asking
about squiggly lines and they will flock to answer.

73's
Richard Clark, KB7QHC

504. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:15:32 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178849732.521266.172900@l77g2000hsb.googlegroups.com>
Source record: 41403

On 10 May, 19:02, Richard Clark <kb7...@comcast.net> wrote:
> On 10 May 2007 18:28:38 -0700, art <aun...@insightbb.com> wrote:
>
> >Shame that they didn't introduce modern math
> >some 50 years ago which would have shortened this thread by 90%.
>
> Hi Art,
>
> You will have to go back nearly three times that many years, 1864 - to
> Maxwell once again.>> The quantity eta is called the intrinsic impedance or wave
impedance
> >> of the material.....".
>
> 120 * pi (roughly 377) Ohms is a fact of nature.
>
> 73's
> Richard Clark, KB7QHC

Heh I am agreeing with you, 377 ohms is a ratio pure and simple.
I am now a member of the majority. I used to call 377 ohms an
impedance
but I am now am agreement with the majority, 377 ohms is a ratio.
If Maxwell is part of the majority how can I go wrong. Seems like the
blitz
got in the way of that jewel being passed on.
Art

505. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:22:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ogk743dhem0ag5pbrqjtc55ok1mvp12i74@4ax.com>
Source record: 41404

On 10 May 2007 12:30:13 -0700, herbert.don@gmail.com wrote:

>Particels of what?

Hi Herbert,

(You asked this before to no answer, haven't you?) Electrons, by Art's latest statement (although he suggested it with mock acceptance). It may be something different tomorrow (like Protons).

This thread is turning into one of those fantasies of the Boy's magazines of the 1950s: "Build a nuclear reactor on your kitchen table!"

73's
Richard Clark, KB7QHC

506. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:25:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kuk743dcfmdgjsb2gouqe6tftripno3lfb@4ax.com>
Source record: 41405

On 10 May 2007 19:15:32 -0700, art <aunwin@insightbb.com> wrote:

> I used to call 377 ohms an
>impedance

Hi Art,

All impedances are ratios. Nothing has changed since 1864.

73's
Richard Clark, KB7QHC

507. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:30:46 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178850646.739772.295780@o5g2000hsb.googlegroups.com>
Source record: 41406

On 10 May, 18:57, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> >> I think you are confusing a posting by Cecil. Anyway, quoting
> >> from "Engineering Electromagnetics" by Nathan Ida, 2nd ed. p 743:
> >> "....the reference field is E (an arbitrary choice used in
> >> electromagnetics as a convention). Thus we define the ratio between
> >> Ex(z) and Hy(z) as eta = Ex(z)/Ey(z) = ... sqrt(mu/epsilon) [ohms]
> >> This quantity is an impedance because the electric field intensity is
> >> given in [V/m] and the magnetic field intensity is given in [A/m].
> >> The quantity eta is called the intrinsic impedance or wave impedance
> >> of the material.....".
>
> >> Frank
>
> > O.K. I will go with the majority and bedamned to those who oppose us.
> > I now know what the new or modern mathematics is all about and
> > called for by educationists. I suppose the next generation will be
> > completely at home with these new conventions unlike the mixture
> > that we presently have. Shame that they didn't introduce modern math
> > some 50 years ago which would have shortened this thread by 90%.
> > Regards
> > Art
>
> Checking an older textbook: "Electromagnetic Theory"
> by Julius Adams Stratton, published in 1941, pp 283,
> 284: "..... the intrinsic impedance of the medium for plane waves is
> defined by Schelkunoff* as the quantity Zo = sqrt(Z/Y) ..... In free
> space this impedance reduces to Zo = sqrt(mu/epsilon) = 376.6 ohms.
>
> *Schelkunoff, Bell System Tech. J., 17, 17, January, 1938.
>
> Where mu and epsilon are defined by Cecil in an earlier posting.
>
> Frank- Hide quoted text -
>
> - Show quoted text -

Jimminy cricket, Are you now saying that 377 ohms is an
impedance and not a ratio ? No wonder the threads are so long.
Can you pass this info on to those who declare it as a ratio
so I can decide with whome I declare allegance to? Harrison
and others read it in a book that 377 ohms was a ratio and
if it is in a book it must be reliable and this group is never in
error.

The correctness of this statement has the true efficiency of a yagi on
hold
because when properly matched losses are 50 % of that energy that
was coupled.
In a Gaussian array there is no coupling... whow what an achievement
the group is pointing out with respect to efficiency.
I am a happy camper.
Art

508. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:32:16 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <pf6dnaCgnuwfSN7bnZ2dnUVZ_r2onZ2d@comcast.com>
Source record: 41407

"Butch Magee" <lynyrd@cableone.net> wrote in message
news:1347dnbc6ccrh5a@corp.supernews.com...
> NotMe wrote:
>> Can anyone comment on the performance of the High Sierra HS-1800/Pro
>> antenna used as a base antenna? Due to my area/neighbors, etc..., this
>> is probably the route I'm going to go.
>>
>> I'm just curious if anyone has any experience using this antenna for
>> their home and it's performance as such.
>>
>> Thanks!
>>
>>
> I think you would be far better off to get the Hi-Q.
>
> Butch KF5DE

Who makes the "Hi-Q"?

509. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:38:25 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178851105.890623.140550@e51g2000hsg.googlegroups.com>
Source record: 41408

On 10 May, 19:25, Richard Clark <kb7...@comcast.net> wrote:
> On 10 May 2007 19:15:32 -0700, art <aun...@insightbb.com> wrote:
>
> > I used to call 377 ohms an
> >impedance
>
> Hi Art,
>
> All impedances are ratios. Nothing has changed since 1864.
>
> 73's
> Richard Clark, KB7QHC

Right on. I understood for once your posting now that you are
not including flim flam. If that is what you believe I am
comfortable in following suit.
Is this now the end of this thread?
Do we now have closure?

510. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:44:17 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992CE753AE212mcoslocomcastnet@216.196.97.136>
Source record: 41409

Cecil Moore <nospam@w5dxp.com> wrote in
news:2I%%h.911$LR5.454@newssvr17.news.prodigy.net:

> John - KD5YI wrote:
>> I suspect the second link above does not actually exist. My browser
>> says "The page cannot be found" which has nothing to do with the file
>> type (.ez).
>
> Seems it has everything to do with file type .EZ since
> every other extension works just fine. If I simply change
> the coil505.EZ extension to coil505.bin and leave the file
> just as it is, everything works fine. Try it for yourself.
>
> http://w5dxp.com/coil505.bin
>
> The server is reporting that the .EZ file cannot be found even
> though it actually exists on the server. It's the Microsoft
> server that has the problem. The Linux server works just
> fine. Apparently, the Microsoft server doesn't recognize
> .EZ as a valid file type. If I ZIP the .EZ file, it also
> handles it just fine.

Coming in late on this one again. The question was raised about Windows vs linux servers. Like just about anything Windows based, there is "always something" requiring a big workaround, or even if it is something that the server *will* handle, there is always something that you have to do to get it to work right.

- 73 de Mike KB3EIA, happily administering an OSX server that just chugs away -

...But willing to concede the superiority of all things Windows, as long as I don't have to use them.... ;^)

511. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 02:51:44 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992CE896C205Bmcoslocomcastnet@216.196.97.136>
Source record: 41410

Cecil Moore <nospam@w5dxp.com> wrote in news:a8Q%h.7406$2v1.2345
@newssvr14.news.prodigy.net:

> as the solution gets implemented. Are we going to
> ask everyone to rename antenna.bin to antenna.ez
> before they can use it with EZNEC? Why does qsl.net
> handle .EZ files properly and 1and1.com doesn't?
> As a simple user, this should NOT be my problem.

Your server folks need to get their act together and perform the
appropriate workaraound (I assume that the need for mime type of a file is
some sort of security thing) Time to switch to another server.

Some outfits get so hung up on what they think is security thst they
punish the good folk. I belonged to a list that onetime rejected a post I
made because it contained the word "link" in it.

- 73 de Mike KB3EIA -

512. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 03:14:19 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <qgn743hgu94of7jlbg4n44kj820v5vknkm@4ax.com>
Source record: 41411

On Thu, 10 May 2007 21:51:44 -0500, Mike Coslo
<mcoslo@youknow.comcast.net> wrote:

>Cecil Moore <nospam@w5dxp.com> wrote in news:a8Q%h.7406$2v1.2345
>@newssvr14.news.prodigy.net:
>
>> as the solution gets implemented. Are we going to
>> ask everyone to rename antenna.bin to antenna.ez
>> before they can use it with EZNEC? Why does qsl.net
>> handle .EZ files properly and 1and1.com doesn't?
>> As a simple user, this should NOT be my problem.
>
> Your server folks need to get their act together and perform the
>appropriate workaraound (I assume that the need for mime type of a file is
>some sort of security thing) Time to switch to another server.
>
> Some outfits get so hung up on what they think is security thst they
>punish the good folk. I belonged to a list that onetime rejected a post I
>made because it contained the word "link" in it.
>
> - 73 de Mike KB3EIA -

Mike, Mike, before you fly completely off the handle, 1and1 offers
their customers a choice of Mickysoft's server or Linux. Cecil chose
Micksoft. I also use 1and1 as my HSP and chose Linux. Cecil had
problems I didn't.

73,
Danny, K6MHE

513. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 03:27:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uan7439fs4rfqfsjj1m5mqlfkl8l11o2ii@4ax.com>
Source record: 41412

On 10 May 2007 19:38:25 -0700, art <aunwin@insightbb.com> wrote:

>Is this now the end of this thread?

Hi Art,

This latest sub-thread only marks one of your five errors you asked to
be identified.

73's
Richard Clark, KB7QHC

514. MFJ window feed through / lightning

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 03:35:41 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <KfidnZuYGJbned7bnZ2dnUVZ_vOlnZ2d@insightbb.com>
Source record: 41413
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna

I like the idea of the window feed through. In case of a lightning storm, one could easily disconnect his antennas from the INSIDE. My question is should one ground the feed-through plate at the window to a ground rod just below the window?

First thought - Maybe this would help protect the house.

Second though - Maybe it would be better to let the coax float with the tower, to avoid burning out the coax.

Third thought - With ground rods at both the tower and the entrance to the house, could this create a noise inducing ground loop?

Is there any standard practice about this?

--
Bob D. ND9B

515. Re: 2m Antenna Designs ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 03:40:49 UTC
From: jim <james27613@yahoo.com>
Message-ID: <4643E5C1.A8DDF85D@yahoo.com>
Source record: 41414

hi

http://www.cebik.com/moxon/mvhf.html

http://www.cebik.com/vhf/hs.html

73 james

516. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 03:56:04 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1178855764.649449.38470@l77g2000hsb.googlegroups.com>
Source record: 41415

On 10 May, 20:27, Richard Clark <kb7...@comcast.net> wrote:
> On 10 May 2007 19:38:25 -0700, art <aun...@insightbb.com> wrote:
>
> >Is this now the end of this thread?
>
> Hi Art,
>
> This latest sub-thread only marks one of your five errors you asked to
> be identified.
>
> 73's
> Richard Clark, KB7QHC

Hmm, go ahead, hopefully somebody will still be hanging around.

517. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 04:41:00 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <wtS0i.5833$296.3937@newsread4.news.pas.earthlink.net>
Source record: 41416

>
> = 377 ohms (approximately)
>

Had heard that one wants their stealth fighters to be covered with material that has this impedance. Also heard that any such material that can be manufactured is frequency dependent...

518. Feeding Inv Vee antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 04:48:55 UTC
From: Andrew <antennas@yahoo.com>
Message-ID: <XAS0i.1159$V75.117@edtnps89>
Source record: 41417

Question for ya folks.

I took down my co-ax that was feeding my inverted Vee antenna. I replaced it with 450 ohm ladder line and then at the window I put the 4-1 balun that was at the feed point and ran co-ax into the house.
Question is.... Is there a better way to feed this sucker..I was thinking about a co-ax cable balun 1:1 , but might handle the mismatches easier. I don't care about the SWR on the ladder line since losses so low and it will all be radiated anyway eventually.
Just don't want the 4:1 to fail one day.

Would love to hear thoughts on this.
Thanks.

VE7REF- Andrew

519. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 05:05:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l9u743hohd62fmds05olq1m9768ngkf30o@4ax.com>
Source record: 41418

On Thu, 10 May 2007 20:14:19 -0700, Danny Richardson
<n_group@k6mhe.com> wrote:

>Cecil had problems I didn't.

Anyone who has worked in software will tell you:
"They aren't problems,
they are undocumented features."

73's
Richard Clark, KB7QHC

520. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 05:10:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <edu743tta0cthp11qgj8a5mgm4dcrv6fh5@4ax.com>
Source record: 41419

On 10 May 2007 20:56:04 -0700, art <aunwin@insightbb.com> wrote:

>On 10 May, 20:27, Richard Clark <kb7...@comcast.net> wrote:
>> On 10 May 2007 19:38:25 -0700, art <aun...@insightbb.com> wrote:
>>
>> >Is this now the end of this thread?
>>
>> Hi Art,
>>
>> This latest sub-thread only marks one of your five errors you asked to
>> be identified.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Hmm, go ahead, hopefully somebody will still be hanging around.

No need to, they are already enumerated elsewhere. What has been
remarkable about this thread is that its efficiency has peaked at 20%.
- roughly 43.517% above average.

73's
Richard Clark, KB7QHC

521. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 05:13:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4ou743lliu5ri1ii2nok37ru815707qobn@4ax.com>
Source record: 41420

On Fri, 11 May 2007 04:41:00 GMT, robert casey <wa2ise@ix.netcom.com>
wrote:

>
>>
>> = 377 ohms (approximately)
>>
>
>Had heard that one wants their stealth fighters to be covered with
>material that has this impedance. Also heard that any such material
>that can be manufactured is frequency dependent...

Hi Robert,

It's been around for some 20 or 17 years at least and about as heavy
as the lead apron you wear for dental XRays.

73's
Richard Clark, KB7QHC

522. Re: MFJ window feed through / lightning

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 05:23:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <stu7439sos3mu2gsk52hntg7edubia4c5j@4ax.com>
Source record: 41421
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna

On Thu, 10 May 2007 23:35:41 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

>I like the idea of the window feed through. In case of a lightning storm,
>one could easily disconnect his antennas from the INSIDE. My question is
>should one ground the feed-through plate at the window to a ground rod just
>below the window?

Hi Bob,

Only if you want the lightning to go there.

>First thought - Maybe this would help protect the house.

Too many variables unmentioned to guarantee that.

>Second though - Maybe it would be better to let the coax float with the
>tower, to avoid burning out the coax.

Think of it as a fuse. Do you want it to blow open, or continue
feeding a bajillion amps into the ground nearby? (Again, neither of
these is guaranteed to occur - too much left unsaid.) This could
elevate the local ground potential and if you take too long a stride
you could feel half that potential between your legs (does that
motivate you?). This is implicit to the next thought:

>Third thought - With ground rods at both the tower and the entrance to the
>house, could this create a noise inducing ground loop?

Connect the two (and beyond) per standard practices.

>Is there any standard practice about this?

Consult your local library for the code. Such things vary from place
to place, but there are commonalities - no doubt many of them will be
discussed here shortly.

73's
Richard Clark, KB7QHC

523. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 07:21:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13486bil21fngb0@corp.supernews.com>
Source record: 41422

robert casey wrote:
>
>>
>> = 377 ohms (approximately)
>>
>
> Had heard that one wants their stealth fighters to be covered with
> material that has this impedance. Also heard that any such material
> that can be manufactured is frequency dependent...

If you want to see proof that what you heard isn't so, go to your local EMI test facility and ask to see their anechoic chamber. The one I use is pretty quiet from about 200 kHz up through the microwave range. Under the carbon-loaded foam cones are thick ferrite plates to extend the absorption down to the lower frequencies. You can also get ferrite loaded paint and silicone rubber, both of which have good absorption for several decades of frequency at least. But as Richard says, they're awfully heavy.

Roy Lewallen, W7EL

524. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 07:23:10 UTC
From: LA4RT Jon Kåre Hellan <dev@null.com>
Message-ID: <1m1whnesdd.fsf@persaunet.uninett.no>
Source record: 41423

Richard Clark <kb7qhc@comcast.net> writes:

> On 10 May 2007 12:30:13 -0700, herbert.don@gmail.com wrote:
>
> This thread is turning into one of those fantasies of the Boy's
> magazines of the 1950s: "Build a nuclear reactor on your kitchen
> table!"

Well, that's not just a fantasy, I'm afraid. See the Tale of the
Radioactive Boy Scout: http://www.dangerouslaboratories.org/radscout.html

I also used to have a picture of Otto Hahn's lab setup when he first
split the atom in 1938. It really looked like a few simple instruments
arranged on a kitchen table.

73
LA4RT Jon

525. Re: Feeding Inv Vee antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 09:01:28 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <c2vQIbKoDDRGFw7z@g3ohx.demon.co.uk>
Source record: 41424

In message <XAS0i.1159$V75.117@edtnps89>, Andrew <antennas@yahoo.com>
writes
>Question for ya folks.
>
>I took down my co-ax that was feeding my inverted Vee antenna. I replaced it
>with 450 ohm ladder line and then at the window I put the 4-1 balun that was
>at the feed point and ran co-ax into the house.
>Question is.... Is there a better way to feed this sucker..I was thinking
>about a co-ax cable balun 1:1 , but might handle the mismatches easier. I
>don't care about the SWR on the ladder line since losses so low and it will
>all be radiated anyway eventually.
>Just don't want the 4:1 to fail one day.
>
>Would love to hear thoughts on this.
>Thanks.
>
>VE7REF- Andrew
>
>

I'm sure that others will come up with some informative suggestions.
However, while I'm not saying that a 4:1 balun is not appropriate in
this case, I always wonder why one is included almost 'for good luck' in
many HF installations. Surely you would only use one to carry out an
accurate 4:1 transformation between two known impedances? I understand
that baluns with ferrite cores are not too happy when working far
outside the correct impedance ratio.
Ian.
--

526. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 09:04:31 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <LGSVUQLfGDRGFwb4@g3ohx.demon.co.uk>
Source record: 41425

```
In message <l9u743hohd62fmds05olq1m9768ngkf30o@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes
>On Thu, 10 May 2007 20:14:19 -0700, Danny Richardson
><n_group@k6mhe.com> wrote:
>
>>Cecil had problems I didn't.
>
>Anyone who has worked in software will tell you:
> "They aren't problems,
> they are undocumented features."
>
>73's
>Richard Clark, KB7QHC

Management says that 'There are no problems - there are only
opportunities.'
Ian.
--
```

527. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 09:56:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <W4X0i.2200$LR5.1880@newssvr17.news.prodigy.net>
Source record: 41426

art wrote:
> I used to call 377 ohms an impedance
> but I am now am agreement with the majority, 377 ohms is a ratio.

377 ohms is both an impedance and a ratio.
--
73, Cecil http://www.w5dxp.com

528. Re: Feeding Inv Vee antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 10:38:05 UTC
From: Alan WA4SCA <APBIDDLE@UNITED.NET>
Message-ID: <1nh8435npc48hlc768shgk9tgcvq1u8eas@4ax.com>
Source record: 41327

Andrew,

There is a good discussion on this at:

www.dxengineering.com/Products.asp?ID={022A1CDF-C417-4F8B-AF97-B1ED91AAE23A}&SecID=10&DeptID=33

You may need to cut and past that to get it to work. DX Engineering
is pricey, but they do know their stuff.

--
Alan
WA4SCA

529. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 11:06:19 UTC
From: francesco.messineo@gmail.com
Message-ID: <1178881579.352807.256460@q75g2000hsh.googlegroups.com>
Source record: 41328

Sorry people if I step in, but I really don't understand a word of
this thread.
(I'm a telecomunnication engineer though).

On 11 Mag, 04:15, art <aun...@insightbb.com> wrote:

> Heh I am agreeing with you, 377 ohms is a ratio pure and simple.
> I am now a member of the majority. I used to call 377 ohms an
> impedance
> but I am now am agreement with the majority, 377 ohms is a ratio.
> If Maxwell is part of the majority how can I go wrong. Seems like the
> blitz
> got in the way of that jewel being passed on.
> Art

R=V/I (ohm's law) is a ratio and its dimensional result is ohms.
What's wrong with Zo beeing dimensionally in ohms and beeing a ratio?

Thanks and 73
Francesco IZ8DWF

530. Re: Feeding Inv Vee antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 13:03:03 UTC
From: AK <nomail@aol.com>
Message-ID: <bQZ0i.47806$n_.14578@attbi_s21>
Source record: 41329

"Andrew" <antennas@yahoo.com> wrote in message
news:XAS0i.1159$V75.117@edtnps89...
> Question for ya folks.
>
> I took down my co-ax that was feeding my inverted Vee antenna. I replaced
> it with 450 ohm ladder line and then at the window I put the 4-1 balun
> that was at the feed point and ran co-ax into the house.
> Question is.... Is there a better way to feed this sucker..I was thinking
> about a co-ax cable balun 1:1 , but might handle the mismatches easier. I
> don't care about the SWR on the ladder line since losses so low and it
> will all be radiated anyway eventually.
> Just don't want the 4:1 to fail one day.
>
> Would love to hear thoughts on this.
> Thanks.
>
> VE7REF- Andrew

Hello Andrew -

I am assuming that is an inverted Vee dipole.
What frequency?
How high up is the center.

The optimum feedline impedance for your antenna depends on frequency and
effective height above the ground.
If your antenna is for 40m or 80m, I would figure that your feedpoint
impedance would be 50 ohms or lower
(450 ohms divided by 4 is still way off); that's unless you have some very
tall trees or your inverted vee is for one of the higher frequency bands.

So, RG58 or 8x cable would be good for reasonable impedance match.

My experience has been that if the feedline can be fairly perpendicular to
the antenna wires at the feedpoint, the balun is not needed. One thing a
balun does is help prevent the coax shield from becoming part of the
radiator. An indication of that is if the antenna resonates lower than it
should for the calculated antenna wire length, then a balun might be useful.
Baluns add loss, may be affected by weather, and can cause TVI. (My W2AU
balun was bad news for TV's when I operated on 10 meters with their 1:1
balun.)

For ground mounted verticals (impedance around 30 ohms), I run parallel
RG58 or parallel RG59 feedline to my feedline tuner. For dipoles less than
1/4 wave up, RG58 or 8x usually matches things up.
For dipoles higher up that 1/4 wave, RG-6 (cable TV coax) and RG=59 works

well.

Coax isn't affected by being on or under the ground, being draped through tree limbs, or by being taped to metal poles or tower sections. Parallel feedlines don't like those sorts of things. So I suggest - just keep it simple. Match the coax impedance to the wavelength height of your antenna and skip the balun.

73,
Andy K4YKZ

531. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 13:33:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Og_0i.2629$zj3.2001@newssvr23.news.prodigy.net>
Source record: 41330

Jim Kelley wrote:
> Perhaps you wouldn't mind showing your work.

I have added some new material to my web page
concerning this subject.

http://www.w5dxp.com/current2.htm
--
73, Cecil http://www.w5dxp.com

532. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 14:44:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f21vfe$4eq$1@nnrp.linuxfan.it>
Source record: 41331

herbert.don@gmail.com wrote:
> do you now how to explain this so normal people can understand?
>

If traveling waves are used to measure phase shift though the coil in question reliable data is obtained on phase shift.

If standing waves are used, the data is flawed.

Well, you asked for simple now, didn't you?

Regards,
JS

533. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 14:50:22 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f21vr8$68m$1@nnrp.linuxfan.it>
Source record: 41332

herbert.don@gmail.com wrote:
> do you now how to explain this so normal people can understand?
>
One more simple "fact."

Standing waves are really not "standing." They are "moving in place."
(well, oscillating, actually)

<silly-grin>
JS

534. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 14:50:54 UTC
From: "R. Rajesh Jeba Anbiah" <ng4rrjanbiah@rediffmail.com>
Message-ID: <1178895054.462022.177000@e51g2000hsg.googlegroups.com>
Source record: 41333

On May 10, 7:39 pm, g...@mendelson.com (Geoffrey S. Mendelson) wrote:
> R.RajeshJebaAnbiahwrote:
>
> > It's my long time wish to view TV channels of all countries. I'm
> > wondering why it isn't possible with TV but which is possible in
> > radio.
>
> No. TV signals are mostly line of sight. So are satellite signals.
>
> Look upwww.lyngsat.comfor information about what satellites you
> can "see" from your location. Then there is the issue of proper
> antennas, receivers, decoders and for encrypted signals, decryption
> keys (usually paid for if available at all).
>
> There is also the issue of PAL and SECAM signals versus NTSC.
> Multisystem TV sets are common, but not in the U.S.
>
> Where exactly are you?

Many thanks for everyone who replied in this thread. I'm in
Chennai, South India. When I was young, I have seen TV channel of Sri
Lanka using the antenna <http://www.ccrane.com/images/medium/winegard-
outdoor-tv-antenna.jpg>; currently this antenna is no more used here.
Everyone opted for Dish antenna which is operated by some local guys
(it's a connection with rent). Nowadays, we're getting another pay
based (where dish will be given to each person) for the digital
channels. Again the price and subscription is too high.

I'm still wondering why can't I use previous antenna but with
powerful boosters?

--
<?php echo 'Just another PHP saint'; ?>
Email: rrjanbiah-at-Y!com Blog: http://rajeshanbiah.blogspot.com/

535. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 15:00:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f220ef$71p$1@nnrp.linuxfan.it>
Source record: 41334

R. Rajesh Jeba Anbiah wrote:
> > ...
> I'm still wondering why can't I use previous antenna but with
> powerful boosters?
>
> --
> <?php echo 'Just another PHP saint'; ?>
> Email: rrjanbiah-at-Y!com Blog: http://rajeshanbiah.blogspot.com/
>
I "think" what you are asking is, "How can I get the "feeds" (direct transmissions from the TV stations on their respective VHF/UHF frequencies) to the satellites directly at my location?"

In that case, if the transmitting antennas are within your receiving range, you can.

You need to investigate where their transmitters (antennas) are located first, then decide if a suitable antenna/amplifer can be obtained and installed at your location.

Regards,
JS

536. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 15:09:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6k194395str4tcjvqv61kphmegknicg86k@4ax.com>
Source record: 41335

On Fri, 11 May 2007 09:23:10 +0200, LA4RT Jon Kï¿½re Hellan
<dev@null.com> wrote:
>Well, that's not just a fantasy, I'm afraid. See the Tale of the
>Radioactive Boy Scout: http://www.dangerouslaboratories.org/radscout.html

Hi Jon,

WHEW! I knew fiction had to imitate reality somewhere.

73's
Richard Clark, KB7QHC

537. Re: Electron ratio to form a radiation field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 15:16:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4q1943pig12fo58j5tg4k96qlidiv92d21@4ax.com>
Source record: 41336

On 11 May 2007 04:06:19 -0700, francesco.messineo@gmail.com wrote:

>Sorry people if I step in, but I really don't understand a word of
>this thread.
>(I'm a telecomunnication engineer though).
>
>On 11 Mag, 04:15, art <aun...@insightbb.com> wrote:
>
>> Heh I am agreeing with you, 377 ohms is a ratio pure and simple.
>> I am now a member of the majority. I used to call 377 ohms an
>> impedance
>> but I am now am agreement with the majority, 377 ohms is a ratio.
>> If Maxwell is part of the majority how can I go wrong. Seems like the
>> blitz
>> got in the way of that jewel being passed on.
>> Art
>
>R=V/I (ohm's law) is a ratio and its dimensional result is ohms.
>What's wrong with Zo beeing dimensionally in ohms and beeing a ratio?

Hi Francesco,

Nothing wrong at all as all but one correspondent would know. Art is
dismissing criticism by pretending to agree (the falsity you note is
in the mocking attitude he is using).

73's
Richard Clark, KB7QHC

538. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 15:53:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bc294398981h2t4svggctqrnrqvbn7k7gb@4ax.com>
Source record: 41337

On 11 May 2007 07:50:54 -0700, "R. Rajesh Jeba Anbiah"
<ng4rrjanbiah@rediffmail.com> wrote:

> I'm still wondering why can't I use previous antenna but with
>powerful boosters?

Hi Rajesh,

Your link didn't work, but knowing the company, I would guess the
antenna is what is called a fringe antenna. Fringe meaning long
distance. However, from your home in Chennai to the closest point in
Sri Lanka is going at least 250 miles and that would test ANY fringe
antenna to the MAX!

Plus, there have to be transmitters there for the antenna to receive.

73's
Richard Clark, KB7QHC

539. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 16:32:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1178901135.297023.278460@p77g2000hsh.googlegroups.com>
Source record: 41338

On May 11, 6:33 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > Perhaps you wouldn't mind showing your work.
>
> I have added some new material to my web page
> concerning this subject.
>
> http://www.w5dxp.com/current2.htm
> --
> 73, Cecil http://www.w5dxp.com

You'll forgive me if I'm not in a mood to be generous. You might consider adding some ordinates to your phase plots. Also, some credit to Roy for making all of the calculations for you might be appropriate as well. (You might ask him how he does it.) We still haven't seen any of your work. By work I mean calculations, not typing i.e. assumptions, deductions, inferences, and proclamations. Assuming there are actual values, it would be good to know, for example, what calculations were made in order to arrive at the phase angles in the plots. The only equations you provide are for instantaneous amplitude as a function of phase angle for a standing wave. Obviously that isn't suffiencient for obtaining the data in your plots. It's very poorly done. D+

ac6xg

540. Re: Like radio, how to make TV to receive all channels?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 17:05:30 UTC
From: richardharrison@webtv.net
Message-ID: <23356-4644A25A-503@storefull-3255.bay.webtv.net>
Source record: 41340

Rajesh wrote:
"It`s my long time wish to view TV channels of all countries."

For simplicity, gain, and bandwidth, a rhombic is hard to beat.
Risadvantage is size and it is hard to rotate.

Once upon a time, an Australian asked how he coild receive a far away TV station, and I gave him the details of a rhombic in Arnold B. Bailey`s "TV and Other Receiving Antennas". The Aussie built it and reported back that now his screen was illuminated with pictures from the distant station. Eureka!

Description is: "Four straight horizontal conductors (sides) forming a diamond. Size at 200 MHz: Two #10 wires each 26 feet long, separated 18 feet at midpoint, overall length 31 feet. Transmission line: 300 ohms balanced but slightly mismatched (twinlead). Resistance at 200 MHz: 600 ohms. Antenna Zo: 600 ohms (redundant specification it appears). Termination resistor at distant station end of antenna: 600 ohms. Gain at 200 MHz: 14.5 dB (or less). Bandwidth at 1 dB down 30%.

Height is not specified, but for TV, usually higher is better.

Best regards, Richard Harrison, KB5WZI

541. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 17:16:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gu11i.1353$mR2.589@newssvr22.news.prodigy.net>
Source record: 41339

Jim Kelley wrote:
> You'll forgive me if I'm not in a mood to be generous. You might
> consider adding some ordinates to your phase plots.

Here's the definition of "ordinate":
"The y-coordinate on an (x,y) graph"

I'm not sure what you are asking for. The graphs were
generated by Excel. What exactly are you saying? Do
you want me to add the dots for the data points?

> Also, some credit
> to Roy for making all of the calculations for you might be appropriate
> as well. (You might ask him how he does it.)

How he interfaces to NEC? I'm not sure what you are asking
for. EZNEC is a great piece of software but the calculating
engine is NEC. I doubt that even Roy knows the NEC equations.

> We still haven't seen
> any of your work. By work I mean calculations, not typing i.e.
> assumptions, deductions, inferences, and proclamations. Assuming
> there are actual values, it would be good to know, for example, what
> calculations were made in order to arrive at the phase angles in the
> plots.

I don't know what "work" you are asking for. All I did
was run EZNEC simulations and report the results.

The phase angles are calculated and reported by the NEC
calculating engine. I don't know what equations they use,
but probably the method of moments equations. I believe
Balanis has a chapter on MOM equations.

> The only equations you provide are for instantaneous amplitude
> as a function of phase angle for a standing wave. Obviously that
> isn't suffiencient for obtaining the data in your plots. It's very
> poorly done. D+

All the data is directly from EZNEC, Jim. Download coil505.EZ
and run it yourself. It is NEC that is doing the calculations.
The data reported by EZNEC was entered into coil505.xls and
Excel produced the graphs. Your objections seem really
strange and petty.
--
73, Cecil, w5dxp.com

542. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 18:44:18 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4644b97e$0$4642$4c368faf@roadrunner.com>
Source record: 41341

"NotMe" <NotMe@Oops.edu> wrote in message
news:pf6dnaCgnuwfSN7bnZ2dnUVZ_r2onZ2d@comcast.com...
>
> "Butch Magee" <lynyrd@cableone.net> wrote in message
> news:1347dnbc6ccrh5a@corp.supernews.com...
>> NotMe wrote:
>>> Can anyone comment on the performance of the High Sierra HS-1800/Pro
>>> antenna used as a base antenna? Due to my area/neighbors, etc..., this
>>> is probably the route I'm going to go.
>>>
>>> I'm just curious if anyone has any experience using this antenna for
>>> their home and it's performance as such.
>>>
>>> Thanks!
>>>
>>>
>> I think you would be far better off to get the Hi-Q.
>>
>> Butch KF5DE
>
>
> Who makes the "Hi-Q"?
>

You may want to try replacing the whip with a longer one if you are going to
use it as a base station.

Jimmie

543. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:12:46 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f22fu7soj1@news.service.uci.edu>
Source record: 41344

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> You'll forgive me if I'm not in a mood to be generous. You might
>> consider adding some ordinates to your phase plots.
>
>
> Here's the definition of "ordinate":
> "The y-coordinate on an (x,y) graph"
> I'm not sure what you are asking for. The graphs were
> generated by Excel. What exactly are you saying? Do
> you want me to add the dots for the data points?

Let me apologize in advance to the group for being forced,
reluctantly, into the pedantic exercise which follows.

Dear Cecil -
As of this moment there are no numbers on your y-axes to indicate how many degrees your plots represent. You will need to tell Excel that you want to have numbers there - and not just any numbers. You want numbers that represent the value of the y coordinants for points on your plotted curve. You must program your Excel spreadsheet to do this because it is no more omniscient than the people who would view your webpage.

> I'm not sure what you are asking
> for. EZNEC is a great piece of software but the calculating
> engine is NEC. I doubt that even Roy knows the NEC equations.

Well, it's become apparent that you don't know them. Even still, you claim be wiser than Kraus on this subject. Certainly bold, if not altogether ludicrous. And all this is for no reason other than the fact that you can run a program that you didn't write (the author of which you relentlessly berate) to perform calculations that you can't explain.

ac6xg

544. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:13:19 UTC
From: richardharrison@webtv.net
Message-ID: <18309-4644C04F-100@storefull-3252.bay.webtv.net>
Source record: 41342

Cecil, W5DXP wrote:
"I believe Balanis has a chapter on MOM equations."

So does Kraus. See page 461 in the 3rd edition of "Antennas".

Best regards, Richard Harrison, KB5WZI

545. Re: MFJ window feed through / lightning

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:22:48 UTC
From: AK <nomail@aol.com>
Message-ID: <co31i.109108$_c5.65372@attbi_s22>
Source record: 41343
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna

Bob - An antenna expert (when I lived in central Florida) told me that floating antennas will attract lightning. So, I always grounded my antennas with an inside switch, and had a 60ft ground rod (washed-in water pipe) directly under the center of my 70' tower base. Unlike many of my ham friends, I never had any lightning damage to my rigs during 17 years of living in the lightning capital. The mast had a number of burns on it when I took it down to move north. I am sure it had more hits than the three I was aware of. The other thing I did was loop the coax down to ground level, and then back up (about 3') and through my window to the grounding switch in the shack (bedroom). The theory there is that lightning doesn't like to reverse direction and will usually jump from the shield to the ground rather than loop back up and come into the house. The open feed line is an invitation for the lightning to find its own way to ground - through your home. I ground my feed lines with an outside switch these days, and so far still have no hits on my radios. However, my antenna switch control box took enough of a jolt from a close hit to burn out one diode. Andy K4YKZ

546. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:40:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f22gs5$8bp$1@nnrp.linuxfan.it>
Source record: 41345

Jim Kelley wrote:
> > ...
> Dear Cecil -
> As of this moment there are no numbers on your y-axes to indicate how
> many degrees your plots represent. You will need to tell Excel that
> you want to have numbers there - and not just any numbers. You want
> numbers that represent the value of the y coordinants for points on
> your plotted curve. You must program your Excel spreadsheet to do
> this because it is no more omniscient than the people who would view
> your webpage.
> ...

Well, you damn idiot, at least you no longer dispute it, you just
dispute how much you have been in error. My gawd, we are actually
making progress! 8-)

JS

547. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:42:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1349hp13jcdat2c@corp.supernews.com>
Source record: 41346

Jim Kelley wrote:
>
> You'll forgive me if I'm not in a mood to be generous. You might
> consider adding some ordinates to your phase plots. Also, some credit
> to Roy for making all of the calculations for you might be appropriate
> as well. (You might ask him how he does it.) We still haven't seen
> any of your work. By work I mean calculations, not typing i.e.
> assumptions, deductions, inferences, and proclamations. Assuming
> there are actual values, it would be good to know, for example, what
> calculations were made in order to arrive at the phase angles in the
> plots. The only equations you provide are for instantaneous amplitude
> as a function of phase angle for a standing wave. Obviously that
> isn't suffiencient for obtaining the data in your plots. It's very
> poorly done. D+

EZNEC uses NEC-2 for calculations and produces results essentially identical to those from NEC-2. The method is well documented in the NEC-2 manual, available on the web. Like NEC-2, EZNEC reports the magnitude and phase of current at each segment of the model. It calculates these from fundamental electromagnetic principles. No attempt is made by NEC-2 or EZNEC to consider the antenna as a transmission line or calculate any supposed traveling waves. Decomposition of the verifiable NEC/EZNEC results into traveling waves or anything else is strictly Cecil's doing, and any conclusions he reaches from it are also his only.

Roy Lewallen, W7EL

548. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:46:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1349i06gdsokp5e@corp.supernews.com>
Source record: 41347

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "I believe Balanis has a chapter on MOM equations."
>
> So does Kraus. See page 461 in the 3rd edition of "Antennas".

I don't have the third edition, but the explanation of MOM first appeared in the second edition which I do have. It's a very clear and concise explanation of the method. I highly recommend it for anyone wanting a basic understanding of how NEC and MININEC based modeling programs work but not needing the very detailed mathematical treatment of the NEC or MININEC manual.

Roy Lewallen, W7EL

549. Re: loking for a couple of details about a colinear desgin

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:50:47 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1178913047.398574.233000@p77g2000hsh.googlegroups.com>
Source record: 41348

On May 10, 3:36 pm, an_old_friend <konst...@hotmail.com> wrote:
> ---------- ---------- -------- ----------
> .5l II .5l II .5L II .5l
>
> can't ell from the drawings I find hi the stub 1.4 wave each are
> terminated at the end and thus the outer end fed by induction or
> shorted togather at the botom (most likely IMO) or shorted at the top
> I suppose is possible
>
> sorry folks just not quite making out the drawing of of this for that
> detail
>
> Help is asked some abuse is expected (please feel free to disapoint)

Normally, the stubs are 1/4 wave long (resonant at the operating frequency), shorted at the end away from the antenna so they look like a very high resistance at the antenna. Proper operation depends on the stub's coupling to the antenna field, so for example, it doesn't work well to make the stub a piece of coax that's part of the linear antenna. This also is the beginning of an explanation why you need the stub at all, and can't just put a gap between the ends of the elements. (After all, if the stub reflects an open back to where it connects to the antenna elements, why can't it be just omitted?) On the other hand, a properly constructed "coaxial collinear," where the coax is actually driven, can work quite well--but the lengths of the radiating sections are shortened.

Hope I haven't disappointed you too much by not giving you the expected abuse...

Cheers,
Tom

550. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 19:58:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <4W31i.2284$UU.390@newssvr19.news.prodigy.net>
Source record: 41349

Jim Kelley wrote:
> As of this moment there are no numbers on your y-axes to indicate how
> many degrees your plots represent.

This is simply a false statement, Jim. I see the numbers on my
y-axes when I click on coil505.xls and open it with Excel. I
see the numbers on my web page using Firefox and Explorer. But
whatever problem you are having, I'm willing to help you solve
it. How have you managed to make the y-axis numbers disappear
so you can give me a hard time about it?

> Well, it's become apparent that you don't know them. Even still, you
> claim be wiser than Kraus on this subject.

Well, Kraus has a problem that I don't yet have - he cannot
learn anything new. Dr. Corum's calculated VF's for coils
seem to be more accurate than Kraus's based on my EZNEC
simulations. Where Kraus gets 0.006 for the VF of a 75m
Texas Bugcatcher coil, Corum gets something closer to
the 0.016 reported by EZNEC.

P.S. I'm deliberately ignoring the ad hominem attacks in
your posting. Why can't you just state the technical
facts without waxing so extremely nasty?
--
73, Cecil http://www.w5dxp.com

551. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 20:09:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3441i.5532$H_.1501@newssvr21.news.prodigy.net>
Source record: 41351

Roy Lewallen wrote:
> Decomposition of the
> verifiable NEC/EZNEC results into traveling waves or anything else is
> strictly Cecil's doing, and any conclusions he reaches from it are also
> his only.

Typical guru response. EZNEC validly reports the standing
wave current in standing wave antennas and traveling wave
current in traveling wave antennas. It also validly reports
the traveling wave current in loading coils when they are
loaded with their Z0 impedance in order to eliminate
reflected current. I have been telling Roy for years that
his and w8ji's standing-wave current measurements were bogus
so he cannot possibly plead ignorance. Now EZNEC agrees with
me. Poetic justice?
--
73, Cecil http://www.w5dxp.com

552. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 20:20:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ntj943tn0f3eriakf0guthsclsoumreghs@4ax.com>
Source record: 41352

On Fri, 11 May 2007 20:09:35 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>I have been telling Roy for years that
>his and w8ji's standing-wave current measurements were bogus
>so he cannot possibly plead ignorance. Now EZNEC agrees with
>me. Poetic justice?

Only if a whore could rhyme.

553. YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 22:17:09 UTC
From: matty@mindless.com
Message-ID: <1178921829.902309.273180@h2g2000hsg.googlegroups.com>
Source record: 41353

THIS REALLY CAN MAKE YOU EASY MONEY! IT WORKS!
BUT YOU HAVE TO FOLLOW IT CAREFULLY FOR IT TO WORK!
A little while back, I was looking on the web for easy ways to make money and I kept thinking that all of the ways I was reading would never work and were just scams, but not this one! The article that I had found said that I could make thousands of dollars easily in a matter of weeks with only an initial small payment of $6.00. I thought, "Yeah, right, this must be a scam like most of the rest", but
like most of us, I was curious, so I kept reading. Anyway, it said that if I sent $1.00 to each of the 6 names and addresses listed at the bottom of the article that I would make great money but only if I followed the following steps. After sending the $1.00 to each person you were then instructed to rewrite the list by taking the 1st person off of the list then moving the 2nd person to the 1st spot, and the 3rd person to the 2nd spot, etc, etc. Finally you should be left with
the number 6 spot empty and this is where you place your name and address. After reconfiguring the list you then must post it on about 200 newsgroups (doesn't matter but the more places you post the more money you make!). There are thousands and thousands of newsgroups from around the world so this task is easy and that was it when I was done! No catch. So after thinking it over, I thought about trying it. I figured, what have I got to lose except 6 stamps and $6.00, right? Like most of us I was a little skeptical because it seemed so easy and I was a little worried about the legal aspects of it all. So
I checked it out with the U.S. Post Office (1-800-725-2161) and they confirmed that it is indeed legal! (U.S. Postal and Lottery Laws Title 18, Section 1302 and 1341 and Code of Federal Regulations, Volume 16, Sections 255 and 436) After reviewing the pros and cons of
the investment I decided to carry out with it. I invested the measly $6.00 and guess what? Within 7 days, I started getting money in the mail!! I was very shocked! I figured it would end soon, but the money just kept coming in. In my first week, I made about $25.00. By
the end of the second week I had made a total of over $1,000.00! In the third week I had over $6,000.00 and it's still growing. This is now my fourth week and I have made a total of just over $21,000.00 and
it's still coming in rapidly. It's certainly worth $6.00, and 6 stamps. Now let me explain to you how this works and most importantly, why it works. Also, make sure you print a copy of this

article NOW, so you can get the information off of it as you need it.
STEP 1: Get 6 separate pieces of paper and write the following on
each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6
US
$1.00 bills and place ONE inside EACH of the 6 pieces of paper so the
bill will not be seen through the envelope to prevent thievery.
Next,
place one paper in each of the 6 envelopes and seal them. You should
now have 6 sealed envelopes, each with a piece of paper stating the
above phrase (PLEASE PUT ME ON YOUR MAILING LIST), your name and
address, and a $1.00 bill. What you are doing with this letter is
creating a service. THIS IS ABSOLUTELY LEGAL!
Now mail the 6 envelopes to the following addresses:
1. LORRAINE HUTCHINSON (P.O. BOX 23951 LONDON ENGLAND E12 5YP)
2. GEAN SAPP (1768 OLD HICKORY STREET, DECATUR, GA 30032)
3. TAMEKA HILL (P.O. BOX 188 JAMESVILLE, NC 27846)
4. DAN BELL (1519 CAMERON LANDING DRIVE, STOCKBRIDGE, GA 30281)
5. ERIC PORAT (2345 EAST 64 STREET, BROOKLYN, NY 11234)
6. MATT SANTIAMAGRO (1120 SUNSET AVE, KELLEY, IA 50134)
STEP 2: After you have mailed out your letters creating a service and
making this legal, take the #1 name off the list that you see above,
move the other names up (6 becomes 5, 5 becomes 4, etc...) and add
YOUR NAME & ADDRESS as number 6 on the list.
STEP 3: Change anything you need to in this article, but try to keep
this article as close to original as possible. Now, post your
amended
article to at least 200 newsgroups. (I believe there are close to
24,000 groups in USA alone). All you need is 200, but remember, the
more you post- the more money you make!
DIRECTIONS --HOW TO POST TO NEWSGROUPS
Step a) You do not need to re-type this entire letter to do your own
posting. Simply put your cursor at the beginning of this letter and
drag your cursor to the bottom of this document, and select 'copy'
from the edit menu. This will copy the entire letter into the
computers memory.
Step b) Open a blank "notepad" file under accessories in windows and
place your cursor at the top of the blank page. From the 'edit' menu
select 'paste'. This will paste a copy of the letter into notepad so
that you can add your name to the list.
Step c) Save your new notepad file as a .txt file. If you want to do
your postings in different sittings, you'll always have this file to
go back to.
Step d) Use the Internet to search for various newsgroups (on-line
forums, message boards, chat sites, discussions.)
Step e) Visit these message boards and post this article as a new
message by highlighting the text of this letter and selecting paste
from the edit menu. Fill in the Subject, this will be the header
that
everyone sees as they scroll through the list of postings in a
particular group, click the post message button. After you have

completed these steps you are done with your first posting.
Congratulations! You are that much closer to easy money! THAT'S IT!
All you have to do is jump to different newsgroups and post away,
after you get the hang of it, it will take about 30 seconds for each
newsgroup! That's it! You will begin receiving money from around the
world within days! You may eventually want to rent a P.O.Box due to
the large amount of mail you will receive. If you wish to stay
anonymous, you can invent a name to use, as long as the postman will
deliver it. *JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT AND
REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL
MAKE!! BUT YOU HAVE TO POST A MINIMUM OF 200*
WHY it works: Out of 200 postings, say I receive only 5 replies (a
very low example). So then I made $5.00 with my name at #6 on the
letter. Now, each of the 5 persons who just sent me $1.00 make the
MINIMUM 200 postings, each with my name at #5 and only 5 persons
respond to each of the original 5, that is another $25.00 for me, now
those 25 each make 200 MINIMUM posts with my name at #4 and only 5
replies each, I will bring in an additional $125.00! Now, those 125
persons turn around and post the MINIMUM 200 with my name at #3 and
only receive 5 replies each, I will make an additional $626.00! OK,
now here is the fun part, each of those 625 persons post a MINIMUM
200
letters with my name at #2 and they each only receive 5 replies, that
just made me $3,125.00! Those 3,125 persons will all deliver this
message to 200 newsgroups with my name at #1 and if still 5 persons
per 200 newsgroups react I will receive $15,625,00! With an original
investment of only $6.00! AMAZING! When your name is no longer on the
list, you just take the latest posting in the newsgroups, and send
out
another $6.00 to names on the list, putting your name at number 6
again. And start posting again. The thing to remember is, do you
realize that thousands of people all over the world are joining the
internet and reading these articles everyday. Remember play FAIRLY
and
HONESTLY and this will work.

554. Re: MFJ window feed through / lightning

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 22:32:11 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <68r943dtu2fth4ahdu4okbuuq22ugoencb@4ax.com>
Source record: 41354

On Thu, 10 May 2007 23:35:41 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

>I like the idea of the window feed through. In case of a lightning storm,
>one could easily disconnect his antennas from the INSIDE. My question is
>should one ground the feed-through plate at the window to a ground rod just
>below the window?

I recently installed the MFJ feedthrough, and when bad weather
approaches, I disconnect the two dipoles and a j-pole from the
OUTSIDE. I hang the feedlines from a small tree outside the window. If
lightning hits, I figure it will find its way down the tree.

It hadn't occurred to me to disconnect from the inside, and bring the
lightning to my window sill. Yikes.

bob
k5qwg

>
>First thought - Maybe this would help protect the house.
>
>Second though - Maybe it would be better to let the coax float with the
>tower, to avoid burning out the coax.
>
>Third thought - With ground rods at both the tower and the entrance to the
>house, could this create a noise inducing ground loop?
>
>Is there any standard practice about this?

555. Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 22:50:17 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <Jq61i.176075$6m4.174091@pd7urf1no>
Source record: 41356

matty@mindless.com wrote:
> THIS REALLY CAN MAKE YOU EASY MONEY! IT WORKS!
> BUT YOU HAVE TO FOLLOW IT CAREFULLY FOR IT TO WORK!

You betcha! Just as soon as I get my shack organized!

Irv VE6BP

556. Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 22:50:37 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <TtudnSLUQ4rvb9nbnZ2dnUVZ_vWtnZ2d@comcast.com>
Source record: 41355

THIS IS A BS SCAM!

<matty@mindless.com> wrote in message
news:1178921829.902309.273180@h2g2000hsg.googlegroups.com...
> THIS REALLY CAN MAKE YOU EASY MONEY! IT WORKS!
> BUT YOU HAVE TO FOLLOW IT CAREFULLY FOR IT TO WORK!
> A little while back, I was looking on the web for easy ways to make
> money and I kept thinking that all of the ways I was reading would
> never work and were just scams, but not this one! The article that I
> had found said that I could make thousands of dollars easily in a
> matter of weeks with only an initial small payment of $6.00. I
> thought, "Yeah, right, this must be a scam like most of the rest",
> but
> like most of us, I was curious, so I kept reading. Anyway, it said
> that if I sent $1.00 to each of the 6 names and addresses listed at
> the bottom of the article that I would make great money but only if I
> followed the following steps. After sending the $1.00 to each person
> you were then instructed to rewrite the list by taking the 1st person
> off of the list then moving the 2nd person to the 1st spot, and the
> 3rd person to the 2nd spot, etc, etc. Finally you should be left
> with
> the number 6 spot empty and this is where you place your name and
> address. After reconfiguring the list you then must post it on about
> 200 newsgroups (doesn't matter but the more places you post the more
> money you make!). There are thousands and thousands of newsgroups
> from around the world so this task is easy and that was it when I was
> done! No catch. So after thinking it over, I thought about trying
> it. I figured, what have I got to lose except 6 stamps and $6.00,
> right? Like most of us I was a little skeptical because it seemed so
> easy and I was a little worried about the legal aspects of it all.
> So
> I checked it out with the U.S. Post Office (1-800-725-2161) and they
> confirmed that it is indeed legal! (U.S. Postal and Lottery Laws
> Title 18, Section 1302 and 1341 and Code of Federal Regulations,
> Volume 16, Sections 255 and 436) After reviewing the pros and cons
> of
> the investment I decided to carry out with it. I invested the measly
> $6.00 and guess what? Within 7 days, I started getting money in the
> mail!! I was very shocked! I figured it would end soon, but the
> money just kept coming in. In my first week, I made about $25.00.
> By
> the end of the second week I had made a total of over $1,000.00! In
> the third week I had over $6,000.00 and it's still growing. This is
> now my fourth week and I have made a total of just over $21,000.00

> and
> it's still coming in rapidly. It's certainly worth $6.00, and 6
> stamps. Now let me explain to you how this works and most
> importantly, why it works. Also, make sure you print a copy of this
> article NOW, so you can get the information off of it as you need it.
> STEP 1: Get 6 separate pieces of paper and write the following on
> each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6
> US
> $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the
> bill will not be seen through the envelope to prevent thievery.
> Next,
> place one paper in each of the 6 envelopes and seal them. You should
> now have 6 sealed envelopes, each with a piece of paper stating the
> above phrase (PLEASE PUT ME ON YOUR MAILING LIST), your name and
> address, and a $1.00 bill. What you are doing with this letter is
> creating a service. THIS IS ABSOLUTELY LEGAL!
> Now mail the 6 envelopes to the following addresses:
> 1. LORRAINE HUTCHINSON (P.O. BOX 23951 LONDON ENGLAND E12 5YP)
> 2. GEAN SAPP (1768 OLD HICKORY STREET, DECATUR, GA 30032)
> 3. TAMEKA HILL (P.O. BOX 188 JAMESVILLE, NC 27846)
> 4. DAN BELL (1519 CAMERON LANDING DRIVE, STOCKBRIDGE, GA 30281)
> 5. ERIC PORAT (2345 EAST 64 STREET, BROOKLYN, NY 11234)
> 6. MATT SANTIAMAGRO (1120 SUNSET AVE, KELLEY, IA 50134)
> STEP 2: After you have mailed out your letters creating a service and
> making this legal, take the #1 name off the list that you see above,
> move the other names up (6 becomes 5, 5 becomes 4, etc...) and add
> YOUR NAME & ADDRESS as number 6 on the list.
> STEP 3: Change anything you need to in this article, but try to keep
> this article as close to original as possible. Now, post your
> amended
> article to at least 200 newsgroups. (I believe there are close to
> 24,000 groups in USA alone). All you need is 200, but remember, the
> more you post- the more money you make!
> DIRECTIONS --HOW TO POST TO NEWSGROUPS
> Step a) You do not need to re-type this entire letter to do your own
> posting. Simply put your cursor at the beginning of this letter and
> drag your cursor to the bottom of this document, and select 'copy'
> from the edit menu. This will copy the entire letter into the
> computers memory.
> Step b) Open a blank "notepad" file under accessories in windows and
> place your cursor at the top of the blank page. From the 'edit' menu
> select 'paste'. This will paste a copy of the letter into notepad so
> that you can add your name to the list.
> Step c) Save your new notepad file as a .txt file. If you want to do
> your postings in different sittings, you'll always have this file to
> go back to.
> Step d) Use the Internet to search for various newsgroups (on-line
> forums, message boards, chat sites, discussions.)
> Step e) Visit these message boards and post this article as a new
> message by highlighting the text of this letter and selecting paste

> from the edit menu. Fill in the Subject, this will be the header
> that
> everyone sees as they scroll through the list of postings in a
> particular group, click the post message button. After you have
> completed these steps you are done with your first posting.
> Congratulations! You are that much closer to easy money! THAT'S IT!
> All you have to do is jump to different newsgroups and post away,
> after you get the hang of it, it will take about 30 seconds for each
> newsgroup! That's it! You will begin receiving money from around the
> world within days! You may eventually want to rent a P.O.Box due to
> the large amount of mail you will receive. If you wish to stay
> anonymous, you can invent a name to use, as long as the postman will
> deliver it. *JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT AND
> REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL
> MAKE!! BUT YOU HAVE TO POST A MINIMUM OF 200*
> WHY it works: Out of 200 postings, say I receive only 5 replies (a
> very low example). So then I made $5.00 with my name at #6 on the
> letter. Now, each of the 5 persons who just sent me $1.00 make the
> MINIMUM 200 postings, each with my name at #5 and only 5 persons
> respond to each of the original 5, that is another $25.00 for me, now
> those 25 each make 200 MINIMUM posts with my name at #4 and only 5
> replies each, I will bring in an additional $125.00! Now, those 125
> persons turn around and post the MINIMUM 200 with my name at #3 and
> only receive 5 replies each, I will make an additional $626.00! OK,
> now here is the fun part, each of those 625 persons post a MINIMUM
> 200
> letters with my name at #2 and they each only receive 5 replies, that
> just made me $3,125.00! Those 3,125 persons will all deliver this
> message to 200 newsgroups with my name at #1 and if still 5 persons
> per 200 newsgroups react I will receive $15,625,00! With an original
> investment of only $6.00! AMAZING! When your name is no longer on the
> list, you just take the latest posting in the newsgroups, and send
> out
> another $6.00 to names on the list, putting your name at number 6
> again. And start posting again. The thing to remember is, do you
> realize that thousands of people all over the world are joining the
> internet and reading these articles everyday. Remember play FAIRLY
> and
> HONESTLY and this will work.
>

557. RF resistance of braided round conductor

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 23:42:48 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992E62CE5680Anonenowhere@61.9.191.5>
Source record: 41357

I am modelling a Double Bazooka constructed of RG58C/U, and am interested in a method of estimating the effective RF resistance of the outer of the outer conductor compared to a round copper conductor of the same diameter.

The structure loss calculated by NEC-2 is about 2%, so it is a fairly small quantity.

The model so far is of a Double Bazooka resonant at 3.6MHz at 10m height over average ground, constructed entirely of Belden 8262 (RG58C/U), and fed with 25m of the same line. The model ignores the effect of the jacket on the radiator, and assumed that it is a round copper conductor of the same diameter as the sheild of the coax. The draft results at at http://www.vk1od.net/DoubleBazooka/Fig01.gif .

Owen

558. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 23:56:29 UTC
From: nx7u <nx7u@cox.net>
Message-ID: <1178927789.811230.253770@n59g2000hsh.googlegroups.com>
Source record: 41358

Depends. The coil is there for the relatively low input resistance on
80m, and to a lesser extent on 40m. If you have a lot of ground loss,
you may find that you don't need the coil. If you have an excellent
ground plane, you will need it to get a reasonable VSWR on 80m and
40m. Consider it a figure-of-merit to have to have the coil!

On May 10, 5:19 pm, "John" <vk2...@yahoo.com.au> wrote:
> I bought one for mobiling, but circumstances have changed.
> If I were to use it for a base antenna, would I have to remove the
> inductor/coil which is connected to earth at the base of the bracket?
>
> VK2KCE
>

559. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 23:57:26 UTC
From: nx7u <nx7u@cox.net>
Message-ID: <1178927846.213266.162980@p77g2000hsh.googlegroups.com>
Source record: 41359

I had both. Stuck with the High Sierra. The Hi-Q is *such* a pain to
mount to anything.

On May 10, 5:20 pm, Butch Magee <lyn...@cableone.net> wrote:
> NotMe wrote:
> > Can anyone comment on the performance of the High Sierra HS-1800/Pro antenna
> > used as a base antenna? Due to my area/neighbors, etc..., this is probably
> > the route I'm going to go.
>
> > I'm just curious if anyone has any experience using this antenna for their
> > home and it's performance as such.
>
> > Thanks!
>
> I think you would be far better off to get the Hi-Q.
>
> Butch KF5DE

560. Re: High Sierra Screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-11 23:58:28 UTC
From: nx7u <nx7u@cox.net>
Message-ID: <1178927908.316589.37630@e65g2000hsc.googlegroups.com>
Source record: 41360

And even better if you can extend the lower section (~2" diameter
tube). More metal=better, but more metal underneath the coil=mo'
better.

>
> You may want to try replacing the whip with a longer one if you are going to
> use it as a base station.
>
> Jimmie

561. Re: loking for a couple of details about a colinear desgin

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:02:41 UTC
From: herbert.don@gmail.com
Message-ID: <1178928161.488281.72030@h2g2000hsg.googlegroups.com>
Source record: 41361

ok 1/4 stubs and not 1.4 stubs
On May 11, 12:50 pm, K7ITM <k...@msn.com> wrote:
> On May 10, 3:36 pm, an_old_friend <konst...@hotmail.com> wrote:
>
> > ---------- ---------- -------- ----------
> > .5l II .5l II .5L II .5l
>
> > can't ell from the drawings I find hi the stub 1.4 wave each are
> > terminated at the end and thus the outer end fed by induction or
> > shorted togather at the botom (most likely IMO) or shorted at the top
> > I suppose is possible
>
> > sorry folks just not quite making out the drawing of of this for that
> > detail
>
> > Help is asked some abuse is expected (please feel free to disapoint)
>
> Normally, the stubs are 1/4 wave long (resonant at the operating
> frequency), shorted at the end away from the antenna so they look like
> a very high resistance at the antenna. Proper operation depends on
> the stub's coupling to the antenna field, so for example, it doesn't
> work well to make the stub a piece of coax that's part of the linear
> antenna. This also is the beginning of an explanation why you need
> the stub at all, and can't just put a gap between the ends of the
> elements. (After all, if the stub reflects an open back to where it
> connects to the antenna elements, why can't it be just omitted?) On
> the other hand, a properly constructed "coaxial collinear," where the
> coax is actually driven, can work quite well--but the lengths of the
> radiating sections are shortened.
>
> Hope I haven't disappointed you too much by not giving you the
> expected abuse...
>
> Cheers,
> Tom

562. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:13:05 UTC
From: herbert.don@gmail.com
Message-ID: <1178928785.416541.93650@q75g2000hsh.googlegroups.com>
Source record: 41362

On May 11, 7:44 am, John Smith I <assemblywiz...@gmail.com> wrote:
> herbert....@gmail.com wrote:
> > do you now how to explain this so normal people can understand?
>
> If traveling waves are used to measure phase shift though the coil in
> question reliable data is obtained on phase shift.
>
> If standing waves are used, the data is flawed.
>
> Well, you asked for simple now, didn't you?
>
> Regards,
> JS

no i didn'tt ask for simple. i asked for an explanation that could be
understood. So far i don't see any comparisons of what makes 'bad'
data bad, only reasons. everuyone has reasons. reliable? flawed?
is this like ~2db? how flawed is ~?

563. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:14:48 UTC
From: herbert.don@gmail.com
Message-ID: <1178928888.365769.96300@q75g2000hsh.googlegroups.com>
Source record: 41363

facts don't make very good explanations.

On May 11, 7:50 am, John Smith I <assemblywiz...@gmail.com> wrote:
> herbert....@gmail.com wrote:
> > do you now how to explain this so normal people can understand?
>
> One more simple "fact."
>
> Standing waves are really not "standing." They are "moving in place."
> (well, oscillating, actually)
>
> <silly-grin>
> JS

564. Re: RF resistance of braided round conductor

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:29:48 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1178929788.750435.324510@n59g2000hsh.googlegroups.com>
Source record: 41364

On May 11, 4:42 pm, Owen Duffy <n...@no.where> wrote:
> I am modelling a Double Bazooka constructed of RG58C/U, and am interested
> in a method of estimating the effective RF resistance of the outer of the
> outer conductor compared to a round copper conductor of the same diameter.
>
> The structure loss calculated by NEC-2 is about 2%, so it is a fairly small
> quantity.
>
> The model so far is of a Double Bazooka resonant at 3.6MHz at 10m height
> over average ground, constructed entirely of Belden 8262 (RG58C/U), and fed
> with 25m of the same line. The model ignores the effect of the jacket on
> the radiator, and assumed that it is a round copper conductor of the same
> diameter as the sheild of the coax. The draft results at
athttp://www.vk1od.net/DoubleBazooka/Fig01.gif.
>
> Owen

Hi Owen,

A fellow from Times Microwave, I believe it was, wrote an article that was published in one of the electronics/RF journals back about ten years ago, about coax, including loss. He included comments about braids and stranded conductors, I believe. I went looking for the article some time after I read it, and never could find it again. Unfortunately, I also never got a positive response from Times about it when I asked. But if you trust my memory, you can try a value of about 7% increase in RF resistance as compared with a smooth round conductor, for braid. That's at best an estimate, but it probably doesn't matter all _that_ much for what you are doing. I expect it depends on the angle of the brading, and to some extent on the frequency; I believe the 7% is for frequencies whose wavelength was much longer than the "pitch" of the braid, which clearly would be the case for your antenna.

Hope this is some help and not too much arm-waving for your purpose.

You could, of course, get an idea by comparing the loss for various types of coax where the difference is in the outer conductor: braid vs solid. But because the outer is typically such a small part of the total loss, the estimate's accuracy would be limited.

Cheers,
Tom

565. Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:49:36 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <Aa81i.105$R97.41@trndny03>
Source record: 41365

<matty@mindless.com> wrote in message
news:1178921829.902309.273180@h2g2000hsg.googlegroups.com...
> THIS REALLY CAN MAKE YOU EASY MONEY! IT WORKS!
> BUT YOU HAVE TO FOLLOW IT CAREFULLY FOR IT TO WORK!
> A little while back, I was looking on the web for easy ways to make
> money and I kept thinking that all of the ways I was reading would
> never work and were just scams, but not this one! The article that I
> had found said that I could make thousands of dollars easily in a
> matter of weeks with only an initial small payment of $6.00. I
> thought, "Yeah, right, this must be a scam like most of the rest",
> but
> like most of us, I was curious, so I kept reading. Anyway, it said
> that if I sent $1.00 to each of the 6 names and addresses listed at
> the bottom of the article that I would make great money but only if I
> followed the following steps. After sending the $1.00 to each person
> you were then instructed to rewrite the list by taking the 1st person
> off of the list then moving the 2nd person to the 1st spot, and the
> 3rd person to the 2nd spot, etc, etc. Finally you should be left
> with
> the number 6 spot empty and this is where you place your name and
> address. After reconfiguring the list you then must post it on about
> 200 newsgroups (doesn't matter but the more places you post the more
> money you make!). There are thousands and thousands of newsgroups
> from around the world so this task is easy and that was it when I was
> done! No catch. So after thinking it over, I thought about trying
> it. I figured, what have I got to lose except 6 stamps and $6.00,
> right? Like most of us I was a little skeptical because it seemed so
> easy and I was a little worried about the legal aspects of it all.
> So
> I checked it out with the U.S. Post Office (1-800-725-2161) and they
> confirmed that it is indeed legal! (U.S. Postal and Lottery Laws
> Title 18, Section 1302 and 1341 and Code of Federal Regulations,
> Volume 16, Sections 255 and 436) After reviewing the pros and cons
> of
> the investment I decided to carry out with it. I invested the measly
> $6.00 and guess what? Within 7 days, I started getting money in the
> mail!! I was very shocked! I figured it would end soon, but the
> money just kept coming in. In my first week, I made about $25.00.
> By
> the end of the second week I had made a total of over $1,000.00! In
> the third week I had over $6,000.00 and it's still growing. This is
> now my fourth week and I have made a total of just over $21,000.00
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> it's still coming in rapidly. It's certainly worth $6.00, and 6

> stamps. Now let me explain to you how this works and most
> importantly, why it works. Also, make sure you print a copy of this
> article NOW, so you can get the information off of it as you need it.
> STEP 1: Get 6 separate pieces of paper and write the following on
> each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6
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> $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the
> bill will not be seen through the envelope to prevent thievery.
> Next,
> place one paper in each of the 6 envelopes and seal them. You should
> now have 6 sealed envelopes, each with a piece of paper stating the
> above phrase (PLEASE PUT ME ON YOUR MAILING LIST), your name and
> address, and a $1.00 bill. What you are doing with this letter is
> creating a service. THIS IS ABSOLUTELY LEGAL!
> Now mail the 6 envelopes to the following addresses:
> 1. LORRAINE HUTCHINSON (P.O. BOX 23951 LONDON ENGLAND E12 5YP)
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> STEP 2: After you have mailed out your letters creating a service and
> making this legal, take the #1 name off the list that you see above,
> move the other names up (6 becomes 5, 5 becomes 4, etc...) and add
> YOUR NAME & ADDRESS as number 6 on the list.
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> place your cursor at the top of the blank page. From the 'edit' menu
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> Step c) Save your new notepad file as a .txt file. If you want to do
> your postings in different sittings, you'll always have this file to
> go back to.
> Step d) Use the Internet to search for various newsgroups (on-line
> forums, message boards, chat sites, discussions.)
> Step e) Visit these message boards and post this article as a new
> message by highlighting the text of this letter and selecting paste
> from the edit menu. Fill in the Subject, this will be the header
> that

> everyone sees as they scroll through the list of postings in a
> particular group, click the post message button. After you have
> completed these steps you are done with your first posting.
> Congratulations! You are that much closer to easy money! THAT'S IT!
> All you have to do is jump to different newsgroups and post away,
> after you get the hang of it, it will take about 30 seconds for each
> newsgroup! That's it! You will begin receiving money from around the
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> the large amount of mail you will receive. If you wish to stay
> anonymous, you can invent a name to use, as long as the postman will
> deliver it. *JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT AND
> REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL
> MAKE!! BUT YOU HAVE TO POST A MINIMUM OF 200*
> WHY it works: Out of 200 postings, say I receive only 5 replies (a
> very low example). So then I made $5.00 with my name at #6 on the
> letter. Now, each of the 5 persons who just sent me $1.00 make the
> MINIMUM 200 postings, each with my name at #5 and only 5 persons
> respond to each of the original 5, that is another $25.00 for me, now
> those 25 each make 200 MINIMUM posts with my name at #4 and only 5
> replies each, I will bring in an additional $125.00! Now, those 125
> persons turn around and post the MINIMUM 200 with my name at #3 and
> only receive 5 replies each, I will make an additional $626.00! OK,
> now here is the fun part, each of those 625 persons post a MINIMUM
> 200
> letters with my name at #2 and they each only receive 5 replies, that
> just made me $3,125.00! Those 3,125 persons will all deliver this
> message to 200 newsgroups with my name at #1 and if still 5 persons
> per 200 newsgroups react I will receive $15,625,00! With an original
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> out
> another $6.00 to names on the list, putting your name at number 6
> again. And start posting again. The thing to remember is, do you
> realize that thousands of people all over the world are joining the
> internet and reading these articles everyday. Remember play FAIRLY
> and
> HONESTLY and this will work.

Do I get Ginzu knives with it?What about my free Zanfir cd?

566. Re: RF resistance of braided round conductor

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:52:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992E6EA85193Dnonenowhere@61.9.191.5>
Source record: 41367

K7ITM <k7itm@msn.com> wrote in
news:1178929788.750435.324510@n59g2000hsh.googlegroups.com:

> On May 11, 4:42 pm, Owen Duffy <n...@no.where> wrote:
>> I am modelling a Double Bazooka constructed of RG58C/U, and am
>> interested in a method of estimating the effective RF resistance of
>> the outer of the outer conductor compared to a round copper conductor
>> of the same diameter.
>>
>> The structure loss calculated by NEC-2 is about 2%, so it is a fairly
>> small quantity.
>>
>> The model so far is of a Double Bazooka resonant at 3.6MHz at 10m
>> height over average ground, constructed entirely of Belden 8262
>> (RG58C/U), and fed with 25m of the same line. The model ignores the
>> effect of the jacket on the radiator, and assumed that it is a round
>> copper conductor of the same diameter as the sheild of the coax. The
>> draft results at athttp://www.vk1od.net/DoubleBazooka/Fig01.gif.
>>
>> Owen
>
> Hi Owen,
>
> A fellow from Times Microwave, I believe it was, wrote an article that
> was published in one of the electronics/RF journals back about ten
> years ago, about coax, including loss. He included comments about
> braids and stranded conductors, I believe. I went looking for the
> article some time after I read it, and never could find it again.
> Unfortunately, I also never got a positive response from Times about
> it when I asked. But if you trust my memory, you can try a value of
> about 7% increase in RF resistance as compared with a smooth round
> conductor, for braid. That's at best an estimate, but it probably
> doesn't matter all _that_ much for what you are doing. I expect it
> depends on the angle of the brading, and to some extent on the
> frequency; I believe the 7% is for frequencies whose wavelength was
> much longer than the "pitch" of the braid, which clearly would be the
> case for your antenna.

Ok.

I did try a sensitivity analysis by modelling aluminium (which IIRC has a
skin resistance of about double copper) and it didn't make much
difference to the outcome.

>
> Hope this is some help and not too much arm-waving for your purpose.

Thanks.

>
> You could, of course, get an idea by comparing the loss for various
> types of coax where the difference is in the outer conductor: braid
> vs solid. But because the outer is typically such a small part of the
> total loss, the estimate's accuracy would be limited.

I did think of that, but my estimate is that the outer conductor of such a cable contributes something like 20% of the R component of an RLGC model, and I thought it getting to great a reach to try to deconstruct the total R, deducting the inner R, and then working out a factor for the inner of the outer R against an ideal conductor of that inner diameter. Others have hinted at times that I may have gone too far in translation of published cable specs into an RLGC model.

BTW, the graph has changed, I doubled an admittance instead of halving it in the code, so the stub was having more effect that it really does.

Thanks again.

Owen

567. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 00:53:30 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46450ffe$0$21260$39cecf19@news.twtelecom.net>
Source record: 41366

Richard Clark wrote:

> On 10 May 2007 09:28:52 -0700, dykesc <cupstidd@bellsouth.net> wrote:
>
>
>>Does the fact that
>>the antenna has unequal leg lengths somehow explain this?
>
>
> That, and it is sloping (compounding asymmetry).
>
>
>>If it
>>matters, there is a 1:1 current balun between the txmsn line and the
>>antenna feedpoints.
>
>
> It may not be very useful.
>
> 73's
> Richard Clark, KB7QHC

Richard

I hate to revisit my main problem with you, since you are normally so amusing, but if you aren't going to help the poor newbie, could you please keep quiet and not make his confusion worse?

tom
K0TAR

568. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 01:12:33 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46451474$0$21260$39cecf19@news.twtelecom.net>
Source record: 41368

Richard Clark wrote:

> On Thu, 10 May 2007 20:14:19 -0700, Danny Richardson
> <n_group@k6mhe.com> wrote:
>
>
>>Cecil had problems I didn't.
>
>
> Anyone who has worked in software will tell you:
> "They aren't problems,
> they are undocumented features."
>
> 73's
> Richard Clark, KB7QHC

And Microsoft has lots more of them than anyone else.

After reading some of the stories from the inside of the "engineering"
of Windows products, it's not surprising.

tom
K0TAR

569. Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 01:59:24 UTC
From: tehrasha@gmail.com
Message-ID: <1178935164.295223.69320@o5g2000hsb.googlegroups.com>
Source record: 41369

Can the 20m, 75ohm matching stub perform double duty as a common mode choke?

ie: will it hurt if i wind the stub around something like 4" PVC?

--Teh

570. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 02:56:27 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f23ack$d9r$1@nnrp.linuxfan.it>
Source record: 41370

herbert.don@gmail.com wrote:
> facts don't make very good explanations.
>
I found Cecils' .ez files (the excel sheets require the microsoft product which some may not have access to) were an excellent "explanation" of what he proposes. However, some don't, through this process of debate, analysis and argument we may even find a deeper understanding. Makes you wonder if they bother to download the free trial version of EZNEC and bother to look ...

As to the debate, analysis and "controversy" over his offerings, well, that is what makes it all interesting, isn't it? Not being a guru makes this new to me, poor gurus, must bore 'em to death :-(

A great mind once said, (probably paraphrased here) "Genius is one percent inspiration and ninety-nine percent perspiration."

Regards,
JS

571. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 03:11:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <goaa43dc8d41cpnms048f1l6dgoacvr3it@4ax.com>
Source record: 41371

On Fri, 11 May 2007 19:53:30 -0500, Tom Ring <news0003@taring.org>
wrote:

>I hate to revisit my main problem with you

but....

As you see it, I just kicked out the crutches from beneath a cripple
newsboy who is struggling in the street and you as the social reformer
prefers to convert this evil sinner instead.

"Won't somebody think of the children!!?"

Does that put us back on the amusement track?

73's
Richard Clark, KB7QHC

572. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 03:19:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4hca43psrd45vbqupf9aaqnav0g5vlct2a@4ax.com>
Source record: 41372

On Fri, 11 May 2007 19:56:27 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>herbert.don@gmail.com wrote:
>> facts don't make very good explanations.
>>
>I found Cecils' .ez files (the excel sheets require the microsoft
>product which some may not have access to) were an excellent
>"explanation" of what he proposes.

Talk about the gulf between perception and reality.

73's
Richard Clark, KB7QHC

573. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 04:30:55 UTC
From: richardharrison@webtv.net
Message-ID: <21717-464542FF-130@storefull-3254.bay.webtv.net>
Source record: 41373

Herbert wrote:
"Do you know how to explain this so normal people can understand?"

I `m not a Guru, but I`ll try.

First, there was adispute about delay in an antenna loading coil. That provoked attempts to measure the delay. Then the argument turned to the measurement methods.

The antenna signal travels from the transmitter through the coil and through the stinger until it reaches the tip where it is forced to reverse course by the open circuit. All the signal which has not been radiated or lost in waste enroute starts its journey back toward the transmitter. This reflected energy from the antenna tip is of no help in determining delay through the loading coil but the ripples it makes, when it adds and subtracts from the waveform of the forward energy, makes measurements difficult. Frequently a directional coupler is used to measure the energy moving in one direction, while ignoring the energy moving in the opposite direction, to get a meaningful measurement. Cecil proposed a resistor matching the impedance at the tip of the antenna to avoid a reflection. This also eliminates the troublesome ambiguity.

Testing is convincing, perhaps, but not really necessary as the delay through a coil has been understood and quantified at least since Ampere who died in 1836.

The ARRL Handbook, mine is from 1976, explains inductance on page 25:
"Since the induced emf opposes the emf of the source, it tends to prevent the current from rising rapidly when the circuit is closed."

Delay is a well known function of inductors. In early times they were often called "retard coils".

Best regards, Richard Harrison, KB5WZI

574. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 09:23:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <XHf1i.21192$JZ3.14611@newssvr13.news.prodigy.net>
Source record: 41374

John Smith I wrote:
> Makes you wonder if they bother to download the free
> trial version of EZNEC and bother to look ...

The bugcatcher coil in coil505.EZ has 234 segments.
The free demo version of EZNEC is limited to 20
segments. Thus, something like a 2-4 turn helix
is all the free demo version will support.
--
73, Cecil http://www.w5dxp.com

575. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 09:39:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <aXf1i.1521$mR2.1302@newssvr22.news.prodigy.net>
Source record: 41375

Richard Harrison wrote:
> Cecil
> proposed a resistor matching the impedance at the tip of the antenna to
> avoid a reflection. This also eliminates the troublesome ambiguity.

Actually a little more elementary than that. Take a base-loaded
75m mobile antenna and remove the stinger, leaving only the
coil. Install a resistor to ground from the top of the coil and
adjust the resistor value equal to the characteristic impedance
of the coil. This is the point where the feedpoint impedance
at the base of the coil is equal to the value of the resistor
in ohms. This is, of course, assuming the coil is less than
1/4WL long which it is for a typical mobile installation.
--
73, Cecil http://www.w5dxp.com

576. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 10:52:03 UTC
From: Mike <vk6mo@iinet.net.au>
Message-ID: <46459c58$0$9060$5a62ac22@per-qv1-newsreader-01.iinet.net.au>
Source record: 41376

What Happens if the Bug Catcher actually catches a Bug. How does that
change things ?? :-)
"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:aXf1i.1521$mR2.1302@newssvr22.news.prodigy.net...
> Richard Harrison wrote:
>> Cecil
>> proposed a resistor matching the impedance at the tip of the antenna to
>> avoid a reflection. This also eliminates the troublesome ambiguity.
>
> Actually a little more elementary than that. Take a base-loaded
> 75m mobile antenna and remove the stinger, leaving only the
> coil. Install a resistor to ground from the top of the coil and
> adjust the resistor value equal to the characteristic impedance
> of the coil. This is the point where the feedpoint impedance
> at the base of the coil is equal to the value of the resistor
> in ohms. This is, of course, assuming the coil is less than
> 1/4WL long which it is for a typical mobile installation.
> --
> 73, Cecil http://www.w5dxp.com

577. Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 12:02:52 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.12.02.50.485810@from.qrz.com>
Source record: 41277

I just put up an inverted V that is up about 70 feet in the center and about 15 feet at the ends. Each leg is about 130 feet long, or about 260 feet overall, which is right around a half wave for 160 meters. It is fed with ladder line and an LDG auto-tuner.

I also have a dipole antenna that's up about 17 feet and is a half wave for certain MARS / CAP frequencies above the 75 meter band, hence it's a bit short for 75 meters. That antenna is coax fed and goes through a different LDG auto-tuner which allows me to use it on 75/80 meters with a good match.

The long and high inverted V doesn't work any better than the short and low dipole, and in some cases doesn't work as well.

I have checked all the connections on the inverted V and even did a continuity check from each side of the ladder line, up through the feed point, out each leg to the end of each leg, and all seems OK.

I have tried switching auto-tuners (taking the one that's on the coax-fed dipole and putting it on the inverted V) with no discernible difference.

Seems very strange. Any ideas that might account for why the V doesn't work better?

578. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 12:48:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <EIi1i.7799$2v1.3154@newssvr14.news.prodigy.net>
Source record: 41278

Rick (W-A-one-R-K-T) wrote:
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?

The key is the combination of feedpoint impedance and
length of the ladder-line. Some lengths of ladder-line
at some frequencies are close to worst case. For instance,
if the feedpoint of the 160m dipole is 6000 ohms on 75m,
you certainly don't want to feed it with 1/2WL of
ladder-line on 75m.

The free demo version of EZNEC available from eznec.com
will probably tell you what is wrong with your installation.

There's a DOS program on my web page that will tell you
the optimum lengths for feedline. It can be downloaded
from http://www.w5dxp.com/imax.exe

For instance, with a 260 foot dipole used with 450 ohm
ladder-line on 3.8 MHz, the optimum feedline lengths
are ~55 feet and ~172 feet. If your feedline length is
halfway between those two lengths, i.e. ~113 feet, it
is a worst case impedance situation for 3.8 MHz.
--
73, Cecil http://www.w5dxp.com

579. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 12:53:19 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <3Ni1i.6215$296.2538@newsread4.news.pas.earthlink.net>
Source record: 41279

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.05.12.12.02.50.485810@from.qrz.com...
>
> I just put up an inverted V that is up about 70 feet in the center and
> about 15 feet at the ends. Each leg is about 130 feet long, or about 260
> feet overall, which is right around a half wave for 160 meters. It is fed
> with ladder line and an LDG auto-tuner.
>
> I also have a dipole antenna that's up about 17 feet and is a half wave
> for certain MARS / CAP frequencies above the 75 meter band, hence it's a
> bit short for 75 meters. That antenna is coax fed and goes through a
> different LDG auto-tuner which allows me to use it on 75/80 meters with a
> good match.
>
> The long and high inverted V doesn't work any better than the short and
> low dipole, and in some cases doesn't work as well.
>
> I have checked all the connections on the inverted V and even did a
> continuity check from each side of the ladder line, up through the feed
> point, out each leg to the end of each leg, and all seems OK.
>
> I have tried switching auto-tuners (taking the one that's on the coax-fed
> dipole and putting it on the inverted V) with no discernible difference.
>
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?
>

It could depend on where the stations are you are trying to work. If they
are closer than about 200 to 300 miles on 75 meters then the lower antenna
probably will work beter. It is low to the ground and it tends to shoot the
signal up so it bounces down and covers the local area. The other antenna
will tend to send the signal out to more distance places. I have not done
the math for the angle of the higher antenna, but seems that it might too
steep. It should not be any less than about 120 deg where the wires come
together. It could also be the directions the stations are from you.

I have an off center fed antenna up about 50 feet that is about 130 feet
long and another dipole cut for 80 meters that is about 20 feet up. Most of
the locals are much stronger on the lower antenna.
I put it up because I like to talk to a couple of stations that are less
than 100 miles away.

580. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 13:03:31 UTC
From: Dave <noone@nowhere.com>
Message-ID: <DWi1i.5111$1X1.1916@trndny02>
Source record: 41280

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.05.12.12.02.50.485810@from.qrz.com...
>
> I just put up an inverted V that is up about 70 feet in the center and
> about 15 feet at the ends. Each leg is about 130 feet long, or about 260
> feet overall, which is right around a half wave for 160 meters. It is fed
> with ladder line and an LDG auto-tuner.
>
> I also have a dipole antenna that's up about 17 feet and is a half wave
> for certain MARS / CAP frequencies above the 75 meter band, hence it's a
> bit short for 75 meters. That antenna is coax fed and goes through a
> different LDG auto-tuner which allows me to use it on 75/80 meters with a
> good match.
>
> The long and high inverted V doesn't work any better than the short and
> low dipole, and in some cases doesn't work as well.
>
> I have checked all the connections on the inverted V and even did a
> continuity check from each side of the ladder line, up through the feed
> point, out each leg to the end of each leg, and all seems OK.
>
> I have tried switching auto-tuners (taking the one that's on the coax-fed
> dipole and putting it on the inverted V) with no discernible difference.
>
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?
>

you left out many details.
1. on what band did you do these tests?
2. what where your criteria for evaluating 'better'? swr, rx noise, rx
signal strength, tx field strength, tx signal measurements by someone at
some distance from you?
3. at what distance were the stations you compared, if that is what you did?
4. at what time of day/night, and on what date (important if there was some
kind of geomagnetic disturbance or some other propagation anomaly that day).
5. over how long of a period of time have you made these observations?
6. in what directions were the stations relative to each of the v's?
7. how close together are the v's?
8. what is supporting the v's?

581. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 13:10:02 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <U0j1i.291$Ao7.70@newsfe12.lga>
Source record: 41281

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:21717-464542FF-130@storefull-3254.bay.webtv.net...
> The antenna signal travels from the transmitter through the coil and
> through the stinger until it reaches the tip where it is forced to
> reverse course by the open circuit. All the signal which has not been
> radiated or lost in waste enroute starts its journey back toward the
> transmitter. This reflected energy from the antenna tip is of no help in
> determining delay through the loading coil but the ripples it makes,
> when it adds and subtracts from the waveform of the forward energy,
> makes measurements difficult. .....
>
> Best regards, Richard Harrison, KB5WZI
>

Which brings me back to my question: How important is the Q and low resistance of the coil and stinger? The subtracted waveform (current) seems to show slight increase at the base of coil, which we are trying to achieve - prolonging the high current portion along the radiator system.

If we had traveling wave situation along the radiator - almost uniform distribution (need resistive loading at the tip, just like in Cecil's coil example or Rhombic/Beverage antennas) - how would that affect overall efficiency?

When Barry, W9UCW did his experiments and measurements, he was surprised that quality of the loading coil made hardly any difference. Like good Bugcatcher coil vs. bad Hustler type resonator.

Do we have the case where some power is being lost for the benefit of stretching the high current portion along the radiator and making up for losses?
Normally we always try to minimize the resistive or other loses, but seems that something "fishy" might be going on, or is it insignificant form practical purposes, but I still believe that when involving more loaded elements in an array, things add up and become worthy of considering.
(We are talking about quarter wave vertical resonant radiator not the Goosian soup :-)

73 Yuri, K3BU.us

582. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 13:42:30 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <s1hb43tfdotbt4ann8gcjs2p4ujf2uoe69@4ax.com>
Source record: 41282

On Sat, 12 May 2007 08:02:52 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>
>I just put up an inverted V that is up about 70 feet in the center and
>about 15 feet at the ends. Each leg is about 130 feet long, or about 260
>feet overall, which is right around a half wave for 160 meters. It is fed
>with ladder line and an LDG auto-tuner.
>
>I also have a dipole antenna that's up about 17 feet and is a half wave
>for certain MARS / CAP frequencies above the 75 meter band, hence it's a
>bit short for 75 meters. That antenna is coax fed and goes through a
>different LDG auto-tuner which allows me to use it on 75/80 meters with a
>good match.
>
>The long and high inverted V doesn't work any better than the short and
>low dipole, and in some cases doesn't work as well.
>
>I have checked all the connections on the inverted V and even did a
>continuity check from each side of the ladder line, up through the feed
>point, out each leg to the end of each leg, and all seems OK.
>
>I have tried switching auto-tuners (taking the one that's on the coax-fed
>dipole and putting it on the inverted V) with no discernible difference.
>
>Seems very strange. Any ideas that might account for why the V doesn't
>work better?

http://www.cebik.com/wire/vang.html

583. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 14:17:39 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <70k1i.17605$YL5.8334@newssvr29.news.prodigy.net>
Source record: 41283

Yuri Blanarovich wrote:
> Which brings me back to my question: How important is the Q and low
> resistance of the coil and stinger?

As the loading coil is moved from base-loading to
top-loading, the average net current through the coil
decreases (assuming no top hat loading). The importance
of coil Q is related to how much net average current
is flowing through the coil.

For instance, the net average current through a
hamstick coil is enough to burn your hand even
after the power has been shut off.

I've always had it in the back of my mind to
install a 16'x6' piece of hardware cloth at
12.5 ft above ground above my GMC pickup,
supported by fiberglass poles. I would mount
the loading coil about a foot below the top
hat. I'll bet that would win any 75m mobile
antenna shootout.
--
73, Cecil http://www.w5dxp.com

584. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 14:35:48 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.14.35.45.925020@from.qrz.com>
Source record: 41284

On Sat, 12 May 2007 13:03:31 +0000, Dave wrote:

> 1. on what band did you do these tests?

Mostly 80 and 40, since those are the frequencies near where my two reference dipoles are cut (the one I mentioned, cut a bit above 80 meters, and a second 40-meter dipole at the same elevation, 17 feet, fed from the same coax feedline).

> 2. what where your criteria for evaluating 'better'? swr, rx noise, rx
> signal strength, tx field strength, tx signal measurements by someone at
> some distance from you?

The only criterion I have available right now is received signal strength. I don't yet have the resources to do transmit signal strength measurements.

> 3. at what distance were the stations you compared,

Some were regional, less than 200 miles away, and so of course I would have expected the low dipole to perform well, perhaps better than the inverted vee. However, others were 500 to 1000 miles away, in places like Virginia and Georgia (I'm in New Hampshire). Consistently, they came in as well, or nearly so, and sometimes better, on the dipole than on the V.

> 4. at what time of day/night, and on what date

I work at home, and so I am able to get on the air several times during each day. I ran some tests on the ECARS net at 7255 during the day, generally from about 10 AM until about 3 PM EDT, and on 80 meter CW and 75 meter SSB during the early to mid evening. I did this every day for about the last week and a half or so (for reference, today is Saturday, May 12).

> 5. over how long of a period of time have you made these observations?

As noted above, about the last week and a half or so.

> 6. in what directions were the stations relative to each of the v's?

There is only one V, and the other is a dual band dipole (75 and 40 meters fed with one coax). The V and the 75-meter dipole are oriented roughly east and west, and the 40-meter dipole is oriented roughly east-southeast and west-northwest. Most of the stations I tested with were in Ohio down through Florida, and so were about 260 degrees true down to about 210 degrees true ... especially in the case of the Ohio stations, not really optimal for the antenna orientation, and yet an inverted vee should have been much less sensitive to that than a dipole.

> 7. how close together are the v's?

The V and the dipole are approximately 30 feet apart horizontally and 50 feet apart vertically at their feedpoints, hence their feedpoints are a bit under 60 feet apart.

> 8. what is supporting the v's?

The V is supported by a tall tree in the back yard. The tree doesn't have many branches or much foliage, and what it does have are high up, mostly higher than the feedpoint.

The dipole is supported by trees on each end.

585. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 14:37:13 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.14.37.13.135458@from.qrz.com>
Source record: 41285

On Sat, 12 May 2007 06:42:30 -0700, Danny Richardson wrote:

> http://www.cebik.com/wire/vang.html

Good morning, Danny.

Thanks for the pointer. That one was a real eye opener. I always thought that any angle 90 degrees or greater at the feedpoint was OK. I think mine is something like about 100 degrees. I'll see if I can raise the ends up a bit and see what difference that makes.

586. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 15:09:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f24lbf$l0h$1@nnrp.linuxfan.it>
Source record: 41286

Cecil Moore wrote:
> > ...
> For instance, the net average current through a
> hamstick coil is enough to burn your hand even
> after the power has been shut off.
>
> I've always had it in the back of my mind to
> install a 16'x6' piece of hardware cloth at
> 12.5 ft above ground above my GMC pickup,
> supported by fiberglass poles. I would mount
> the loading coil about a foot below the top
> hat. I'll bet that would win any 75m mobile
> antenna shootout.

Cecil:

Have you been designing and setting up antennas out at Area 51, again?

ROFLOL!!!

Regards,
JS

587. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:22:13 UTC
From: herbert.don@gmail.com
Message-ID: <1178986933.794621.153600@h2g2000hsg.googlegroups.com>
Source record: 41287

I undesrtand delay in coils but I don't see anyone arguing delay.
more important is i don't see any differences but everyone is saying
this and that is better than something else. coke is better than
pepsi = who cares?

On May 11, 9:30 pm, richardharri...@webtv.net (Richard Harrison)
wrote:
> Herbert wrote:
>
> "Do you know how to explain this so normal people can understand?"
>
> I `m not a Guru, but I`ll try.
>
> First, there was adispute about delay in an antenna loading coil. That
> provoked attempts to measure the delay. Then the argument turned to the
> measurement methods.
>
> The antenna signal travels from the transmitter through the coil and
> through the stinger until it reaches the tip where it is forced to
> reverse course by the open circuit. All the signal which has not been
> radiated or lost in waste enroute starts its journey back toward the
> transmitter. This reflected energy from the antenna tip is of no help in
> determining delay through the loading coil but the ripples it makes,
> when it adds and subtracts from the waveform of the forward energy,
> makes measurements difficult. Frequently a directional coupler is used
> to measure the energy moving in one direction, while ignoring the energy
> moving in the opposite direction, to get a meaningful measurement. Cecil
> proposed a resistor matching the impedance at the tip of the antenna to
> avoid a reflection. This also eliminates the troublesome ambiguity.
>
> Testing is convincing, perhaps, but not really necessary as the delay
> through a coil has been understood and quantified at least since Ampere
> who died in 1836.
>
> The ARRL Handbook, mine is from 1976, explains inductance on page 25:
> "Since the induced emf opposes the emf of the source, it tends to
> prevent the current from rising rapidly when the circuit is closed."
>
> Delay is a well known function of inductors. In early times they were
> often called "retard coils".
>
> Best regards, Richard Harrison, KB5WZI

588. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:25:21 UTC
From: herbert.don@gmail.com
Message-ID: <1178987121.801891.172340@e65g2000hsc.googlegroups.com>
Source record: 41288

what is average net current? is there a peak net current?

On May 12, 7:17 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Yuri Blanarovich wrote:
> > Which brings me back to my question: How important is the Q and low
> > resistance of the coil and stinger?
>
> As the loading coil is moved from base-loading to
> top-loading, the average net current through the coil
> decreases (assuming no top hat loading). The importance
> of coil Q is related to how much net average current
> is flowing through the coil.
>
> For instance, the net average current through a
> hamstick coil is enough to burn your hand even
> after the power has been shut off.
>
> I've always had it in the back of my mind to
> install a 16'x6' piece of hardware cloth at
> 12.5 ft above ground above my GMC pickup,
> supported by fiberglass poles. I would mount
> the loading coil about a foot below the top
> hat. I'll bet that would win any 75m mobile
> antenna shootout.
> --
> 73, Cecil http://www.w5dxp.com

589. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:27:47 UTC
From: herbert.don@gmail.com
Message-ID: <1178987267.171701.169550@y80g2000hsf.googlegroups.com>
Source record: 41289

how far apart are the ends?

On May 12, 5:02 am, "Rick (W-A-one-R-K-T)" <get.my.em...@from.qrz.com>
wrote:
> I just put up an inverted V that is up about 70 feet in the center and
> about 15 feet at the ends. Each leg is about 130 feet long, or about 260
> feet overall, which is right around a half wave for 160 meters. It is fed
> with ladder line and an LDG auto-tuner.
>
> I also have a dipole antenna that's up about 17 feet and is a half wave
> for certain MARS / CAP frequencies above the 75 meter band, hence it's a
> bit short for 75 meters. That antenna is coax fed and goes through a
> different LDG auto-tuner which allows me to use it on 75/80 meters with a
> good match.
>
> The long and high inverted V doesn't work any better than the short and
> low dipole, and in some cases doesn't work as well.
>
> I have checked all the connections on the inverted V and even did a
> continuity check from each side of the ladder line, up through the feed
> point, out each leg to the end of each leg, and all seems OK.
>
> I have tried switching auto-tuners (taking the one that's on the coax-fed
> dipole and putting it on the inverted V) with no discernible difference.
>
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?

590. Re: RF resistance of braided round conductor

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:29:47 UTC
From: herbert.don@gmail.com
Message-ID: <1178987387.413957.168110@h2g2000hsg.googlegroups.com>
Source record: 41290

have you tried measuring the rf resistorance?

On May 11, 5:52 pm, Owen Duffy <n...@no.where> wrote:
> K7ITM <k...@msn.com> wrote innews:1178929788.750435.324510@n59g2000hsh.googlegroups.com:
>
>
>
>
>
> > On May 11, 4:42 pm, Owen Duffy <n...@no.where> wrote:
> >> I am modelling a Double Bazooka constructed of RG58C/U, and am
> >> interested in a method of estimating the effective RF resistance of
> >> the outer of the outer conductor compared to a round copper conductor
> >> of the same diameter.
>
> >> The structure loss calculated by NEC-2 is about 2%, so it is a fairly
> >> small quantity.
>
> >> The model so far is of a Double Bazooka resonant at 3.6MHz at 10m
> >> height over average ground, constructed entirely of Belden 8262
> >> (RG58C/U), and fed with 25m of the same line. The model ignores the
> >> effect of the jacket on the radiator, and assumed that it is a round
> >> copper conductor of the same diameter as the sheild of the coax. The
> >> draft results at athttp://www.vk1od.net/DoubleBazooka/Fig01.gif.
>
> >> Owen
>
> > Hi Owen,
>
> > A fellow from Times Microwave, I believe it was, wrote an article that
> > was published in one of the electronics/RF journals back about ten
> > years ago, about coax, including loss. He included comments about
> > braids and stranded conductors, I believe. I went looking for the
> > article some time after I read it, and never could find it again.
> > Unfortunately, I also never got a positive response from Times about
> > it when I asked. But if you trust my memory, you can try a value of
> > about 7% increase in RF resistance as compared with a smooth round
> > conductor, for braid. That's at best an estimate, but it probably
> > doesn't matter all _that_ much for what you are doing. I expect it
> > depends on the angle of the brading, and to some extent on the
> > frequency; I believe the 7% is for frequencies whose wavelength was
> > much longer than the "pitch" of the braid, which clearly would be the
> > case for your antenna.
>

> Ok.
>
> I did try a sensitivity analysis by modelling aluminium (which IIRC has a
> skin resistance of about double copper) and it didn't make much
> difference to the outcome.
>
>
>
> > Hope this is some help and not too much arm-waving for your purpose.
>
> Thanks.
>
>
>
> > You could, of course, get an idea by comparing the loss for various
> > types of coax where the difference is in the outer conductor: braid
> > vs solid. But because the outer is typically such a small part of the
> > total loss, the estimate's accuracy would be limited.
>
> I did think of that, but my estimate is that the outer conductor of such
> a cable contributes something like 20% of the R component of an RLGC
> model, and I thought it getting to great a reach to try to deconstruct
> the total R, deducting the inner R, and then working out a factor for the
> inner of the outer R against an ideal conductor of that inner diameter.
> Others have hinted at times that I may have gone too far in translation
> of published cable specs into an RLGC model.
>
> BTW, the graph has changed, I doubled an admittance instead of halving it
> in the code, so the stub was having more effect that it really does.
>
> Thanks again.
>
> Owen- Hide quoted text -
>
> - Show quoted text -

591. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:52:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <vhm1i.17624$YL5.3185@newssvr29.news.prodigy.net>
Source record: 41291

herbert.don@gmail.com wrote:
> I undesrtand delay in coils but I don't see anyone arguing delay.

The following web page is representative of the side that
asserts there is virtually zero delay through a 75m loading
coil. But the backers of that argument have grown strangely
silent as of late.

http://www.w8ji.com/inductor_current_time_delay.htm
--
73, Cecil http://www.w5dxp.com

592. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 16:58:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Hmm1i.17625$YL5.3300@newssvr29.news.prodigy.net>
Source record: 41292

herbert.don@gmail.com wrote:
> what is average net current?

Average net current is the RMS value of the standing-wave
current. Here is a graph of such from Kraus: "Antennas"
for a 1/2WL dipole:

http://www.w5dxp.com/krausdip.jpg

Half of that graph would represent a 1/4WL monopole.
--
73, Cecil http://www.w5dxp.com

593. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 17:44:37 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.17.44.36.33733@from.qrz.com>
Source record: 41293

On Sat, 12 May 2007 10:37:13 -0400, Rick (W-A-one-R-K-T) wrote:

> Thanks for the pointer. That one was a real eye opener. I always thought
> that any angle 90 degrees or greater at the feedpoint was OK. I think
> mine is something like about 100 degrees.

Actually I just calculated it out and it's more like around 130 degrees,
or each leg is just 25 degrees down from horizontal. So, according to
Cebik that should be pretty good.

594. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 17:46:32 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.17.46.32.587247@from.qrz.com>
Source record: 41294

On Sat, 12 May 2007 09:27:47 -0700, herbert.don wrote:

> how far apart are the ends?

Around 235 feet.

595. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 17:47:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <S4n1i.1603$mR2.520@newssvr22.news.prodigy.net>
Source record: 41295

Rick (W-A-one-R-K-T) wrote:
> On Sat, 12 May 2007 10:37:13 -0400, Rick (W-A-one-R-K-T) wrote:
>> Thanks for the pointer. That one was a real eye opener. I always thought
>> that any angle 90 degrees or greater at the feedpoint was OK. I think
>> mine is something like about 100 degrees.
>
> Actually I just calculated it out and it's more like around 130 degrees,
> or each leg is just 25 degrees down from horizontal. So, according to
> Cebik that should be pretty good.

What is the length of your feedline?
--
73, Cecil http://www.w5dxp.com

596. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 17:55:35 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.17.55.29.564234@from.qrz.com>
Source record: 41296

On Sat, 12 May 2007 12:47:32 -0500, Cecil Moore wrote:

> What is the length of your feedline?

That I don't know at the moment. I downloaded your imax.exe program and ran some numbers.

There sure aren't very many numbers that are good for all bands 160 through 10.

No doubt my feedline is wrong for a lot of frequencies, made more clear by the fact that there are a few frequencies where my LDG autotuner can't find a match.

However, how much does the feedline length matter IF the autotuner is able to find a good match point?

I can get 1.5:1 or better from everywhere in the 160 and 80 meter bands, and the high end of the 40-meter band (on the low end I can't get below about 2:1).

I'm about to go outside and try some different feedline lengths.

597. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 19:06:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <lfo1i.7813$2v1.2268@newssvr14.news.prodigy.net>
Source record: 41297

Rick (W-A-one-R-K-T) wrote:
> No doubt my feedline is wrong for a lot of frequencies, made more clear by
> the fact that there are a few frequencies where my LDG autotuner can't
> find a match.
>
> However, how much does the feedline length matter IF the autotuner is able
> to find a good match point?

Some impedances are outside the matching range and some
impedances are barely inside the matching range. Some
of the latter may not be a "good" match point. I model
my antenna systems to get a ballpark idea of what
impedance I am up against and use an antenna analyzer
to fine tune the system.
--
73, Cecil http://www.w5dxp.com

598. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 20:33:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <134c94fti9a5f22@corp.supernews.com>
Source record: 41298

```
Rick (W-A-one-R-K-T) wrote:
> . . .
> The only criterion I have available right now is received signal strength.
> I don't yet have the resources to do transmit signal strength
> measurements.
> . . .

Do you expect them to be different? Why?

Roy Lewallen, W7EL
```

599. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 21:23:39 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.12.21.23.39.315856@from.qrz.com>
Source record: 41299

On Sat, 12 May 2007 13:33:16 -0700, Roy Lewallen wrote:

> Do you expect them to be different? Why?

Good evening Roy...

Well, yeah... sorta...

Wouldn't one normally expect a "better" antenna to be "better" on receive
(i.e. give a stronger received signal) as well as on transmit?

600. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:00:12 UTC
From: richardharrison@webtv.net
Message-ID: <16304-464638EC-943@storefull-3256.bay.webtv.net>
Source record: 41302

Cecil, W5DXP wrote:
"Here is a graph of such from Kraus: "Antennas" for a 1/2WL dipole."

The Fig. 9-6 that Cecil posted is from an older edition of Kraus. In the new 3rd edition, the same graph is Fig. 14-2 on page 464.

Best regards, Richard Harrison, KB5WZI

601. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:12:07 UTC
From: Dave <noone@nowhere.com>
Message-ID: <XYq1i.2023$vu2.1813@trndny01>
Source record: 41300

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.05.12.21.23.39.315856@from.qrz.com...
> On Sat, 12 May 2007 13:33:16 -0700, Roy Lewallen wrote:
>
>> Do you expect them to be different? Why?
>
> Good evening Roy...
>
> Well, yeah... sorta...
>
> Wouldn't one normally expect a "better" antenna to be "better" on receive
> (i.e. give a stronger received signal) as well as on transmit?
>

yes, a 'better' antenna would be... but higher and longer don't necessarily
mean 'better'.

602. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:14:41 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46463c45$0$21250$39cecf19@news.twtelecom.net>
Source record: 41301

Richard Clark wrote:

>
>
> but....
>
> As you see it, I just kicked out the crutches from beneath a cripple
> newsboy who is struggling in the street and you as the social reformer
> prefers to convert this evil sinner instead.
>
> "Won't somebody think of the children!!?"
>
> Does that put us back on the amusement track?
>
> 73's
> Richard Clark, KB7QHC

I hate conversion attempts specifically and football in general, so
you'll never find me trying it.

I am also of the opinion that children are way overrated. They are easy
to make, and not worth nearly as much as an experienced middle aged worker.

tom
K0TAR

603. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:53:32 UTC
From: herbert.don@gmail.com
Message-ID: <1179010412.903821.232590@h2g2000hsg.googlegroups.com>
Source record: 41303

i see nothing about average or peak net current there a t the link
i see no differences by value only of maytters of taste.
Is there someone else here who knows how to explain not fact things so
a normal person can understand what this is all about?

On May 12, 9:58 am, Cecil Moore <nos...@w5dxp.com> wrote:
> herbert....@gmail.com wrote:
> > what is average net current?
>
> Average net current is the RMS value of the standing-wave
> current. Here is a graph of such from Kraus: "Antennas"
> for a 1/2WL dipole:
>
> http://www.w5dxp.com/krausdip.jpg
>
> Half of that graph would represent a 1/4WL monopole.
> --
> 73, Cecil http://www.w5dxp.com

604. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:57:34 UTC
From: herbert.don@gmail.com
Message-ID: <1179010654.851572.238140@h2g2000hsg.googlegroups.com>
Source record: 41304

there is nothing there that shows any difference
virtually zero means anything

what does it matter anyway when no one can show simple difference?

On May 12, 9:52 am, Cecil Moore <nos...@w5dxp.com> wrote:
> herbert....@gmail.com wrote:
> > I undesrtand delay in coils but I don't see anyone arguing delay.
>
> The following web page is representative of the side that
> asserts there is virtually zero delay through a 75m loading
> coil. But the backers of that argument have grown strangely
> silent as of late.
>
> http://www.w8ji.com/inductor_current_time_delay.htm
> --
> 73, Cecil http://www.w5dxp.com

605. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 22:59:50 UTC
From: herbert.don@gmail.com
Message-ID: <1179010790.668152.196900@o5g2000hsb.googlegroups.com>
Source record: 41305

Then it should work fine
yes you do seem to have a problem. maybe if you shrtened it up some.

On May 12, 10:46 am, "Rick (W-A-one-R-K-T)"
<get.my.em...@from.qrz.com> wrote:
> On Sat, 12 May 2007 09:27:47 -0700, herbert.don wrote:
> > how far apart are the ends?
>
> Around 235 feet.

606. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 23:02:00 UTC
From: herbert.don@gmail.com
Message-ID: <1179010920.389300.300030@l77g2000hsb.googlegroups.com>
Source record: 41306

Howell does it work?

On May 10, 6:18 pm, art <aun...@insightbb.com> wrote:
> On my transition to MMANA-GA antenna modeling program from the the AO
> professional
> antenna program I read the latest review of the 2007 version. It
> stated that it overcomes
> the irritations and downsides of Elnec and Eznec programs of
> yesteryear what ever they
> are as well as providing optimisation additions and upto date
> additions related to NEC2.etc
> I don't have actual knoweledge of the irritations alluded to or
> whether there are even newer
> versions of these old programs. The important thing is that MMANA-GA
> is FREE to all
> amateurs and as I have pointed out in the past Industry demands the
> fine attributes that
> optimization supplies and which are a necessary part of the newer
> expensive programs
> that proliferate. As I said this program is FREE to all antenna
> enthusiasts and provides
> all that is needed unless one strives to model all the antennas at the
> same time on the
> Sears building in Chicago. I am eager to work with their optimiser
> which has twice the
> variables that my former professional program gave me plus involve
> myself with the
> group discussions and help modes and other connecting freeware that is
> prevalent on the net.
> Who knows there may be another Gaussian array scenario waiting to be
> discovered
> and the tool for pursuit is provided FREE OF CHARGE provided by hams
> for all
> hams. A christmas present is available to all so that you don't have
> to spend
> your money at Dayton
> Art

607. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-12 23:33:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <j9s1i.7836$2v1.5035@newssvr14.news.prodigy.net>
Source record: 41307

herbert.don@gmail.com wrote:
> i see nothing about average or peak net current there a t the link
> i see no differences by value only of maytters of taste.

Don't worry, Don, many of the gurus on this newsgroup
don't comprehend it either. Maybe when the light dawns
upon them, they will explain it better than I can.
--
73, Cecil http://www.w5dxp.com

608. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:14:51 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992ECDFE962B5mcoslocomcastnet@216.196.97.136>
Source record: 41308

Tom Ring <news0003@taring.org> wrote in news:46451474$0$21260$39cecf19
@news.twtelecom.net:

> Richard Clark wrote:
>
>> On Thu, 10 May 2007 20:14:19 -0700, Danny Richardson
>> <n_group@k6mhe.com> wrote:
>>
>>
>>>Cecil had problems I didn't.
>>
>>
>> Anyone who has worked in software will tell you:
>> "They aren't problems,
>> they are undocumented features."
>>
>> 73's
>> Richard Clark, KB7QHC
>
> And Microsoft has lots more of them than anyone else.
>
> After reading some of the stories from the inside of the "engineering"
> of Windows products, it's not surprising.

One of the coolest undocumented Windows features I've ever seen was
about 2 weeks ago when I updated my Gateway pivot monitor software, my
monitor quit working correctly (it actually went to some bizzare upside
down mode and at only one resolution) but to top it off, my Visual Studio
quit working.

Hats off to a system that can perform that little trick.

- 73 de Mike KB3EIA -

609. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:15:51 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992ECE2A37CCDmcoslocomcastnet@216.196.97.136>
Source record: 41309

Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote in
news:LGSVUQLfGDRGFwb4@g3ohx.demon.co.uk:

> Management says that 'There are no problems - there are only
> opportunities.'

It keeps computer support people in jobs.....

- 73 de Mike KB3EIA -

610. Re: MIME type for .EZ files?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:19:20 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992ECEC11212Emcoslocomcastnet@216.196.97.136>
Source record: 41310

Danny Richardson <n_group@k6mhe.com> wrote in
news:qgn743hgu94of7jlbg4n44kj820v5vknkm@4ax.com:

> Mike, Mike, before you fly completely off the handle, 1and1 offers
> their customers a choice of Mickysoft's server or Linux. Cecil chose
> Micksoft. I also use 1and1 as my HSP and chose Linux. Cecil had
> problems I didn't.

I thought I raised that point in another post regarding my son's ISP. Once
he switched from Windows server to Linux, his problems went away.

- 73 de Mike KB3EIA -

611. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:19:30 UTC
From: herbert.don@gmail.com
Message-ID: <1179015570.151872.221510@p77g2000hsh.googlegroups.com>
Source record: 41311

strange
if you dont know average andpeak net current and why use it?

On May 12, 4:33 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> herbert....@gmail.com wrote:
> > i see nothing about average or peak net current there a t the link
> > i see no differences by value only of maytters of taste.
>
> Don't worry, Don, many of the gurus on this newsgroup
> don't comprehend it either. Maybe when the light dawns
> upon them, they will explain it better than I can.
> --
> 73, Cecil http://www.w5dxp.com

612. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:25:22 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns992ECFC797831mcoslocomcastnet@216.196.97.136>
Source record: 41312

tehrasha@gmail.com wrote in news:1178935164.295223.69320
@o5g2000hsb.googlegroups.com:

> Can the 20m, 75ohm matching stub perform double duty as a common mode
> choke?
>
> ie: will it hurt if i wind the stub around something like 4" PVC?

Best thing to do is try it and let us know your results. I would guess that it might have some small effect on the match. In my own case, there really isn't a good place to put the coil near the antenna, so a choke is better right before entering the house.

- Mike -

613. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 00:49:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <134co5coq1hi8eb@corp.supernews.com>
Source record: 41313

You should definitely expect the difference between two antennas to be the same in terms of signal strength for transmitting and receiving. However, the antenna which produces the stronger signal isn't necessarily the better receiving antenna. What counts when receiving is signal/noise ratio, and the the antenna producing the strongest signal may well produce a worse signal/noise ratio.

Doing transmit signal tests is entirely useless unless you happen across someone with a step attenuator who knows how to use it, and the patience to make many measurements as QSB fades you in and out. A friend of mine gets perverse pleasure out of the dramatic differences other people report between "antenna A" and "antenna B", when they're actually the same antenna.

Roy Lewallen, W7EL

Rick (W-A-one-R-K-T) wrote:
> On Sat, 12 May 2007 13:33:16 -0700, Roy Lewallen wrote:
>
>> Do you expect them to be different? Why?
>
> Good evening Roy...
>
> Well, yeah... sorta...
>
> Wouldn't one normally expect a "better" antenna to be "better" on receive
> (i.e. give a stronger received signal) as well as on transmit?
>

614. Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 02:46:04 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <viuc43d0ijlu2tookn0unfnokb6os9v06l@4ax.com>
Source record: 41314

I have been reading the Inverted Vee thread about the differences in receive and s/n.

My process of using the tuner is to find the highest noise level, then, turn on the carrier and fine tune to the lowest SWR. Often I find that the signal strength isn't as good as it was before tuning.

Assuming the SWR is acceptable when tuned to the best signal, even though it is not at its lowest, would it be better to leave the tuner at the best received signal and use the radio with a bit higher SWR?

I am talking about SWR below 2:1, (not 10:1) as measured by the meter or radio at time of tuning. For me, acceptable SWR for my solid state rigs is 1.7:1 as 1.8:1 often causes protective circuits to kick in and reduce power.

Comments?

Buck
N4PGW

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

615. Re: Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 03:48:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <134d2l0j6dgjcba@corp.supernews.com>
Source record: 41315

Buck wrote:
> I have been reading the Inverted Vee thread about the differences in
> receive and s/n.
>
> My process of using the tuner is to find the highest noise level,
> then, turn on the carrier and fine tune to the lowest SWR. Often I
> find that the signal strength isn't as good as it was before tuning.
>
> Assuming the SWR is acceptable when tuned to the best signal, even
> though it is not at its lowest, would it be better to leave the tuner
> at the best received signal and use the radio with a bit higher SWR?
>
> I am talking about SWR below 2:1, (not 10:1) as measured by the meter
> or radio at time of tuning. For me, acceptable SWR for my solid state
> rigs is 1.7:1 as 1.8:1 often causes protective circuits to kick in and
> reduce power.
>
> Comments?
>
> Buck
> N4PGW
>
It would be really neat if we had a tuner that would selectively tune the signal and noise. But alas, we don't. At HF, the signal and noise are both coming from outside the antenna, so anything we do at the tuner -- or anywhere between the antenna and receiver -- affects both equally. The tuner won't affect the received s/n ratio unless you get it so badly mistuned that you start hearing receiver noise, which isn't likely at HF. So tune it any way you want.

For transmitting, you're always best off getting as much power to the antenna as you can. (I mean actual power, not "forward power".) What you're trying to do is make the best s/n ratio at the other guy's receiver. You can't do anything about his noise, but for every dB you increase your signal, you get a one dB improvement in the s/n ratio at his end. This means having an SWR low enough that your rig doesn't shut down. Unless you have an extraordinarily lossy transmission line, any SWR below the shutdown point will get the same amount of power to the antenna for practical purposes.

At VHF and above, receiver noise is usually greater than atmospheric noise, so the rules change for receiving antennas. There, you do want to get as much signal from your antenna as you can in order to get the best s/n ratio. The rule for transmitting is still the same, though.

Roy Lewallen, W7EL

616. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 04:25:33 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179030333.914638.112940@n59g2000hsh.googlegroups.com>
Source record: 41316

> You haven't mentioned a balun at the 259B, or any other device to float
> the measurement terminals to make a true differential mode impedance
> measurment without significantly disturbing the thing you are measuring.
>
> There are issues regarding balance of the feedline with an OCF dipole,
> but reversing the meter for different readings suggests that the meter
> terminals are not sufficiently isolated from the environment (ground, the
> adjacent transmission line, possibly a power cord).
>
> What have you done to make the 259B appear as an isolated impedance
> meter?
>
> Owen

Owen,

My recent experience and your post has convinced me that a direct termination of my balanced transmission line (300 ohm twin lead) to the 259b is going to be problematic. I am now measuring through the 4:1 current balun in my MFJ tuner. Wish I had a 1:1. At 7.185 Mhz through the 4:1 balun (tuner bypassed) I get 19 -j48. Assuming an ideal balun I believe your previous post stated this would be 76 -j192 on the high side. At most even harmonic frequencies I've measured, it appears the 4:1 balun in the tuner is actually resulting in too low a resistive term impedance. As I write this I recall some text in the antenna book about calculating the proper 1/4 wave Zo transmission line impedance needed to transform to a desired impedance. Will this work for any odd multiple of a 1/4 wave transmission line? On second thought this wouldn't work on the harmonics would it? If I set it up for 20 meters it wouldn't work on 40. The whole deal with the off center feed is to be able to use it on even harmonics (80, 40, 20 meters). Guess I'll just work on figuring out the best compromise transmission line, but I'm fairly convinced I can do better than the 300 ohm twin lead.

This is all just for the challenge of understanding the theory and making it work in application. The tuner is doing fine for all 3 bands in my current configuration.

Thanks for helping out a Stuggling Crippled Newbie Street Urchin.

617. Re: Antennas led astray

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 05:05:11 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns992EE0B26BEA8doldridgsprintca@64.59.135.159>
Source record: 41317

"Jimmie D" <jimmiedee@bellsouth.net> wrote in
news:aJnvh.35771$Ts.6301@bignews6.bellsouth.net:

>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:dfnpr2d991ikus3m7h3b0t1mr4unje7kje@4ax.com...
>> On Fri, 26 Jan 2007 23:22:38 GMT, Dave Oldridge
>> <doldridg@leavethisoutshaw.ca> wrote:
>>
>>>> The same problem still exists. The cesium atom didn't
>>>> exist before the first super nova. How can the time
>>>> be calculated between the Big Bang and the first super
>>>> nova if cesium didn't exist?
>>>
>>>There are other entropic processes that can be calibrated against the
>>>cesium.
>>
>> Hi Dave,
>>
>> You have been snookered into answering a complaint manufactured (as
>> usual) from the misapplication of relationships. The resonance of
>> Cesium is not a function of time. Time is not a function of Cesium's
>> resonance (the incorrect correlation drawn, to which you are
>> responding).
>>
>> There is no dependency between the two. It is our dependency in our
>> usage of one to measure the other. The sophism above is much like
>> saying sound did not exist before someone was close enough to hear
>> the falling tree. The excitation of gas molecules we call sound
>> existed long before the appearance of the first amoeba, much less
>> apes in falling trees. Both sound and time are phenomenological
>> terms for simple and rational physical processes that exist without
>> dependence on us.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Yes, time is about as much related to the vibration of a cesium atom
> as it is to the pendulum im my grandfather clock.

Except we now define its unit in terms of the oscillations of a cesium
atom. And sure, it's relative. But, in the same reference frame as the
observer, the cesium clock is sufficient.

--
Dave Oldridge+
ICQ 1800667

618. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 05:32:31 UTC
From: richardharrison@webtv.net
Message-ID: <437-4646A2EF-847@storefull-3251.bay.webtv.net>
Source record: 41318

Cecil, W5DXP wrote:
"The following web page is representative of the side that asserts there is virtually zero delay through a 75m loading coil. But the backers of that argument have grown strangely silent of late."

Coils generate counter-emf as a result of forward current and the necessary magnetic field grows no faster than the current grows. Its growth is delayed by the counter-emf.

Current does not jump off the rails in a coil. It follows the coil wire as it follows a straight wire elsewhere. Terman says so and here is a quotation from the "Lenkurt Demodulator of August 1965 which describes the operation of a Traveling Wave Tube (TWT). Lenkurt used some of these in heterodyne repeaters operating at 6 GHz because of their wide bandwidth. Lenkurt`s description is very similar to Terman`s description:
"The signal to be amplified by the tube is coupled into the gun end of the helix. This RF signal travels as a surface wave around the turns of the helix, toward the collector, at about the velocity of light. The forward movement of the wave is analogous to the travel of a finely threaded screw (I called it a bolt in my analogy) where many turns are required to drive it into position. The signal wave generates an axial electric field which travels with it along the longitudinal axis of the helix. This alternating electric field interacts or velocity modulates the electrons in the beam."

The beam is pencil thin centered inside the helix. The beam is formed and focused much like that inside a cathode ray tube. Its electrons are accelerated by a high positive d-c voltage on the collector and elsewhere in the tube. But that`s not all. Signal voltage on the helix speeds and slows the beam at multiple points along the helix which is many wavelengths long at 6 GHz. This advancement and retardation along the length of the helix bunches up the electrons producing the velocity modulation of the beam.

The helix is just a long spiral of wire inside the TWT. There are many cycles of the 6 GHz signal distributed along the wave`s travel route.

Terman and Lenkurt say the signal route is along the wire in the coil. I believe them.

Best regards, Richard Harrison, KB5WZI

619. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 07:07:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <a5dd43p5j9u640i13tcli9c2dj8qd7ql5v@4ax.com>
Source record: 41319

On 12 May 2007 21:25:33 -0700, dykesc <cupstidd@bellsouth.net> wrote:

>My recent experience and your post has convinced me that a direct
>termination of my balanced transmission line (300 ohm twin lead) to
>the 259b is going to be problematic.

The way you described it (presuming an efficient choking BalUn) with battery operation and you remote from it, suggests any issue of "unbalance" is strictly academic. You can force it to become a real problem if the case of the 259 is close to ground where the chassis adds a capacitance to ground, but that is a rapidly diminishing value as you raise it (couldn't be more than 1 or 2 pF at 6 feet up).

>I am now measuring through the
>4:1 current balun in my MFJ tuner.

This is extremely unlikely (being a current BalUn) unless it is specifically specified as one (and even then, many professed 4:1 current BalUns are in fact no such thing).

You have the means to test the assertion, use your 259 to measure the isolation of the BalUn. This was the subject of a recent thread.

>Wish I had a 1:1. At 7.185 Mhz
>through the 4:1 balun (tuner bypassed) I get 19 -j48. Assuming an
>ideal balun I believe your previous post stated this would be 76 -j192
>on the high side. At most even harmonic frequencies I've measured, it
>appears the 4:1 balun in the tuner is actually resulting in too low a
>resistive term impedance.

Fixation on BalUns has clouded a simpler solution: wind a choke in the line and dump the ferrites of suspect quality.

>As I write this I recall some text in the
>antenna book about calculating the proper 1/4 wave Zo transmission
>line impedance needed to transform to a desired impedance. Will this
>work for any odd multiple of a 1/4 wave transmission line?

Yes, but discrepancies mount up dramatically as you multiply them (tolerances at 1/4 demand greater precision at 3/4, and even greater at 5/4). Besides, this doesn't address the odd readings you experience.

>On second
>thought this wouldn't work on the harmonics would it? If I set it up
>for 20 meters it wouldn't work on 40.

Sub Harmonics wouldn't suffer terribly. You do have a tuner after
all.

>The whole deal with the off
>center feed is to be able to use it on even harmonics (80, 40, 20
>meters).

Off center feeds merely give you different Zs for the same resonances
- something of a shell game where you get to move your problems to
another band (guess what? This is what may be happening.).

>Guess I'll just work on figuring out the best compromise
>transmission line, but I'm fairly convinced I can do better than the
>300 ohm twin lead.

It would be simpler to hang a second, half-length dipole beneath a
full size dipole and forget the off center feed.

>This is all just for the challenge of understanding the theory and
>making it work in application. The tuner is doing fine for all 3 bands
>in my current configuration.

Many antennas work just fine until the operator discovers a new tool
that proves it doesn't (in spite of a wall full of QSL cards).

>Thanks for helping out a Stuggling Crippled Newbie Street Urchin.

Wait until you face the sewer rats of Rio.

73's
Richard Clark, KB7QHC

620. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 07:15:30 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns992FAF8F23E0Fnonenowhere@61.9.191.5>
Source record: 41320

dykesc <cupstidd@bellsouth.net> wrote in
news:1179030333.914638.112940@n59g2000hsh.googlegroups.com:

...
> Owen,
>
> My recent experience and your post has convinced me that a direct
> termination of my balanced transmission line (300 ohm twin lead) to
> the 259b is going to be problematic. I am now measuring through the
> 4:1 current balun in my MFJ tuner. Wish I had a 1:1. At 7.185 Mhz
> through the 4:1 balun (tuner bypassed) I get 19 -j48. Assuming an
> ideal balun I believe your previous post stated this would be 76 -j192
> on the high side. At most even harmonic frequencies I've measured, it

In my experience, the balun integrated into MFJ tuners is far from ideal,
and it is usually a voltage balun.

> appears the 4:1 balun in the tuner is actually resulting in too low a
> resistive term impedance. As I write this I recall some text in the

I don't really understand what you are hoping for.

> antenna book about calculating the proper 1/4 wave Zo transmission
> line impedance needed to transform to a desired impedance. Will this
> work for any odd multiple of a 1/4 wave transmission line? On second
> thought this wouldn't work on the harmonics would it? If I set it up
> for 20 meters it wouldn't work on 40. The whole deal with the off
> center feed is to be able to use it on even harmonics (80, 40, 20
> meters). Guess I'll just work on figuring out the best compromise
> transmission line, but I'm fairly convinced I can do better than the
> 300 ohm twin lead.

You seem to be trying to operate a dipole over multiple bands.

The issues that this brings include:
1. is the pattern acceptable;
2. can you get power from the equipment room to the antenna reasonably
efficiently;
3. can you deliver the rated load impedance to the transmitter.

Impedance transformation for 3. can conveniently be done and is often
done in the equipment room, eg an ATU.

In that case, the feedline will operate at high VSWR at some frequencies
if you use an unloaded dipole.

Such a dipole with say 20m of feedline is difficult to feed efficiently if it is shorter than about 35% of a wavelength.

A dipole of more than 120% of a wavelength has a pattern with multiple lobes and intervening nulls, which may or may not be an issue.

Low loss open wire feedline can operate with very high VSWR (as would be encountered with a multi-band dipole) without great loss. It is most unlikely that coax is acceptable for this application, and possibly even lossy forms of open wire line like TV ribbon or ladder line... depending on your acceptability criteria.

Balun loss may be an issue if the balun is operated at very high impedance (ie high flux for moderate power). If the balun gets very hot, you have your warning.

Have a look at my article on feeding a G5RV, in particular Fig 10, the classic tuned feeder configuration. a 30m long dipole with low loss open wire line and an efficient balanced tuner is a frequency agile antenna with good efficiency and good pattern up to 12MHz. Above 12MHz, the pattern breaks into many lobes and nulls.

>
> This is all just for the challenge of understanding the theory and
> making it work in application. The tuner is doing fine for all 3 bands
> in my current configuration.

That is what real ham radio is about!

Owen

621. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 07:29:59 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns992F51AD43EEdoldridgsprintca@64.59.135.159>
Source record: 41321

art <aunwin@insightbb.com> wrote in news:1178846280.542779.109990
@q75g2000hsh.googlegroups.com:

> On my transition to MMANA-GA antenna modeling program from the the AO
> professional
> antenna program I read the latest review of the 2007 version. It
> stated that it overcomes
> the irritations and downsides of Elnec and Eznec programs of
> yesteryear what ever they
> are as well as providing optimisation additions and upto date
> additions related to NEC2.etc
> I don't have actual knoweledge of the irritations alluded to or
> whether there are even newer
> versions of these old programs. The important thing is that MMANA-GA
> is FREE to all
> amateurs and as I have pointed out in the past Industry demands the
> fine attributes that
> optimization supplies and which are a necessary part of the newer
> expensive programs
> that proliferate. As I said this program is FREE to all antenna
> enthusiasts and provides
> all that is needed unless one strives to model all the antennas at the
> same time on the
> Sears building in Chicago. I am eager to work with their optimiser
> which has twice the
> variables that my former professional program gave me plus involve
> myself with the
> group discussions and help modes and other connecting freeware that is
> prevalent on the net.
> Who knows there may be another Gaussian array scenario waiting to be
> discovered
> and the tool for pursuit is provided FREE OF CHARGE provided by hams
> for all
> hams. A christmas present is available to all so that you don't have
> to spend
> your money at Dayton

And yet, with all that it has, MMANA-GAL is not able to optimize at a
specific take-off angle. That would be SUCH a good feature to have for
HF modelling.

--
Dave Oldridge+
ICQ 1800667

622. Re: NVIS Dipoles Directional?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 08:44:17 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns992F11B3FAAEdoldridgsprintca@64.59.135.159>
Source record: 41322

Rick <Nospam@reply.in.gp> wrote in
news:pan.2007.04.10.04.34.39.629296@reply.in.gp:

> On Mon, 09 Apr 2007 23:36:56 +0000, Dave Oldridge wrote:
>
>> NVIS propagation is pretty high angle stuff. If you look at the
>> three dimensional patterns for NVIS antennas you will see that they
>> have a large lobe at high angles and an almost circular
>> omnidirectional pattern at those angles. We're looking at 80 degrees
>> and up mostly here, maybe 70 at the low end....so that antennas are
>> mainly designed to illuminate the patch of ionosphere directly above
>> the antenna.
>
> Right. That's my point. So, what I'm claiming ... and trying to get
> someone who knows more about this stuff than I do (which is just about
> all of you) to confirm or deny ... is that with an NVIS dipole,
> someone 100 miles away from me would not be able to perceive the
> difference if my antenna was broadside to him or oriented in line with
> him. True, or false?

True. Given the vagaries of propagation and the small differences in the
pattern at that angle, he wouldn't notice.

--
Dave Oldridge+
ICQ 1800667

623. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 10:31:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gOB1i.7884$2v1.6429@newssvr14.news.prodigy.net>
Source record: 41323

dykesc wrote:
> I am now measuring through the
> 4:1 current balun in my MFJ tuner. Wish I had a 1:1.

Most tuner baluns are voltage baluns. What you need
is a 1:1 current balun with a choking impedance of
a few thousand ohms. That is generally the balun of
choice when the impedances are unknown.
--
73, Cecil http://www.w5dxp.com

624. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 10:41:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zXB1i.7885$2v1.6796@newssvr14.news.prodigy.net>
Source record: 41324

Owen Duffy wrote:
> Have a look at my article on feeding a G5RV, in particular Fig 10, the
> classic tuned feeder configuration. a 30m long dipole with low loss open
> wire line and an efficient balanced tuner is a frequency agile antenna
> with good efficiency and good pattern up to 12MHz. Above 12MHz, the
> pattern breaks into many lobes and nulls.

As a matter of interest, Mr. Varney, G5RV himself, designed
his antenna for 20m operation because he liked that multi-
lobed pattern. In AZ, I had each of the four major lobes
pointing toward one of the world's large land masses.
--
73, Cecil http://www.w5dxp.com

625. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 11:34:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <NIC1i.2606$LR5.2187@newssvr17.news.prodigy.net>
Source record: 41325

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "The following web page is representative of the side that asserts there
> is virtually zero delay through a 75m loading coil. But the backers of
> that argument have grown strangely silent of late."
>
> Current does not jump off the rails in a coil.

Not disagreeing in general but just fine tuning a bit.
In an HF mobile loading coil, the EM waves are photonic
in nature so a few photons are capable of migrating to
adjacent turns - certainly not enough to cause the 3
nS delay through a 10 inch long 100 turn coil reported
by w8ji, but the effect is enough to roughly cut in half
the time taken for the current to negotiate the coil wire.

I have modeled a 75m Texas Bugcatcher coil at:

http://www.w5dxp.com/coil505u.EZ

The length of the wire used in that coil is ~48 feet.
A wavelength at 3.8 MHz is ~259 feet. So that 48 feet
equals about (360)(48/259) = ~67 degrees. Yet EZNEC
reports a phase shift of only ~38 degrees. The effect
of the interaction between adjacent coils increases the
velocity factor of the coil to roughly 1.8 times what it
would be if all the current were confined to the coil
wire. That's a VF increase from ~0.009 to ~0.016 but
certainly still magnitudes short of w8ji's reported
value of 0.988

The measured velocity factor as a function of the ratio
of coil-circumference/wavelength is presented by Kraus,
Figure 8-34 in the 3rd edition. Note that the phase
velocity is not a straight line function of circumference.

The velocity factor as a function of the ratio of
coil-diameter/wavelength has been plotted in Fig. 1
of: http://www.ttr.com/TELSIKS2001-MASTER-1.pdf
and is also not a straight-line function.
--
73, Cecil http://www.w5dxp.com

626. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 12:23:15 UTC
From: richardharrison@webtv.net
Message-ID: <17906-46470333-747@storefull-3258.bay.webtv.net>
Source record: 41326

Cecil, W5DXP wrote:
"The measured velocity factor as a function of the ratio of coil-circumference/wavelength is presented by Kraus, Figure 8-34 in the 3rd edition."

Yes. The older edition, posted briefly on the web, has a Fig. 7-19 which also has VF`s found by Chu & Jackson, and by Bagby. They also found propagation faster than c for some coil circumferences / wavelength. Photons, massless at rest, can do that.

Best regards, Richard Harrison, KB5WZI

627. Re: Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 12:46:44 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <vu1e43dq79egsc9p87o2cf3duecbd0jona@4ax.com>
Source record: 41177

On Sat, 12 May 2007 20:48:44 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>It would be really neat if we had a tuner that would selectively tune
>the signal and noise. But alas, we don't. At HF, the signal and noise
>are both coming from outside the antenna, so anything we do at the tuner
>-- or anywhere between the antenna and receiver -- affects both equally.
>The tuner won't affect the received s/n ratio unless you get it so badly
>mistuned that you start hearing receiver noise, which isn't likely at
>HF. So tune it any way you want.
>
>For transmitting, you're always best off getting as much power to the
>antenna as you can. (I mean actual power, not "forward power".) What
>you're trying to do is make the best s/n ratio at the other guy's
>receiver. You can't do anything about his noise, but for every dB you
>increase your signal, you get a one dB improvement in the s/n ratio at
>his end. This means having an SWR low enough that your rig doesn't shut
>down. Unless you have an extraordinarily lossy transmission line, any
>SWR below the shutdown point will get the same amount of power to the
>antenna for practical purposes.
>
>At VHF and above, receiver noise is usually greater than atmospheric
>noise, so the rules change for receiving antennas. There, you do want to
>get as much signal from your antenna as you can in order to get the best
>s/n ratio. The rule for transmitting is still the same, though.
>
>Roy Lewallen, W7EL

Thanks, Roy,

A friend of mine suggests I setup a field strength meter and tune for
maximum fs. I don't usually use baluns so I would wonder how accurate
that would be.

Currently, I am tuning my gutters up for HF. I checked it with an
analyzer the other day and found it is an excellent 160 meter and 20
meter antenna without the tuner (swr-wise). In the meantime I am
building a vertical for 20 and up.

Thanks again,
73 for now,
BUck
N4PGW

--
73 for now

Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

628. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 13:26:13 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <3tSdncDxCJpujNrbnZ2dnUVZ_uiknZ2d@comcast.com>
Source record: 41178

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.05.12.17.46.32.587247@from.qrz.com...
> On Sat, 12 May 2007 09:27:47 -0700, herbert.don wrote:
>
>> how far apart are the ends?
>
> Around 235 feet.
>
Is there a reason you are using a 160 m antenna on 40/80 meters? A shorter antenna would get the ends a lot higher, assuming you used the same end supports.

Tam/WB2TT

629. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 14:52:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ke8e43tqfoeng1vgugqh9c5jpsfl93ni1g@4ax.com>
Source record: 41179

On Sun, 13 May 2007 07:23:15 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>They also found
>propagation faster than c for some coil circumferences / wavelength.
>Photons, massless at rest, can do that.

Hi Richard,

This is beginning to descend into nonsense.

Forgive me, it has descended into nonsense long ago, what is happening now is called porpoising (rising and falling deeper, repeatedly).

For instance the power in propagation cannot go faster than c for anything - that is clearly absurd. Perhaps if you were to more deeply cite your reference, then you would find what IS going faster in c has no material content (this discussion is in the material being used by you and I bet is the undisclosed topic of "group" velocity which is thoroughly useless for 75M and subwavelength coils - again, there is a world of difference between a coil and a helix in conventional engineering usages).

Photons get a bad reputation here. There is no such thing as a photon that is massless at rest - it is called an electron at a higher energy level which definitely has mass (no doubt Cecil could Xerox an obscure reference to prove it doesn't); OR it is rendered into a massless Phonon, but Phonons by definition move (no such thing as rest for them either); OR as a Plasmon, but Plasmons move too, but at a different wavelength for the same frequency; OR as an Exciton....

The list of moving quasi-particles goes on, all of them moving. This is something in distinct contrast to Cecil's threads that give only the "appearance of motion."

73's
Richard Clark, KB7QHC

630. Re: Antennas led astray

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 15:18:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27a86$1p1$1@nnrp.linuxfan.it>
Source record: 41180

Dave Oldridge wrote:
> Except we now define its unit in terms of the oscillations of a cesium
> atom. And sure, it's relative. But, in the same reference frame as the
> observer, the cesium clock is sufficient.
>
Let me rephrase that to be more accurate, "our time" is about as related to the real functioning of RF as is a fairy tale told to children which serves as a "satisfactory" explanation to them on some abstract functioning of reality.

Although some type of movement seems to be involved in RF (at least at this present time), it has little to do with our observations of movement of other objects and phenomenon which is unrelated to RF. However, it would be difficult to deny a real and accurate "universal time frame" (UTF) of some sort. It is even quite possible our understanding of RF, antennas, etc. with greatly expand when we finally discover this UTF and are able to devise ways to further expand our manipulations of our use of RF ... time is movement (but the movement of our earth and atoms are defined by the UTF, NOT the opposite!), if you view time as anything else, you are most likely in error ...

Regards,
JS

631. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 15:22:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27afq$1p1$2@nnrp.linuxfan.it>
Source record: 41181

Dave Oldridge wrote:
> > ...
> And yet, with all that it has, MMANA-GAL is not able to optimize at a
> specific take-off angle. That would be SUCH a good feature to have for
> HF modelling.
>
That would be very difficult to disagree with, "aiming" your signal at
the target (or aiming your "receiving pattern" at the target) is what is
has always been about ...

Regards,
JS

632. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 15:37:38 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27bbo$1p1$3@nnrp.linuxfan.it>
Source record: 41182

Cecil Moore wrote:
> > ...
> Not disagreeing in general but just fine tuning a bit.
> In an HF mobile loading coil, the EM waves are photonic
> in nature so a few photons are capable of migrating to
> adjacent turns - certainly not enough to cause the 3
> nS delay through a 10 inch long 100 turn coil reported
> by w8ji, but the effect is enough to roughly cut in half
> the time taken for the current to negotiate the coil wire.
> ...

Cecil:

What would you offer as to the "photonic-jump", the capacitance of the adjacent turns with air serving as the dielectric?

Since inductance lags and capacitance leads, wouldn't the inductance value between turns serve to offset this? And, the diameter of the wire become a major factor in the phenomenon you propose?

What if a spiral wound faraday shield is placed between the turns? Would we still see this "photonic-jump?"

Regards,
JS

633. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 16:02:24 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <kEG1i.1753$mR2.402@newssvr22.news.prodigy.net>
Source record: 41183

John Smith I wrote:
> What would you offer as to the "photonic-jump", the capacitance of the
> adjacent turns with air serving as the dielectric?

When electrons are accelerated in a conductor, they
emit photons. Some photons are emitted from one turn
and migrate to the adjacent turn. One might think of
it as a few photons taking a shortcut. Another way
of saying the same thing is that the fields couple
turn-to-turn. The overall effect is to increase
the velocity factor of the coil by something like a
factor of two over the "threaded bolt" calculation.
However, the effect is still magnitudes too low to
explain the 100 turn, 3 nS coil delay described by
w8ji.

Standing wave current cannot be used to make valid
measurements about current amplitude "drops" across
or phase shifts through a loading coil. One must
instead figure out a way to get a traveling wave
flowing through the coil. Then the phase shift
becomes perfectly obvious.

I have taken Wes's helical coil from:

http://www.k6mhe.com/n7ws/Loaded%20antennas.htm

and modeled it with EZNEC. I then loaded the coil
with a 1250 ohm resistor to minimize reflected current
and took a look at the phase shift through the
coil. Turns out to be about 37 degrees at 7.15 MHz.
That makes it a delay of about 14.4 nS.

That coil512.EZ file can be downloaded from:

http://www.w5dxp.com/coil512.EZ
--
73, Cecil http://www.w5dxp.com

634. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 16:21:40 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.13.16.21.40.513723@from.qrz.com>
Source record: 41184

On Sun, 13 May 2007 09:26:13 -0400, Tam/WB2TT wrote:

> Is there a reason you are using a 160 m antenna on 40/80 meters?

So I can get decent results on 160.

635. Tower Shadow Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 16:45:43 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <rradnfXy5q0p3drbnZ2dnUVZ_gmdnZ2d@insightbb.com>
Source record: 41185

I'm putting up a Diamond V-2000 (Omni directional 6m/2m/440) on my tower
with a side arm. I've been told to expect some degradation in the 'shadow'
direction. Just how bad will this be in dB? Any affect on other directions?

--
Bob D. ND9B

636. DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 16:51:59 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <PmH1i.6489$296.5006@newsread4.news.pas.earthlink.net>
Source record: 41186

OK RRAA Group Let's get Real:

DC to daylight! Which end of the spectrum is most interesting?

There often seems to be disagreement, dare I say "rancourous", among the denizens of RRAA on certain details of the dynamics of em waves and certain wave phenomena, dare I say "reflections".

Most hams are practical folk, interested in phenomena that occur (only) within our legally assigned frequency bands. A select few are interested in what happens outside our legally assigned frequency bands, and at least one of our RRAA bretheren often takes us on excursions all the way up to "daylight" to make his points futher down the spectrum! i.e. He takes us up into the nether regions of optical frequencies to make his points. (God Bless "Hecht"!)

Throughout all of the ensuing discussion that we "lurkers" overview, I have always been curious about what happens if we were to take or frequency excursions to the other extreme.

I believe that we are legally allowed to radiate in the DC band!

Most of us RRAA'ers seem to accept the physical reality inherent in the assertions of James Clerk Maxwell's (Actually Oliver Heavisides!) elegant and widely celebrated simple set of four partial differential equations and their auxilliary relations. Where is dear old Reg when we need him?

Most of us RRAS'ers alos seem to "know" that, at least at Radio Frequencies (RF), there exist both guided and free space electromagnetic "waves", and that during the "life" of such waves, the situation of the simultaneous existence of both "incident" and "reflected" waves often occurs. We all agree, because of "optical" excursions we have been taken on by our "ptical frontiersman", that situation occurs whether or not those waves are "guided" (by transmission lines, a.k.a waveguides) or "free".

Aside: We all seem to know that it is strictly the "acceleration" of electric charges that causes the radiation of radio waves, or if you prefer, the emission of photons. I believe that the extant wave versus particle "paradox" is irrelant to my following comments, assertions and questions. Also I believe that the dividing line between transient and steady state phenomena may be considered to be insignificant and so considered to be irrelevant as well.

Frequency, or spectrum, through the Supreme Force of the Universe's gift to us of "The Sinudoids" is intimately related to circular motion. Acceleration we know is the rate of change of velocity. In the steady state at DC electric charges are moving at a constant velocity. Thus when moving

in a straight line at constant velocity there should be no "waves" launched or radiated, no?

However, as mechanics or Engineers, we all understand the reality of centrifugal force and centripial acceleration. Some of us may actually recall Coriolis acceleration. [grin] I was in New Zealand last year and indeed the water does go down the sink with the opposite circulation. The water would not do that without the existence of the Coriolis Force. But I digress!

The reality of electric charges is clearly accepted by all denizens of RRAA, although some might argue about "holes" [grin].

Clearly then... even constant velocity steady state charges (DC) that circulate at a constant linear and angular velocity around the guided helical path of a solenoidally shaped conductor, otherwise known as a coil or inductor, say for instance the ubiquitous loading coil of a Bug Catcher whip, are subject to CENTRIPIAL ACCELERATION and must perforce emit photons, no? Does a coil carrying DC radiate? If so how efficiently?

My point here is the assertion of the real existence of DC waves either guided or free!

Q0: Is there electromagnetic radiation (are photons emitted) from a solenoidal (helix) carrying DC because of the centripital acceleration of the charges?

Q1: Do electromagnetic "waves" exist at DC, whether guided or free?

Q2: Can incident DC "waves", whether guided or free ever be "reflected"?

Q3: Can a VSWR be measured (at zero frequency) on a transmission line/waveguide that supports DC?

Q4: Is the VSWR at DC related, in any way at all to the VSWR at higher frequencies?

Pete, just plain crazy, none of this is reality!

Let's get practical then... most RRAA'ers seem to agree that a Bird Model 43 clearly measures indident and reflected waves. The generic name for a Bird is "reflectometer". Bird's, being "real practical devices" do have practical frequency range limitations and their accuracy and precision of the measurement of actual reality falls off below and above their (rated) the frequencies that define their rated bandwidth of operation. i.e. Bird's are not "accurate" from DC to daylight! But if one had a "Perfect Bird" and we could measure transmission line guided waves all the way down to DC.

Q4: If the Bird can't do it, is it even possible to construct a reflectometer instrument that can measure reflected waves all the way down to DC (zero frequency)? I have one here at home that I made myself. Where can I buy one?

Q5: If waves do not exist at DC, then at what magic frequency, lets call this frequency f(mgc), do waves cease to exist?

Q6: Below what magic frequency, lets call it f(mgc), do radiation and or reflection phenomena stop?

Q7: What is the difference between a "conjugate match" and a "Zo-match" at DC?

Food for thought, eh?

I miss dear old Reg!

Thoughts comments...

--
Pete k1po
Indialantic By-the-Sea, FL

637. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 16:55:42 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46474306$0$9884$4c368faf@roadrunner.com>
Source record: 41187

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.05.12.12.02.50.485810@from.qrz.com...
>
> I just put up an inverted V that is up about 70 feet in the center and
> about 15 feet at the ends. Each leg is about 130 feet long, or about 260
> feet overall, which is right around a half wave for 160 meters. It is fed
> with ladder line and an LDG auto-tuner.
>
> I also have a dipole antenna that's up about 17 feet and is a half wave
> for certain MARS / CAP frequencies above the 75 meter band, hence it's a
> bit short for 75 meters. That antenna is coax fed and goes through a
> different LDG auto-tuner which allows me to use it on 75/80 meters with a
> good match.
>
> The long and high inverted V doesn't work any better than the short and
> low dipole, and in some cases doesn't work as well.
>
> I have checked all the connections on the inverted V and even did a
> continuity check from each side of the ladder line, up through the feed
> point, out each leg to the end of each leg, and all seems OK.
>
> I have tried switching auto-tuners (taking the one that's on the coax-fed
> dipole and putting it on the inverted V) with no discernible difference.
>
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?
>

One of the bad things about stationary high gain antennas . It may have gain
out the wazoo but if its not putting the signal in the right place it doesnt
do much good.

Jimmie

638. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:00:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8bge43lijqfrstma93sunv5963nlmm4ngb@4ax.com>
Source record: 41188

On Sun, 13 May 2007 11:02:24 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

Aside from 100% error (actually more) for Wes' coil,

>I have taken Wes's helical coil from:
>http://www.k6mhe.com/n7ws/Loaded%20antennas.htm
>and modeled it with EZNEC. ...
>That coil512.EZ file can be downloaded from:

is distinctly false.

639. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:10:51 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27gqi$1p1$4@nnrp.linuxfan.it>
Source record: 41189

Peter O. Brackett wrote:
> > ...
> Most hams are practical folk, interested in phenomena that occur (only)
> within our legally assigned frequency bands. A select few are interested in
> what happens outside our legally assigned frequency bands, and at least one
> of our RRAA bretheren often takes us on excursions all the way up to
> "daylight" to make his points futher down the spectrum! i.e. He takes us
> up into the nether regions of optical frequencies to make his points. (God
> Bless "Hecht"!)
> > ...
>
At least one nano-technology/expermental solar cell depends on very
minute "antenna" covering its' surface, the light waves/photons striking
those "antennas" causes a DC current to flow from the cell ...

I see no one interested in phenomenon "outside of our assigned bands"
(light and RF are the same phenomenon.)

Well, except for those attempting to communicate on a "DC Carrier."

JS

640. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:41:17 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <QISdndVdMJxp0NrbnZ2dnUVZ8turnZ2d@bt.com>
Source record: 41190

"Peter O. Brackett" <none@no-such-domain.nul> wrote in message
news:PmH1i.6489$296.5006@newsread4.news.pas.earthlink.net...
> OK RRAA Group Let's get Real:
>
> DC to daylight! Which end of the spectrum is most interesting?
>
> There often seems to be disagreement, dare I say "rancourous", among the
> denizens of RRAA on certain details of the dynamics of em waves and
certain
> wave phenomena, dare I say "reflections".
>
> Most hams are practical folk, interested in phenomena that occur (only)
> within our legally assigned frequency bands. A select few are interested
in
> what happens outside our legally assigned frequency bands, and at least
one
> of our RRAA bretheren often takes us on excursions all the way up to
> "daylight" to make his points futher down the spectrum! i.e. He takes us
> up into the nether regions of optical frequencies to make his points.
(God
> Bless "Hecht"!)
>
> Throughout all of the ensuing discussion that we "lurkers" overview, I
have
> always been curious about what happens if we were to take or frequency
> excursions to the other extreme.
>
> I believe that we are legally allowed to radiate in the DC band!
>
> Most of us RRAA'ers seem to accept the physical reality inherent in the
> assertions of James Clerk Maxwell's (Actually Oliver Heavisides!) elegant
> and widely celebrated simple set of four partial differential equations
and
> their auxilliary relations. Where is dear old Reg when we need him?
>
> Most of us RRAS'ers alos seem to "know" that, at least at Radio
Frequencies
> (RF), there exist both guided and free space electromagnetic "waves", and
> that during the "life" of such waves, the situation of the simultaneous
> existence of both "incident" and "reflected" waves often occurs. We all
> agree, because of "optical" excursions we have been taken on by our
"ptical
> frontiersman", that situation occurs whether or not those waves are
"guided"

> (by transmission lines, a.k.a waveguides) or "free".
>
> Aside: We all seem to know that it is strictly the "acceleration" of
> electric charges that causes the radiation of radio waves, or if you
prefer,
> the emission of photons. I believe that the extant wave versus particle
> "paradox" is irrelant to my following comments, assertions and questions.
> Also I believe that the dividing line between transient and steady state
> phenomena may be considered to be insignificant and so considered to be
> irrelevant as well.
>
> Frequency, or spectrum, through the Supreme Force of the Universe's gift
to
> us of "The Sinudoids" is intimately related to circular motion.
> Acceleration we know is the rate of change of velocity. In the steady
state
> at DC electric charges are moving at a constant velocity. Thus when
moving
> in a straight line at constant velocity there should be no "waves"
launched
> or radiated, no?
>
> However, as mechanics or Engineers, we all understand the reality of
> centrifugal force and centripial acceleration. Some of us may actually
> recall Coriolis acceleration. [grin] I was in New Zealand last year and
> indeed the water does go down the sink with the opposite circulation. The
> water would not do that without the existence of the Coriolis Force. But
I
> digress!
>
> The reality of electric charges is clearly accepted by all denizens of
RRAA,
> although some might argue about "holes" [grin].
>
> Clearly then... even constant velocity steady state charges (DC) that
> circulate at a constant linear and angular velocity around the guided
> helical path of a solenoidally shaped conductor, otherwise known as a
coil
> or inductor, say for instance the ubiquitous loading coil of a Bug Catcher
> whip, are subject to CENTRIPIAL ACCELERATION and must perforce emit
photons,
> no? Does a coil carrying DC radiate? If so how efficiently?
>
> My point here is the assertion of the real existence of DC waves either
> guided or free!
>
> Q0: Is there electromagnetic radiation (are photons emitted) from a
> solenoidal (helix) carrying DC because of the centripital acceleration of
> the charges?

No. The electrons are constrained within the winding of the solonoid. A magnetic field is
formed by the movement of the electrons but this has nothing to do with centripedal
acceleration of charges.
>
> Q1: Do electromagnetic "waves" exist at DC, whether guided or free?

No. However there is not sharp cut off point. Any change in voltage or current over a
period of time will generate an electromagnetic disturbance. The initial inrush of electricity
when a circuit is first energised creates a detectable electromagnetic pulse. When a circuit
is de-energised or switched of, a similar pulse is generated as voltage and current decay.

> Q2: Can incident DC "waves", whether guided or free ever be "reflected"?

DC is DC and once a constant current/voltage is established only a magnetic field around
the conductors will exist.

> Q3: Can a VSWR be measured (at zero frequency) on a transmission
> line/waveguide that supports DC?

No. There can be no standing waves at DC for the reason stated above.

> Q4: Is the VSWR at DC related, in any way at all to the VSWR at higher
> frequencies?

As there can be no VSWR, this question is pointless.

> Pete, just plain crazy, none of this is reality!
>
> Let's get practical then... most RRAA'ers seem to agree that a Bird Model 43
> clearly measures indident and reflected waves. The generic name for a Bird
> is "reflectometer". Bird's, being "real practical devices" do have
> practical frequency range limitations and their accuracy and precision of
> the measurement of actual reality falls off below and above their (rated)
> the frequencies that define their rated bandwidth of operation. i.e. Bird's
> are not "accurate" from DC to daylight! But if one had a "Perfect Bird" and
> we could measure transmission line guided waves all the way down to DC.
>
> Q4: If the Bird can't do it, is it even possible to construct a
> reflectometer instrument that can measure reflected waves all the way down
> to DC (zero frequency)? I have one here at home that I made myself. Where
> can I buy one?
>

Any repetitive change in voltage and frequency over any period could be
construed
as an alternating current (AC) and theoretically is capable of being coupled
to a
suitable antenna and radiated as an electromagnetic wave. Given the
components to
construct a measuring device with a long enough time constant it is possible
to
measure reflections along a conductor or feedline. DC is a theoretical
construct,
rather like the concept of absolute zero. You can get very close, but you
will never
ever have a truely DC voltage/current just as you can never attain absolute
zero, or
for that matter, accelerate an object with mass to the speed of light.

> Q5: If waves do not exist at DC, then at what magic frequency, lets call
> this frequency f(mgc), do waves cease to exist?

As stated above, DC doesn't really exist, other than as a theoretical
concept. The
voltage and current will always vary slightly in any practical circuit.
>
> Q6: Below what magic frequency, lets call it f(mgc), do radiation and or
> reflection phenomena stop?
>
Radiation and reflection phenomena do no stop. All electrical circuits
radiate some
energy as heat and electromagnetic pulses. These emissions may be below
measurable
limits but they exist none the less.

> Q7: What is the difference between a "conjugate match" and a "Zo-match"
at
> DC?
>
I have no idea.

> Food for thought, eh?
>
> I miss dear old Reg!
>
> Thoughts comments...
>
> --
> Pete k1po
> Indialantic By-the-Sea, FL
>
All of the phenomena associated with electromagnetic waves and electron flow
can be
simulated in water tanks with supended particles in solution. When waves are

generated
at suitable frequencies, they travel along the tanks and matched stubs in exactly the same
wave as electromagnetic theory predicts. Standing waves can be generated at resonance
and these also behave as predicted. Examination of the particles in solution using a laser
show that while waves propogate, individual particles move very slowly or oscillate
around a fixed position. Again very similar to observed performance in antennae and
feed lines. There is a tendency to look rather too deeply into some electromagnetic
phenomena which although apparently strange, have parallels in other branches of science.

Big antennas work better than small antennas at every frequency and provided a decent
impedence match is achieved between the transceiver output and is impedence of free
space (about 377 ohms) then maximum signals are broadcast and received.

The efficiency with which the impedence match can be achieved is really at the crux of
all antenna theory.

My two pennies worth.

Mike G0ULI

641. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:41:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hahe43116dgd2qotra4k8b7qsd7f73lrmn@4ax.com>
Source record: 41191

On Sun, 13 May 2007 16:51:59 GMT, "Peter O. Brackett"
<none@no-such-domain.nul> being supremely bored wrote:

>Let's
>among the denizens
>Most hams
>our legally assigned frequency bands.
>A select few
>our legally assigned frequency bands
>takes us
>takes us
>we "lurkers"
>we were to take
>we are
>Most of us
>we need
>Most of us
>We all
>we have
>our "ptical
>We all

Insecure, aren't "we?"

>I believe that the extant wave versus particle
>"paradox" is irrelant to my following comments, assertions and questions.

Rolling up the rug before it is snapped?

>Also I believe that the dividing line between transient and steady state
>phenomena may be considered to be insignificant and so considered to be
>irrelevant as well.

A nice elimination of a demarcation, but it says nothing of which side
of the line you are standing. Are you on the steady state side
(which, of course has never existed), or the transient state side
(that is, the only one that has ever existed)? Be careful of your
choice, as history (woops, there goes a transient) will mock you! ;-)

>Frequency, or spectrum, through the Supreme Force of the Universe's gift to
>us of "The Sinudoids" is intimately related to circular motion.

Most intimate relations consist of back-and-forth.

>Acceleration we know is the rate of change of velocity.

Faster - faster - FASTER!

>In the steady state
>at DC electric charges are moving at a constant velocity.

You are confusing charge with carrier.

>Thus when moving
>in a straight line at constant velocity there should be no "waves" launched
>or radiated, no?

Well, are you afore it? or against it?

>My point here is the assertion of the real existence of DC waves either
>guided or free!

Edison would have beat Tesla to transferring power over the air if
that were so. Problem is wavelength, you need infinitely long
halfwave antennas - umm, WOW inspiration! That is exactly what
Edison had. He DID beat Tesla with transferring DC power over the air
when he supplied all his customers with antennas. AND they used
guided wave principles.

>Q0: Is there electromagnetic radiation (are photons emitted) from a
>solenoidal (helix) carrying DC because of the centripital acceleration of
>the charges?

Of course.

>Q1: Do electromagnetic "waves" exist at DC, whether guided or free?

That has been historically shown.

>Q2: Can incident DC "waves", whether guided or free ever be "reflected"?

Certainly.

>Q3: Can a VSWR be measured (at zero frequency) on a transmission
>line/waveguide that supports DC?

Break the line and hold each half with your hands.

>Q4: Is the VSWR at DC related, in any way at all to the VSWR at higher
>frequencies?

You just said it, frequency. Transient! For shame.

>Pete, just plain crazy, none of this is reality!

You don't believe your eyes? There's a career for you heading the CIA
(or Justice Department, or Homeland Scrutiny, or... choose one) under
the current administration.

>most RRAA'ers seem

Sorry about that insecurity thingy.

>Q4: If the Bird can't do it

Should this be Q5 or at least Q4.1.v.1?

Anyway, simply because you cannot afford that range slug doesn't mean
the Bird cannot do it.

>Q5: If waves do not exist at DC, then at what magic frequency, lets call
>this frequency f(mgc), do waves cease to exist?

Insecurity now is corrupting your confidence in the topic and
polluting it with transients. As you dismissed them above, we (using
the insecure form of I) might think you are suffering from optileptic
seizures.

>Q6: Below what magic frequency, lets call it f(mgc), do radiation and or
>reflection phenomena stop?

A Chebyshev filter might do it.

>Q7: What is the difference between a "conjugate match" and a "Zo-match" at
>DC?

No conjugal relations? No back-and-forth. You can't tell the
difference?

>Food for thought, eh?

Slim Fast with half the calories.

>I miss dear old Reg!
>
>Thoughts comments...

I can't think of a thing to say.

73's
Richard Clark, KB7QHC

642. Re: Tower Shadow Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:45:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vfje435sh999v2882ep62nnj2dkde9f9r5@4ax.com>
Source record: 41192

On Sun, 13 May 2007 12:45:43 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

>I'm putting up a Diamond V-2000 (Omni directional 6m/2m/440) on my tower
>with a side arm. I've been told to expect some degradation in the 'shadow'
>direction. Just how bad will this be in dB? Any affect on other directions?

Hi Bob,

You would have to work extremely hard to optimize that shadow. Any
less work will hardly be noticed. (Look at any of a number of towers
supporting UHF antennas that are generally omni-directional.)

Keep the antenna far enough away so as to not detune it, however.

73's
Richard Clark, KB7QHC

643. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 17:49:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <jcl1i.2919$zj3.1737@newssvr23.news.prodigy.net>
Source record: 41193

Richard Clark wrote:
> On Sun, 13 May 2007 11:02:24 -0500, Cecil Moore <nospam@w5dxp.com>
> wrote:
>
> Aside from 100% error (actually more) for Wes' coil,

I don't understand but will be glad to correct
any error.

>> I have taken Wes's helical coil from:
>> http://www.k6mhe.com/n7ws/Loaded%20antennas.htm
>> and modeled it with EZNEC. ...
>> That coil512.EZ file can be downloaded from:
>
> is distinctly false.

In what way?
--
73, Cecil http://www.w5dxp.com

644. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 18:09:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dqke43hjld1bdil9407cuump0mkunm0iin@4ax.com>
Source record: 41194

On Sun, 13 May 2007 12:49:03 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>In what way?

Abandon your Xerox ethic and actually read your reference. This
advice would work for other citations you copy off too.

645. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 18:17:29 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZCI1i.21410$JZ3.15241@newssvr13.news.prodigy.net>
Source record: 41195

Richard Clark wrote:
> Abandon your Xerox ethic and actually read your reference. This
> advice would work for other citations you copy off too.

Here's what it says:
"Case 3 uses a model similar to the other two cases, except the
three-segment load wire is replaced by a wire coil ("distributed load")
consisting of sixteen turns of 12 AWG wire, spaced 0.5 inch between
adjacent turns, for a total height (length) of eight inches. The coil is
centered on the length of the monopole and the monopole is brought to
resonance by using the resonating function of MultiNEC to adjust the
radius of the coil. Eight, single segment wires arranged in octagonal
form approximate each turn of the circular coil, for a total of 128
single-segment wires."

Exactly what did I miss?
--
73, Cecil http://www.w5dxp.com

646. Re: Tower Shadow Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 18:25:42 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <GKI1i.14655$3P3.4389@newsread3.news.pas.earthlink.net>
Source record: 41196

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:rradnfXy5q0p3drbnZ2dnUVZ_gmdnZ2d@insightbb.com...
> I'm putting up a Diamond V-2000 (Omni directional 6m/2m/440) on my tower
> with a side arm. I've been told to expect some degradation in the 'shadow'
> direction. Just how bad will this be in dB? Any affect on other
> directions?
>
> --
> Bob D. ND9B
>
You can go here to find a program that will plot the patern.

http://www.repeater-builder.com/antenna/ant-sys-index.html

Here is the name of it.

ANTPLOT - A Side-Tower Mounted Antenna Pattern Prediction Program

Depending on how far from the tower you mount the antenna you can get from a
few db to very deep nulls in many directions.

647. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 18:47:19 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27mfdtpm1@nnrp.linuxfan.it>
Source record: 41197

Cecil Moore wrote:
> > ...
> Standing wave current cannot be used to make valid
> measurements about current amplitude "drops" across
> or phase shifts through a loading coil. One must
> instead figure out a way to get a traveling wave
> flowing through the coil. Then the phase shift
> becomes perfectly obvious.
> ...

So, "something" roughly related to [speed-of-light -
velocity-factor-of-conductor = phase-shift] should be at play (since
photons are speed of light and the rf wave is limited by the VF) ???

Regards,
JS

648. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 19:14:48 UTC
From: herbert.don@gmail.com
Message-ID: <1179083688.477792.12710@q75g2000hsh.googlegroups.com>
Source record: 41198

mmana-gal elnec exnec ao
HF I can figure out but just what doess this mean in english? maybe
about optimize and may be about pattern but what do3es this have to do
with irritations?

On May 13, 8:22 am, John Smith I <assemblywiz...@gmail.com> wrote:
> Dave Oldridge wrote:
> > > ...
> > And yet, with all that it has, MMANA-GAL is not able to optimize at a
> > specific take-off angle. That would be SUCH a good feature to have for
> > HF modelling.
>
> That would be very difficult to disagree with, "aiming" your signal at
> the target (or aiming your "receiving pattern" at the target) is what is
> has always been about ...
>
> Regards,
> JS

649. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 19:17:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gvJ1i.6180$H_.4023@newssvr21.news.prodigy.net>
Source record: 41199

John Smith I wrote:
> So, "something" roughly related to [speed-of-light -
> velocity-factor-of-conductor = phase-shift] should be at play (since
> photons are speed of light and the rf wave is limited by the VF) ???

Coherent EM waves traveling in opposite directions can
certainly confuse the observer. In order to remain un-
confused, one EM wave traveling in one direction should
be the wave used for measurements. Otherwise intelligent
people have been completely fooled by the two waves traveling
in opposite directions. The resultant wave is an illusion
and therefore the observations based on standing waves are
likewise illusions.

How can a standing wave, whose amplitude is dependent
upon the the phases of the two traveling waves, be
used to determine anything about amplitude? How can
the phase, which is essentially fixed and constant
at zero degrees, be used to determine phase delay?

Standing waves have faked the gurus out of their
jockey straps.
--
73, Cecil http://www.w5dxp.com

650. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 19:32:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27p4itpm2@nnrp.linuxfan.it>
Source record: 41200

herbert.don@gmail.com wrote:
> mmana-gal elnec exnec ao
> HF I can figure out but just what doess this mean in english? maybe
> about optimize and may be about pattern but what do3es this have to do
> with irritations?
>
Only a bit more than the relevance of your question to me, on the
subject in question ...

JS

651. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:17:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <134esjar7ksb55f@corp.supernews.com>
Source record: 41201

herbert.don@gmail.com wrote:
> mmana-gal elnec exnec ao
> HF I can figure out but just what doess this mean in english? . .

A "mmana-gal" is a person of the female persuasion who uses MMANA or perhaps one who eats manna. An "exnec" is a person who used NEC in the past but no longer does. "Elnec" is spanish for "the NEC". And "ao" is shorthand for "all others", "anyone", "altruistic organizations", or "anti-oscillatory" depending on context. Make these substitutes when you read Art's postings and they'll make a lot more sense.

Roy Lewallen, W7EL

652. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:19:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27rsr$9pc$1@nnrp.linuxfan.it>
Source record: 41202

Cecil Moore wrote:
> > ...
> How can a standing wave, whose amplitude is dependent
> upon the the phases of the two traveling waves, be
> used to determine anything about amplitude? How can
> the phase, which is essentially fixed and constant
> at zero degrees, be used to determine phase delay?
>
> Standing waves have faked the gurus out of their
> jockey straps.

Cecil:

Just using logic, an "interference wave" (standing wave) would seem to be a poor choice, alright.

But then, my knowledge on this subject makes me dependent upon others, I am listening and attempting to get a grasp on things ... sorry if my ignorance can be taxing at times ... frankly, even to attempt to discern between forward-reflected-standing for the purposes you propose has never entered my mind!

Give me a bit, as with others here, this all is taking a bit of time to get ones' mind wrapped around. You have given this quite a bit of thought, I am just beginning down that path ... perhaps when I learn enough, I will agree or disagree.

However, you have already given me a bit to play with, such as attempting to "repel photons" from transversing windings. LOL!

Regards,
JS

653. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:25:55 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <nvK1i.34467$G23.20542@newsreading01.news.tds.net>
Source record: 41203

In my case I inserted a bead type common mode choke at the end of the matching stub and at the beginning of the 52 ohm coax run to the house. The grass soon grew up over the coax and the choke, and never once did my lawn mower chop into the coax or the choke.

-- John, N9JG

"Mike Coslo" <mcoslo@youknow.comcast.net> wrote in message news:Xns992ECFC797831mcoslocomcastnet@216.196.97.136...
> tehrasha@gmail.com wrote in news:1178935164.295223.69320
> @o5g2000hsb.googlegroups.com:
>
>> Can the 20m, 75ohm matching stub perform double duty as a common mode
>> choke?
>>
>> ie: will it hurt if i wind the stub around something like 4" PVC?
>
> Best thing to do is try it and let us know your results. I would
> guess that it might have some small effect on the match. In my own case,
> there really isn't a good place to put the coil near the antenna, so a
> choke is better right before entering the house.
>
> - Mike -

654. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:28:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27sc9$9pc$2@nnrp.linuxfan.it>
Source record: 41204

Roy Lewallen wrote:
> herbert.don@gmail.com wrote:
>> mmana-gal elnec exnec ao
>> HF I can figure out but just what doess this mean in english? . .
>
> A "mmana-gal" is a person of the female persuasion who uses
Close to right on all points, except "MMANA-GAL", she is a lean, mean,
designing machine built by hams for hams:

http://mmhamsoft.amateur-radio.ca/files/programs/MMANA-GAL-1.2.0.20.exe

Regards,
JS

655. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:32:28 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27ski$9pc$3@nnrp.linuxfan.it>
Source record: 41205

John Smith I wrote:
> > ...
> However, you have already given me a bit to play with, such as
> attempting to "repel photons" from transversing windings. LOL!
> > ...

Geesh, everyone must be slow today, sure I would get jumped about using transversing instead of the proper use of traversing ...

JS

656. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 20:34:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f27sop$9pc$4@nnrp.linuxfan.it>
Source record: 41206

John, N9JG wrote:
> In my case I inserted a bead type common mode choke at the end of the
> matching stub and at the beginning of the 52 ohm coax run to the house. The
> grass soon grew up over the coax and the choke, and never once did my lawn
> mower chop into the coax or the choke.
>
> -- John, N9JG
>
First time I ever heard of "Murphys' Law" failing! :-)

Regards,
JS

657. Re: Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 21:51:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <134f22sse08v4b3@corp.supernews.com>
Source record: 41207

Buck wrote:
>
> A friend of mine suggests I setup a field strength meter and tune for
> maximum fs. I don't usually use baluns so I would wonder how accurate
> that would be.
> . . .

That's a perfectly good way to adjust a tuner, providing the meter is far enough away from your transmitter that direct leakage radiation from the transmitter and line between it and the tuner aren't making a significant difference. As long as it is, it doesn't matter if you have a balun or not, or whether your feedline is radiating or not. Adjusting the tuner has no effect on how your system radiates, just how much. The field strength meter is sampling just one part of the overall pattern. But adjusting the tuner increases or decreases all parts of the pattern in proportion, so the field strength meter tells you what you want to know.

A field strength meter isn't, however, usually a good way of judging whether a change in the antenna (as opposed to a tuner adjustment) is good or bad. This is because changing the antenna does affect the pattern, and the field strength meter only tells you what's happening in one direction -- and likely in the near field, to boot.

Roy Lewallen, W7EL

658. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 21:52:06 UTC
From: vnzjunk <vnzjunk@gmail.com>
Message-ID: <1179093126.894386.131840@u30g2000hsc.googlegroups.com>
Source record: 41208

On Apr 29, 7:01 pm, "Dave (from the UK)" <see-my-
signat...@southminster-branch-line.org.uk> wrote:
> There is a scanned copy of a book you may find interesting:
>
> ----
> Antennas, John D. Kraus, Ph.D.., 1950, 553 pages
>
> This book is a college text and engineering reference on antennas. A
> pretty thorough theoretical treatment along with practical information
> on antenna design.
> -----
>
> See
>
> http://www.pmillett.com/Books/Kraus_antennas.pdf(7.9 MB)
>
> More books at
>
> http://www.pmillett.com/technical_books_online.htm
>
> Apparently the copyright has expired on these books, so they are not
> pirated. I actually own a copy of the Kraus book, but it is attractive
> to have a copy on my laptop.
>
> --
> Dave (from the UK)
>
> Please note my email address changes periodically to avoid spam.
> It is always of the form: month-y...@althorne.org
> Hitting reply will work for a few months only - later set it manually.
>
> http://chessdb.sourceforge.net/- a Free open-source Chess Database

Obviously many were able to obtain the file before it was pulled.
Wonder if anyone on the list would mind emailing me the file as I
missed getting it?

vnzjunk@gmail.com

Thanks in advance

659. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 22:01:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f281rt$k8o$1@nnrp.linuxfan.it>
Source record: 41209

vnzjunk wrote:
> Obviously many were able to obtain the file before it was pulled.
> Wonder if anyone on the list would mind emailing me the file as I
> missed getting it?
>
> vnzjunk@gmail.com
>
> Thanks in advance
>
The file is of little use as I ran finereader on it and because it was
put together in a "funky manner" as a .pdf, it is unable to be converted
into text and images ... I have a book, however, am reluctant to go
though all the trouble of scanning and converting it--just lazy :-(

If you don't get about a million emailings of it, let me know, I will
forward ...
assemblywizard@gmail.com

Regards,
JS

660. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 22:02:24 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <QVL1i.34468$G23.17481@newsreading01.news.tds.net>
Source record: 41210

I should mention that my lawnmower is setup for a fairly high cut.
-- John

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f27sop$9pc$4@nnrp.linuxfan.it...
> John, N9JG wrote:
>> In my case I inserted a bead type common mode choke at the end of the
>> matching stub and at the beginning of the 52 ohm coax run to the house.
>> The grass soon grew up over the coax and the choke, and never once did my
>> lawn mower chop into the coax or the choke.
>>
>> -- John, N9JG
>>
> First time I ever heard of "Murphys' Law" failing! :-)
>
> Regards,
> JS

661. Re: Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 22:41:49 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99305877EB043nonenowhere@61.9.191.5>
Source record: 41211

Buck <usenet01@lumpuckeroo.com> wrote in
news:vu1e43dq79egsc9p87o2cf3duecbd0jona@4ax.com:

> Currently, I am tuning my gutters up for HF. I checked it with an
> analyzer the other day and found it is an excellent 160 meter and 20
> meter antenna without the tuner (swr-wise). In the meantime I am
> building a vertical for 20 and up.

I don't know if there is a different meaning for the term gutters on your side of the big pond, but if you mean the parts of a building for collecting the rainwater from the roof...

Roy has talked to you briefly of the near field / induction fields. The closer you place your antenna to noise sources (eg appliances, including switched mode power supplies), the greater the response of your antenna to those sources.

You have probably heard of the square law of light that tells you that the power density of an EM wave decreases with the square of distance. That is true in the radiation far field, but in the near field, the induction fields decay more rapidly that that, and every bit of distance you can put between your antenna and noise sources is worthwhile.

Wrapping your noise sources with your antenna sounds a sure fire way to couple the very most interference... is that what you really want to do.

Owen

662. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 22:52:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tl4f43lvmg5t2lj7bkp0u9qrfim9cv1kdf@4ax.com>
Source record: 41212

On Sun, 13 May 2007 18:17:29 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

Tedious Xerography snipped as being obviously unread by Xerographer.

>Exactly what did I miss?

If you have to be taken by the hand to have it pointed out to you, you
shouldn't be doing these kind of things without adult supervision.

A
>>I have taken Wes's helical coil from:
>>http://www.k6mhe.com/n7ws/Loaded%20antennas.htm
B
>>and modeled it with EZNEC. ...
>>That coil512.EZ file can be downloaded from:

is distinctly false.

A <> B
Does a symbolic reply nail it down?

663. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 23:55:44 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179100544.862753.238780@q75g2000hsh.googlegroups.com>
Source record: 41213

On May 13, 2:07 am, Richard Clark <kb7...@comcast.net> wrote:

> The way you described it (presuming an efficient choking BalUn) with
> battery operation and you remote from it, suggests any issue of
> "unbalance" is strictly academic. You can force it to become a real
> problem if the case of the 259 is close to ground where the chassis
> adds a capacitance to ground, but that is a rapidly diminishing value
> as you raise it (couldn't be more than 1 or 2 pF at 6 feet up).

Richard, I tired measurements again with my twin lead directly
terminated to the 259b. I got better, more consistent results after
taking great care to insure the analyzer and line were well isolated
from ground, other conductors, and myself. I then took the same
measurements with the 4:1 balun between the twin lead and the
analyzer. Unfortunately the results create new concerns. For example
at 7.185 Mhz with the balun in the circuit (tuner in bypass mode) I
got 19 -j48. Again at 7.185 Mhz with the balun out (twin lead directly
terminated to 259b) I got 159 -j443. Doesn't look like 4:1 to me.
Similar spreads in the 80m and 20m bands.

> This is extremely unlikely (being a current BalUn) unless it is
> specifically specified as one (and even then, many professed 4:1
> current BalUns are in fact no such thing).

The MFJ manual for the 993b tuner says the balun is a 4:1 "current"
balun. Haven't looked inside to confirm this.

> You have the means to test the assertion, use your 259 to measure the
> isolation of the BalUn. This was the subject of a recent thread.
>

Thanks. I'll search for the thread. Sounds like fun.

> >Wish I had a 1:1. At 7.185 Mhz
> >through the 4:1 balun (tuner bypassed) I get 19 -j48. Assuming an
> >ideal balun I believe your previous post stated this would be 76 -j192
> >on the high side. At most even harmonic frequencies I've measured, it
> >appears the 4:1 balun in the tuner is actually resulting in too low a
> >resistive term impedance.
>
> Fixation on BalUns has clouded a simpler solution: wind a choke in
> the line and dump the ferrites of suspect quality.

Would you please elaborate on this? Wind a choke where? In the twin
lead? In the short transmitter to tuner coax line?
Thought I read somewhere that only coax can be used for simple 8 to 10
turn chokes. Balanced lines (i believe because of mutual conductor

inductances) can't be coiled as chokes.

> Many antennas work just fine until the operator discovers a new tool
> that proves it doesn't (in spite of a wall full of QSL cards).

Partly the reason I'm trying to learn all I can about the
configuration I've currently got. That and I like the technology
aspects of the hobby as much or more than I do operating.

> >Thanks for helping out a Stuggling Crippled Newbie Street Urchin.
>
> Wait until you face the sewer rats of Rio.

OK I'll bite. Who are the Rio rats?

Thanks for your help. Any thoughts on those measurement results
earlier in the post will sure be appreciated.

73's
Dykes Cupstid AD5VS

664. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-13 23:58:59 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <7DN1i.6566$296.382@newsread4.news.pas.earthlink.net>
Source record: 41214

Hi Richard:

[snip]
> Insecure, aren't "we?"
[snip]

Who me? Never!

[snip]
> Rolling up the rug before it is snapped?
[snip]

I learned that from The Master... where is Reg when you need him?

[snip]
> A nice elimination of a demarcation, but it says nothing of which side
> of the line you are standing. Are you on the steady state side
> (which, of course has never existed), or the transient state side
> (that is, the only one that has ever existed)? Be careful of your
> choice, as history (woops, there goes a transient) will mock you! ;-)
[snip]

OK, here's the deal...

Admittedly a thought experiment, if Cecil can do it then others are
entitled, no?

Let's say that I was sitting in The Restaurant at the End of the Universie
and in
the basement there, I hooked a solenoid and a resistor in series with a
battery at
exactly 1.0 sec after "The Big Bang".

Now the DC current has been flowing through that solenoid ever since. Then
in the
year of our lord 2007 I want to measure the radiation due to the centripital
acceleration
of the charges flowing round and round the turns in that solenoid.

Q1a: Is there any dectectable radiation?

If not, why then do we all seem to agree that charge acceleration causes
radiation?

Q2a: If so, what exactly is the frequency of that radiation?

Is this an example of a zero frequency [Or say a very nearly zero, e.g.
~1.0exp(-89) Hz] radio wave?

[snip]
>>Frequency, or spectrum, through the Supreme Force of the Universe's gift
>>to
>>us of "The Sinudoids" is intimately related to circular motion.
>
> Most intimate relations consist of back-and-forth.
[snip]

I agree that both circular and reciprocal motion are among the wonderful
experiences of intimate relations, but...

Reciprocal motion is not circular motion!

[snip]
>>Acceleration we know is the rate of change of velocity.
>
> Faster - faster - FASTER!
[snip]

Hmmm... You have a point Richard...

The human gestation period is ~ 280 days, if so long then I wonder why
speeding up towards the end of the act of insemination?

[snip]
>>In the steady state
>>at DC electric charges are moving at a constant velocity.
>
> You are confusing charge with carrier.
[snip]

I may be, but that is irelevant to the question, for as you well know... the
mere motion of charge, no matter how carried, is all that is germain in the
celebrated Maxwell/Heaviside equations of classical electrodynamics.

[snip]
>>Thus when moving
>>in a straight line at constant velocity there should be no "waves"
>>launched
>>or radiated, no?
>
> Well, are you afore it? or against it?
[snip]

I thought it was obvious, I'll explicitly go on record here...

With Maxwell and Heaviside, I believe that electromagnetic waves are
radiated into space by the acceleration of charge!

Period, end of story!

[snip]
>>My point here is the assertion of the real existence of DC waves either
>>guided or free!
>

> Edison would have beat Tesla to transferring power over the air if
> that were so. Problem is wavelength, you need infinitely long
> halfwave antennas - umm, WOW inspiration! That is exactly what
> Edison had. He DID beat Tesla with transferring DC power over the air
> when he supplied all his customers with antennas. AND they used
> guided wave principles.
[snip]

Phfffttt..

Extremely long dipoles are no problem for those of us who live in the
Restaurant
at the End of the Universe. My dipole extends from there back to epicenter
of
The Big Bang!

[snip]
>>Q0: Is there electromagnetic radiation (are photons emitted) from a
>>solenoidal (helix) carrying DC because of the centripital acceleration of
>>the charges?
>
> Of course.
>[snip]

Give that man a cigar! I'm glad you agree Richard.

[snip]
>>Q1: Do electromagnetic "waves" exist at DC, whether guided or free?
>
> That has been historically shown.
>
>>Q2: Can incident DC "waves", whether guided or free ever be "reflected"?
>
> Certainly.
>
>>Q3: Can a VSWR be measured (at zero frequency) on a transmission
>>line/waveguide that supports DC?
[snip]

Wow... you have figuratively wiped out the almost the whole left side of the
board on "Deal or No Deal".

I'm impressed!

[snip]
> Break the line and hold each half with your hands.
[snip]

Crude but it works if you are only interested in one significant finger of
accuracy!

[snip]
>>Q4: Is the VSWR at DC related, in any way at all to the VSWR at higher

>>frequencies?
>
> You just said it, frequency. Transient! For shame.
>
>>Pete, just plain crazy, none of this is reality!
>
> You don't believe your eyes? There's a career for you heading the CIA
> (or Justice Department, or Homeland Scrutiny, or... choose one) under
> the current administration.
[snip]

That is a three letter agency, do such agencies serve Politics or Physics?
Maybe a four letter agency career would be more appropriate, no?

[snip]
>>most RRAA'ers seem
>
> Sorry about that insecurity thingy.
[snip]

I suffer from many afflictions, and they grow more numerous as I gracefully
age,
but... with the invention of that wonderful blue pill by Pfizer, I now find
that
insecurity is no longer among those afflictions! [grin]

[snip]
>>Q4: If the Bird can't do it
>
> Should this be Q5 or at least Q4.1.v.1?
>[snip]

Oops... Now I've gone and done it...

Thanks for pointing that out, I now see that I've abused the traditional
protocols
observed by Internauts, USENET convention suggests only one rhetorical
question
per posting!

Mea culpa!

[snip]
> Anyway, simply because you cannot afford that range slug doesn't mean
> the Bird cannot do it.
[snip]

Bird now sells range slugs that cover the band [1.0E-98Hz - 1.0E-99 Hz]?

[snip]
>>Q5: If waves do not exist at DC, then at what magic frequency, lets call
>>this frequency f(mgc), do waves cease to exist?
>

> Insecurity now is corrupting your confidence in the topic and
> polluting it with transients. As you dismissed them above, we (using
> the insecure form of I) might think you are suffering from optileptic
> seizures.
[snip]

I believe that f(mgc) is exactly zero!

Reflections will be encountered and can be measured at DC!

The question is said Humpty Dumpty, "What is the physical interpertation
of "conjugate match" and "image match" [That's Zo-match for you Zo
affecianados!] at DC.

[snip]
>>Q6: Below what magic frequency, lets call it f(mgc), do radiation and or
>>reflection phenomena stop?
>
> A Chebyshev filter might do it.
[snip]

Now you are being silly, the frequency of ripples in the passband of a
Tchebychev
filter [measured in cycles per Hz!] is non-linear and irrelevant to the
present discussion.

[snip]
>>Q7: What is the difference between a "conjugate match" and a "Zo-match"
>>at
>>DC?
>
> No conjugal relations? No back-and-forth. You can't tell the
> difference?
[snip]

Oh... Now your leg is within the reach of the jaws of the trap, if Reg were
with us
he would trigger it at the next posting! But then Reg was really just a
teddybear!

[snip]
>>Food for thought, eh?
>
> Slim Fast with half the calories.
[snip]

Slim Fast is an expensive way to not get the good stuff!

Calories = Zero, Carbohydrates = Zero, Fats = Zero

Photons... priceless!

[snip]
>>I miss dear old Reg!

>>
>>Thoughts comments...
>
> I can't think of a thing to say.
[snip]

But not for long!

This is The Cottonmouth, Ya'll come back... [grin]

[snip]
> 73's
> Richard Clark, KB7QHC
[snip]

Thanks for the repartee Richard, you are a gem!

--
Pete k1po
Indialantic By-the-Sea, FL
Andrea is outta sight, no hurricanes yet on this beach...

665. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 00:01:32 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179100892.793896.55150@e65g2000hsc.googlegroups.com>
Source record: 41215

On May 13, 2:15 am, Owen Duffy <n...@no.where> wrote:

> Have a look at my article on feeding a G5RV, in particular Fig 10, the
> classic tuned feeder configuration. a 30m long dipole with low loss open
> wire line and an efficient balanced tuner is a frequency agile antenna
> with good efficiency and good pattern up to 12MHz. Above 12MHz, the
> pattern breaks into many lobes and nulls.
>

Where can I find this article Owen? Would probably help me out quite a
bit.

Thanks and 73's

Dykes Cupstid AD5VS

666. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 00:04:58 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179101098.380206.162200@y80g2000hsf.googlegroups.com>
Source record: 41216

On May 13, 5:31 am, Cecil Moore <nos...@w5dxp.com> wrote:

> Most tuner baluns are voltage baluns. What you need
> is a 1:1 current balun with a choking impedance of
> a few thousand ohms. That is generally the balun of
> choice when the impedances are unknown.
> --

The manual speciffically calls it a "current" balun Cecil. Doesn't
make it so. I need to look inside and determine how its wound. Most
4:1 current balun configurations I've seen use two toroids.

Thanks and 73s.

Dykes Cupstid AD5VS

667. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 00:16:00 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9930686FDD2CDnonenowhere@61.9.191.5>
Source record: 41217

dykesc <cupstidd@bellsouth.net> wrote in news:1179100892.793896.55150
@e65g2000hsc.googlegroups.com:

> On May 13, 2:15 am, Owen Duffy <n...@no.where> wrote:
>
>> Have a look at my article on feeding a G5RV, in particular Fig 10, the
>> classic tuned feeder configuration. a 30m long dipole with low loss open
>> wire line and an efficient balanced tuner is a frequency agile antenna
>> with good efficiency and good pattern up to 12MHz. Above 12MHz, the
>> pattern breaks into many lobes and nulls.
>>
>
> Where can I find this article Owen? Would probably help me out quite a
> bit.

Sorry,

http://www.vk1od.net/G5RV/index.htm

Owen

668. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 00:25:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <z%N1i.17727$YL5.10813@newssvr29.news.prodigy.net>
Source record: 41218

dykesc wrote:
> Where can I find this article Owen? Would probably help me out quite a
> bit.

http://www.vk1od.net/G5RV

http://www.w8ji.com/g5rv_facts.htm

http://www.cebik.com/wire/g5rv.html
--
73, Cecil http://www.w5dxp.com

669. Re: Tower Shadow Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 00:32:05 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <69nkh4-alg.ln1@p400bob.personal.cox.net>
Source record: 41219

Hi Bob

I modeled a commercial install some years ago on 148MHz (pagers) that ended up with maybe 3-4 nulls between 6 and 9dB on the shadow side. This was also born out by a site/coverage test.

As it turns out the antenna mounting designers hit this as a pure fluke or if you like plain old bad luck! Moving the antenna in or out maybe 10" yielded ripples less than 3dB. The reason we were even looking at the pattern was that the coverage had gaps in the prediction off the back of the mast. The modeling (nulls) actually matched the places where the signal was low.

You can of course place an antenna for best gain off the mast as a reflector of sorts. The URL below is an extended double 5/8 ZEPP with a center hairpin feed that I more or less optimized for that.

http://pages.suddenlink.net/vk2yqa/fig%202%204nec2%20omni%20freespace%20vert%20pattern.gif

F/B is about 6dB

Cheers Bob VK2YQA

Bob D. wrote:
> I'm putting up a Diamond V-2000 (Omni directional 6m/2m/440) on my tower
> with a side arm. I've been told to expect some degradation in the 'shadow'
> direction. Just how bad will this be in dB? Any affect on other directions?
>

670. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 01:13:29 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4647b7ad$0$21250$39cecf19@news.twtelecom.net>
Source record: 41220

Richard Clark wrote:

> On Sun, 13 May 2007 16:51:59 GMT, "Peter O. Brackett"
> <none@no-such-domain.nul> being supremely bored wrote:
>
>
>>Let's
>>among the denizens
>>Most hams
>>our legally assigned frequency bands.
>>A select few
>>our legally assigned frequency bands
>>takes us
>>takes us
>>we "lurkers"
>>we were to take
>>we are
>>Most of us
>>we need
>>Most of us
>>We all
>>we have
>>our "ptical
>>We all
>
>
> Insecure, aren't "we?"
>
>
>>I believe that the extant wave versus particle
>>"paradox" is irrelant to my following comments, assertions and questions.
>
>
> Rolling up the rug before it is snapped?
>
>
>>Also I believe that the dividing line between transient and steady state
>>phenomena may be considered to be insignificant and so considered to be
>>irrelevant as well.
>
>
> A nice elimination of a demarcation, but it says nothing of which side
> of the line you are standing. Are you on the steady state side
> (which, of course has never existed), or the transient state side

> (that is, the only one that has ever existed)? Be careful of your
> choice, as history (woops, there goes a transient) will mock you! ;-)
>
>
>>Frequency, or spectrum, through the Supreme Force of the Universe's gift to
>>us of "The Sinudoids" is intimately related to circular motion.
>
>
> Most intimate relations consist of back-and-forth.
>
>
>>Acceleration we know is the rate of change of velocity.
>
>
> Faster - faster - FASTER!
>
>
>>In the steady state
>>at DC electric charges are moving at a constant velocity.
>
>
> You are confusing charge with carrier.
>
>
>>Thus when moving
>>in a straight line at constant velocity there should be no "waves" launched
>>or radiated, no?
>
>
> Well, are you afore it? or against it?
>
>
>>My point here is the assertion of the real existence of DC waves either
>>guided or free!
>
>
> Edison would have beat Tesla to transferring power over the air if
> that were so. Problem is wavelength, you need infinitely long
> halfwave antennas - umm, WOW inspiration! That is exactly what
> Edison had. He DID beat Tesla with transferring DC power over the air
> when he supplied all his customers with antennas. AND they used
> guided wave principles.
>
>
>>Q0: Is there electromagnetic radiation (are photons emitted) from a
>>solenoidal (helix) carrying DC because of the centripital acceleration of
>>the charges?
>
>
> Of course.

>
>
>>Q1: Do electromagnetic "waves" exist at DC, whether guided or free?
>
>
> That has been historically shown.
>
>
>>Q2: Can incident DC "waves", whether guided or free ever be "reflected"?
>
>
> Certainly.
>
>
>>Q3: Can a VSWR be measured (at zero frequency) on a transmission
>>line/waveguide that supports DC?
>
>
> Break the line and hold each half with your hands.
>
>
>>Q4: Is the VSWR at DC related, in any way at all to the VSWR at higher
>>frequencies?
>
>
> You just said it, frequency. Transient! For shame.
>
>
>>Pete, just plain crazy, none of this is reality!
>
>
> You don't believe your eyes? There's a career for you heading the CIA
> (or Justice Department, or Homeland Scrutiny, or... choose one) under
> the current administration.
>
>
>>most RRAA'ers seem
>
>
> Sorry about that insecurity thingy.
>
>
>>Q4: If the Bird can't do it
>
>
> Should this be Q5 or at least Q4.1.v.1?
>
> Anyway, simply because you cannot afford that range slug doesn't mean
> the Bird cannot do it.
>

>
>>Q5: If waves do not exist at DC, then at what magic frequency, lets call
>>this frequency f(mgc), do waves cease to exist?
>
>
> Insecurity now is corrupting your confidence in the topic and
> polluting it with transients. As you dismissed them above, we (using
> the insecure form of I) might think you are suffering from optileptic
> seizures.
>
>
>>Q6: Below what magic frequency, lets call it f(mgc), do radiation and or
>>reflection phenomena stop?
>
>
> A Chebyshev filter might do it.
>
>
>>Q7: What is the difference between a "conjugate match" and a "Zo-match" at
>>DC?
>
>
> No conjugal relations? No back-and-forth. You can't tell the
> difference?
>
>
>>Food for thought, eh?
>
>
> Slim Fast with half the calories.
>
>
>>I miss dear old Reg!
>>
>>Thoughts comments...
>
>
> I can't think of a thing to say.
>
> 73's
> Richard Clark, KB7QHC

Now that's more like it.

Although I'm not sure how you make a Chebyshev with a cutoff right at DC.

tom
K0TAR

671. Roll your own?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 03:07:53 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <JZGdnZy2eKoaT9rbnZ2dnUVZ_j2dnZ2d@comcast.com>
Source record: 41221

Is it possible to make you own multi-band antenna, similar to an Alpha Delta DX-CC or DX-EE?

I'd like to make one similar, but using smaller gauge wire, for maybe a 100 Watts max.

Does anyone know of any plans out there?

Thanks.

672. Re: Roll your own?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 03:16:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_vQ1i.5895$RX.2142@newssvr11.news.prodigy.net>
Source record: 41222

NotMe wrote:
> Is it possible to make you own multi-band antenna, ...
> Does anyone know of any plans out there?

You might be interested in my design at:
http://www.w5dxp.com/notuner.htm
--
73, Cecil http://www.w5dxp.com

673. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 04:06:04 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <teR1i.1281$Ta.668@bignews5.bellsouth.net>
Source record: 41223

"Peter O. Brackett" <none@no-such-domain.nul> wrote in message
news:PmH1i.6489$296.5006@newsread4.news.pas.earthlink.net...
> OK RRAA Group Let's get Real:
>
> DC to daylight! Which end of the spectrum is most interesting?

I have a device which uses dc (batteries)
circulates the current through coils (in the flashlight bulb)
and radiate electromagnetic radiation (Light.).
But working skip is kinda ruff. [hehe]

674. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 05:33:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2jqf431j2dm3ep780vleu349ibjdekqjk6@4ax.com>
Source record: 41224

On Sun, 13 May 2007 23:58:59 GMT, "Peter O. Brackett"
<none@no-such-domain.nul> wrote:

>Q1a: Is there any dectectable radiation?

With your misspell, I almost read that as delectable.

Would certifiably ordinary normal RF spectrum be detectable? It
doesn't even have to meet any spectrum limitations (being at either
end of the extremes) to make that equivocal, why would DC radiation be
any different?

However, there are considerations that are specific to the wavelength
that in a normal or even extra-normal situation would still offer a
simple NO.

It would not be detectable for all the same reasons as the pedestrian
examples: Q, Energy, and S+N/N. DC suffers tremendously for every
criteria.

Energy would be well below the FemtoKelvin range.
S+N/N would be swamped from any of a number of noise sources.
Enough Q would be impossible to obtain to distinguish DC from
GigaMeter wavelength AC sources.

>If not, why then do we all seem to agree that charge acceleration causes
>radiation?

It's an hackneyed clichï¿½ meant to sooth Mensa candidates and their
sponsors.

>Q2a: If so, what exactly is the frequency of that radiation?

0

>Is this an example of a zero frequency [Or say a very nearly zero, e.g.
>~1.0exp(-89) Hz] radio wave?

You are being insecure again.

>[snip]
>>>In the steady state
>>>at DC electric charges are moving at a constant velocity.
>>
>> You are confusing charge with carrier.
>[snip]
>
>I may be, but that is irelevant to the question, for as you well know... the

>mere motion of charge, no matter how carried, is all that is germain in the
>celebrated Maxwell/Heaviside equations of classical electrodynamics.

Quite the contrary. A carrier always moves charge, but a charge does
not always move a carrier. This is the difference between inductance
and capacitance (which most folks, materialists, think resides
specifically in the coil or the plate).

DC does NOT always involve moving charge or carriers. You defined it
yourself, is your insecurity doubting the initial condition?

One of the most frequent errors in this group is shifting frames of
reference and then trying to convince everyone it isn't a shell game
they are trying to pull.

>[snip]
>>>Thus when moving
>>>in a straight line at constant velocity there should be no "waves"
>>>launched
>>>or radiated, no?
>>
>> Well, are you afore it? or against it?
>[snip]
>
>I thought it was obvious, I'll explicitly go on record here...
>
>With Maxwell and Heaviside, I believe that electromagnetic waves are
>radiated into space by the acceleration of charge!

Well, there's a brave and bold step forward.

>Period, end of story!

Dubious emphasis. Weren't you already convincing with the first
exclamation?
>
>
>[snip]
>>>My point here is the assertion of the real existence of DC waves either
>>>guided or free!
>>
>> Edison would have beat Tesla to transferring power over the air if
>> that were so. Problem is wavelength, you need infinitely long
>> halfwave antennas - umm, WOW inspiration! That is exactly what
>> Edison had. He DID beat Tesla with transferring DC power over the air
>> when he supplied all his customers with antennas. AND they used
>> guided wave principles.
>[snip]
>
>Phfffttt..
>
>Extremely long dipoles are no problem for those of us who live in the

>Restaurant
>at the End of the Universe. My dipole extends from there back to epicenter
>of
>The Big Bang!

Edison was lucky that his subscriber's dipoles all interfered
(physically) with overlapping elements (early linear loading).

Tesla's RF work at transmitting power in Colorado Springs proved he
was oxygen deprived at that elevation.

>Bird now sells range slugs that cover the band [1.0E-98Hz - 1.0E-99 Hz]?

I didn't say they offered it, I said that you couldn't afford it.

>The question is said Humpty Dumpty, "What is the physical interpertation
>of "conjugate match" and "image match" [That's Zo-match for you Zo
>affecianados!] at DC.

How do you obtain an infinite reactance to fulfill conjugation?

>[snip]
>>>Q6: Below what magic frequency, lets call it f(mgc), do radiation and or
>>>reflection phenomena stop?
>>
>> A Chebyshev filter might do it.
>[snip]
>
>Now you are being silly, the frequency of ripples in the passband of a
>Tchebychev
>filter [measured in cycles per Hz!] is non-linear and irrelevant to the
>present discussion.

The ripples are only in pass-band. Skirt will eventually take care of
DC (after-all there is only one frequency to stop).

73's
Richard Clark, KB7QHC

675. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 05:36:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <i7tf43tvpfgsjkbl12jls058k5rpumu32e@4ax.com>
Source record: 41225

On Mon, 14 May 2007 00:06:04 -0400, "Hal Rosser"
<hmrosser@bellsouth.net> wrote:

>
>"Peter O. Brackett" <none@no-such-domain.nul> wrote in message
>news:PmH1i.6489$296.5006@newsread4.news.pas.earthlink.net...
>> OK RRAA Group Let's get Real:
>>
>> DC to daylight! Which end of the spectrum is most interesting?
>
>I have a device which uses dc (batteries)
>circulates the current through coils (in the flashlight bulb)
>and radiate electromagnetic radiation (Light.).
>But working skip is kinda ruff. [hehe]

Hi Hal,

Move near a lake (especially on a calm night). That should help
propagation.

73's
Richard Clark, KB7QHC

676. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 06:07:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <metf43tgho79si03gng0uk4jn29d64e6s5@4ax.com>
Source record: 41226

On 13 May 2007 16:55:44 -0700, dykesc <cupstidd@bellsouth.net> wrote:

>Richard, I tired measurements again with my twin lead directly
>terminated to the 259b. I got better, more consistent results after
>taking great care to insure the analyzer and line were well isolated
>from ground, other conductors, and myself.

Hi Dykes,

It should be comforting that observing standard precautions produces
repeatable results.

>I then took the same
>measurements with the 4:1 balun between the twin lead and the
>analyzer. Unfortunately the results create new concerns. For example
>at 7.185 Mhz with the balun in the circuit (tuner in bypass mode) I
>got 19 -j48. Again at 7.185 Mhz with the balun out (twin lead directly
>terminated to 259b) I got 159 -j443. Doesn't look like 4:1 to me.
>Similar spreads in the 80m and 20m bands.

This sounds like you've inserted the entire tuner to obtain the 4:1
BalUn (once you threw the right switches).

If, as you say, education is a principle goal, then build a proper 4:1
current BalUn. It is actually quite simple and requires only two
transmission lines and a several dozen beads. Basically it is two 1:1
current BalUns fed in parallel and loaded in series.

You will be simultaneously checking your system, and testing the
authenticity of the MFJ claim:
>The MFJ manual for the 993b tuner says the balun is a 4:1 "current"
>balun. Haven't looked inside to confirm this.
>
>> You have the means to test the assertion, use your 259 to measure the
>> isolation of the BalUn. This was the subject of a recent thread.
>>
> Thanks. I'll search for the thread. Sounds like fun.

If after a fruitless search (it's easy enough to get slogged down in
the snow drift of useless posts here) you don't find it, ask for help
here. Mentioning you tried the archives will save others from whining
about how much effort they went to answer a stupid question. (I won't
whine, and I never call any question stupid - although I frequently
dope slap some of the denser questioners.)

>> Fixation on BalUns has clouded a simpler solution: wind a choke in
>> the line and dump the ferrites of suspect quality.

>
>Would you please elaborate on this? Wind a choke where? In the twin
>lead?

Sure, twist it candy cane (or barber shop pole) style and wind it
around a liter bottle with at least its width as separation between
windings.

>In the short transmitter to tuner coax line?

Actually for severely unbalanced dipoles (and yours qualifies for
Queen of the May), you may need a choke at the feed point to the
antenna, and then again a quarter wave away from there.

>Thought I read somewhere that only coax can be used for simple 8 to 10
>turn chokes. Balanced lines (i believe because of mutual conductor
>inductances) can't be coiled as chokes.

Even if I'm wrong, it is both cheap and instructive. So few here
actually step up to the bench that I don't take their flabby word that
I'm wrong. You may be the first with authentic achievement to break a
record! You've already lapped the field of these arm-chair analysts.

>> Many antennas work just fine until the operator discovers a new tool
>> that proves it doesn't (in spite of a wall full of QSL cards).
>
>Partly the reason I'm trying to learn all I can about the
>configuration I've currently got. That and I like the technology
>aspects of the hobby as much or more than I do operating.

Where this hobby whose technological demand largely consists of
pushing a credit card across a sales counter, antennas still have the
capacity to stretch the imagination.

>> >Thanks for helping out a Stuggling Crippled Newbie Street Urchin.
>>
>> Wait until you face the sewer rats of Rio.
>
>OK I'll bite. Who are the Rio rats?

This is an allusion to an SK who compared those who couldn't exercise
their minds as being fodder for the orphans of Rio, who had more will
to succeed than they did. He characterized them as sewer rats gnawing
on our lazy carcasses.

>Thanks for your help. Any thoughts on those measurement results
>earlier in the post will sure be appreciated.

They will reveal more in comparison to those measurements that follow.

73's
Richard Clark, KB7QHC

677. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 07:43:06 UTC
From: nm5k@wt.net
Message-ID: <1179128586.253415.93150@p77g2000hsh.googlegroups.com>
Source record: 41227

On May 12, 7:10 am, "Yuri Blanarovich" <K...@optonline.net> wrote:

>
> When Barry, W9UCW did his experiments and measurements, he was surprised
> that quality of the loading coil made hardly any difference. Like good
> Bugcatcher coil vs. bad Hustler type resonator.

Dunno, I don't see too much difference between any of my homebrew
coils, but when I compared any of those to a hustler, there was a
large
noticable difference. The hustler was terrible.. Like a dummy load on
a
stick. But in comparing any of my usual coils, I don't see a large
difference
in any of them, including those with heavy gauge wire, vs those with
thinner gauge wire.
I've found thinner gauge wire is just fine as long as the wires are
not wound
too close together.
If one tried a hustler coil, and a good bugcatcher coil, and saw
little or
no difference, I would think ground loss was severely overshadowing
coil
loss.
The less ground loss, the more apparant will coil loss become.
Of course, the large hustler coils have a fairly well known design
defect,
and I consider them defective units vs a usual mobile loading coil.
Even my cheap homebrew coils are far superior, and I do nothing
special..
I once did a side by side test of my mobile vs a friends using a
hustler
mast and resonator on 75m. No contest.. He was in the noise to many
stations, where I was solid copy to most all.. About a 2 S unit ?
difference
on average.
>
> Do we have the case where some power is being lost for the benefit of
> stretching the high current portion along the radiator and making up for
> losses?

Sorta.. To an extent anyway...
The peak point being probably around 75% or so of the total height..
Get too carried away, and excess coil loss will start to offset gains
in efficiency from the improved current distribution.

In testing all my coils, antennas, etc, I've found Reg's program
"vertload"
to be fairly accurate. Both in general performance estimates, but also
in the estimates on coil loss vs size of wire, etc.. His program said
thinner
wire should be ok with only slight losses vs thicker wire, with a
proper pitch
and wire spacing, and in real life it seemed to pan out pretty close.
A center load coil, with more turns than a base load, will have more
loss.
But the overall antenna efficiency is greatly improved, so I know
which
line I'll be standing in when I pick which one I want to use. :/
If you use a large enough top hat, you can have a base loading coil,
and
still have good current distribution. But I don't use hats on
mobiles..
#1, pretty freaking ugly.. #2, I'll kill them on tree branches fairly
quick..
#3, too much wind load at highway speeds.. Tend to flop and whip about
with my flexible fibreglass "masts"..
I use a center loading coil and a fairly long whip as a decent
compromise.
In the driving mode, I have 5 ft under the coil, and 5 ft above it..
In the parked mode, I have 8 ft under the coil, and 5 ft over it by
adding an
extra 3 ft hustler mast at the base.
If thats on one of my trucks, my coil is higher than many peoples
total
antenna height.. :) At this date, I'm still too chicken to drill a
hole in my
latest car, which is a 2005 corolla... The bad part is thats the one
I
drive most of the time lately...
My honda accord is radioactive, as are both of my trucks, but the
trucks
burn too much gas, and the accord needs some work.. It doesn't get as
good a mpg as the corolla either, although both weigh about the same.
I'm lucky to get 30 on the road in the accord, where the corolla gets
about 37-40 depending on speed..
But I miss not having a radio on the road at night... I've already
been to
my lake property up in OK. four times in that car since I got it..
"905 mile round trip" I've put about 8k on that car already, and have
had
it maybe 3 months or so...
The last was a couple of weeks ago. I did install a 80 and 40 single
coax fed
dipole rig up there last time, so at least the property is radioactive
even if my

car isn't.. That helps...
I strung it up in an old oak tree, and left the coax rolled up by the
tree.
When I pull up, the coax is long enough to reach about anywhere I'd
have
the radio, including in the car. I'll probably add 160m legs later..
MK

678. Re: Scanned Antennas book by Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 07:48:47 UTC
From: Jeff <jeff@local.host>
Message-ID: <46481490$0$18532$834e42db@reader.greatnowhere.com>
Source record: 41228

> The file is of little use as I ran finereader on it and because it was put
> together in a "funky manner" as a .pdf, it is unable to be converted into
> text and images ... I have a book, however, am reluctant to go though all
> the trouble of scanning and converting it--just lazy :-(
>
> If you don't get about a million emailings of it, let me know, I will
> forward ...

The full version of Adobe worked fine doing a page capture, although the
file size grew somewhat!

Jeff

679. FS 75/40 Meter Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 14:13:06 UTC
From: Sonny Hood <wrhood@cox.net>
Message-ID: <lhrg43lcs1cg0ukaqcja6uhnrpen0u583n@4ax.com>
Source record: 41229

Coil loaded dipole FS @ Dayton for $50. Space 3246. New. 83 Ft long.
SO-239 connection. Up to 300 Watts. All you need is coax and a tuner

680. Re: Tuning an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 17:40:19 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <9bjf4319f3f0e05efjnpm634da9avins4v@4ax.com>
Source record: 41230

On Sun, 13 May 2007 22:41:49 GMT, Owen Duffy <none@no.where> wrote:

>Buck <usenet01@lumpuckeroo.com> wrote in
>news:vu1e43dq79egsc9p87o2cf3duecbd0jona@4ax.com:
>
>> Currently, I am tuning my gutters up for HF. I checked it with an
>> analyzer the other day and found it is an excellent 160 meter and 20
>> meter antenna without the tuner (swr-wise). In the meantime I am
>> building a vertical for 20 and up.
>
>I don't know if there is a different meaning for the term gutters on your
>side of the big pond, but if you mean the parts of a building for
>collecting the rainwater from the roof...
>

Yes, gutters are the rain collectors/diverters. I live in a duplex
apartment with gutters that go from just outside my back door, up the
wall two stories, across the roof edge for two apartments and down to
just above the ground on the far wall of the apartment.

>Roy has talked to you briefly of the near field / induction fields. The
>closer you place your antenna to noise sources (eg appliances, including
>switched mode power supplies), the greater the response of your antenna
>to those sources.
>
>You have probably heard of the square law of light that tells you that
>the power density of an EM wave decreases with the square of distance.
>That is true in the radiation far field, but in the near field, the
>induction fields decay more rapidly that that, and every bit of distance
>you can put between your antenna and noise sources is worthwhile.
>
>Wrapping your noise sources with your antenna sounds a sure fire way to
>couple the very most interference... is that what you really want to do.
>
No, but until I build the vertical, it is all I have to work with.
This is a 'cliff-dweller' situation.

>Owen

Thanks for the responses. I appreciate them.

Buck
N4PGW

--
73 for now

Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

681. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 19:40:28 UTC
From: richardharrison@webtv.net
Message-ID: <23357-4648BB2C-142@storefull-3255.bay.webtv.net>
Source record: 41231

I wrote:
"Current does not jump off the rails in a coil, it follows the coil wire as it follows a straight wire elsewhere."

Wikipedia says, electrical conduction is the movement of charged particles through an electrical conductor. The movement forms an electrical current in response to an electric field.

Inductance is passive and though it opposes a change in current, nowhere is the inducement to conduct any stronger than it is where the source connects with the coil. The charges at the ends of a coil are going to press on their neighbors to move on and keep the conduction going.

Inductance results from the magnetic field that forms around a current carrying conductor. Electrical current through the conductor creates a magnetic flux proportional to the current.

When there is an AC sinusoidal source, the phase of the current through a pure inductance lags the voltage by 90 degrees.

Best regards, Richard Harrison, KB5WZI

682. Re: Beginner antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 20:44:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f2ahnd$q70$1@f04n12.cac.psu.edu>
Source record: 41232

Cecil Moore wrote:
> Roy Lewallen wrote:
>> So in what way does the full wave dipole "perform better" than a half
>> wave dipole?
>
> My 20m rotatable dipole gives ~2dB gain on 10m according
> to EZNEC.

All you need to do is rotate it! That does work for your instance. But it is a long way between your 20 meter rotatable on 10 meters and 10 meters on a 160 meter dipole. But the statement from someone that more metal in the air rules - or something to that effect - isn't correct.

My nice antenna pattern on 80 meters is starting to look a little funny on 40, and it gets downright weirdly lobey looking on 10 meters. Some places it works great, and some it doesn't. No free lunch. If you add at one place, you subtract from another.

- 73 de Mike KB3EIA -

683. Re: Long inverted V not working well, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 23:35:31 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <f2arn0$879$1@news.netins.net>
Source record: 41233

When an inverted V gets long with respect to wavelenth, the main lobe elevates pretty dramatically, so you no longer get a decent take off angle...lots of radiation at high angles, but very poor at the lower angles.

I found this precise problem when trying to run inverted vee's as extended double zepps...they don't work very well compared to the same antenna as a flat top.

All I had to do was model the V using EZNEC, and sure enough a 3D display of the pattern showed the problem. The nice gain lobes I was looking for were missing in the 2D display at the elevation angles I had expected. Going 3D showed me where they went...way high, not very useful for what I wanted.

The moral of the story: if you want long (w/r to wavelength) dipoles to be effective at low angles, only use flat top configuration. Inverted V's don't do well as they get long with respect to wavelength.
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message news:pan.2007.05.12.12.02.50.485810@from.qrz.com...
>
> I just put up an inverted V that is up about 70 feet in the center and
> about 15 feet at the ends. Each leg is about 130 feet long, or about 260
> feet overall, which is right around a half wave for 160 meters. It is fed
> with ladder line and an LDG auto-tuner.
>
> I also have a dipole antenna that's up about 17 feet and is a half wave
> for certain MARS / CAP frequencies above the 75 meter band, hence it's a
> bit short for 75 meters. That antenna is coax fed and goes through a
> different LDG auto-tuner which allows me to use it on 75/80 meters with a
> good match.
>
> The long and high inverted V doesn't work any better than the short and
> low dipole, and in some cases doesn't work as well.
>
> I have checked all the connections on the inverted V and even did a
> continuity check from each side of the ladder line, up through the feed
> point, out each leg to the end of each leg, and all seems OK.
>
> I have tried switching auto-tuners (taking the one that's on the coax-fed
> dipole and putting it on the inverted V) with no discernible difference.
>
> Seems very strange. Any ideas that might account for why the V doesn't
> work better?
>

684. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-14 23:42:19 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2b00u$6hd$1@news.service.uci.edu>
Source record: 41234

FYI -

Reg Edwards' program produces a VF of .0333 and a delay of 26 degrees
for the 75m Bugcatcher coil.

ac6xg

Cecil Moore wrote:

> The following web page is representative of the side that
> asserts there is virtually zero delay through a 75m loading
> coil. But the backers of that argument have grown strangely
> silent as of late.
>
> http://www.w8ji.com/inductor_current_time_delay.htm

685. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 02:43:14 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179196993.990495.138080@p77g2000hsh.googlegroups.com>
Source record: 41235

On May 14, 1:07 am, Richard Clark <kb7...@comcast.net> wrote:
> On 13 May 2007 16:55:44 -0700, dykesc <cupst...@bellsouth.net> wrote:

> >> Fixation on BalUns has clouded a simpler solution: wind a choke in
> >> the line and dump the ferrites of suspect quality.
>
> >Would you please elaborate on this? Wind a choke where? In the twin
> >lead?
>
> Sure, twist it candy cane (or barber shop pole) style and wind it
> around a liter bottle with at least its width as separation between
> windings.
>

Richard,

I wound the liter bottle choke as you suggested and do believe I'm
getting better results as follows:

1:1 Liter Bottle Choke 4:1 MFJ Balun (tuner
bypassed)

3.94Mhz 57 -j169 14 -j39

7.185Mhz 62 -j212 19 -j48

14.29Mhz 70 -j313 12 -j63

Appears to be a much better correlation to the expected 4:1. Meaning I
can "start" trusting my line input values, though I do believe I can
do better with a properly constructed 1:1 toroidal balun for my input
isolation. Got to order some toroids before I can do this however.

Looks like I'd be better off if I could just lower (zero out) the
capacitive reactance on the twin lead input leaving the resistive
terms alone. Sure wish there was a 1:1 current balun in the tuner. Its
tempting but I don't think I can bring myself to modifying the tuner.
My soldering / desoldering skills aren't the greatest. Its a nice
tuner and I'd hate to muck it up.

I found the thread on testing balun isolation. Still digesting it
though.

Thanks again and 73s
Dykes Cupstid AD5VS

686. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 02:44:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <D892i.20681$YL5.1847@newssvr29.news.prodigy.net>
Source record: 41236

Jim Kelley wrote:
> Reg Edwards' program produces a VF of .0333 and a delay of 26 degrees
> for the 75m Bugcatcher coil.

Thanks Jim,

Dr. Corum's formula indicates a VF of ~0.02

EZNEC indicates a VF of ~0.016

The "threaded bolt" method indicates a VF of ~0.006

w8ji indicates a VF of ~0.42 for his 100 turn,
10 inch long, 2 inch diameter coil.

In order to get a valid measurement of the delay
through a coil, the coil needs to be loaded with
its characteristic impedance to minimize the
reflected current. With mostly traveling wave
current flowing through the coil, the delay is easy
to measure.
--
73, Cecil http://www.w5dxp.com

687. Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 04:10:12 UTC
From: Fred <whru@msn.com>
Message-ID: <1179202212.299571.112660@h2g2000hsg.googlegroups.com>
Source record: 41237

I am trying to match my TS-50 with an AT-50 to a random length wire of
about 50 to 60 ft. At this point 160 through 20 meters tune up fine
however, on 15 and 10 meters the tuner gives me a failure indication.
My question, is there a optimum wire length? even on a random lenght
antenna.
Thanks for any advice.
Fred
wb6iiq

688. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 04:33:27 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1179203607.585560.18620@q75g2000hsh.googlegroups.com>
Source record: 41238

On May 14, 7:44 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> In order to get a valid measurement of the delay
> through a coil, the coil needs to be loaded with
> its characteristic impedance to minimize the
> reflected current.

What if a 3' long stainless steel whip is loading the coil?

ac6xg

689. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 04:35:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <xMa2i.308978$JN6.28151@newsfe17.phx>
Source record: 41239

"no spam" <no@spam.net> wrote in message
news:gmG0i.34389$G23.19781@newsreading01.news.tds.net...
> >> I'm looking for plans for a simple AM antenna to connect to my stereo
to
> >> replace the little loop antenna that came with it. In the past I have
> >> used
> >> long wires but they are not very directional.
> >>
> >> I have found some fairly good plans online for what looks like wire
wound
> >> around a box but all of them seem to have potentiometer in the mix
> >> somewhere. It would be very little problem to build an aimable 18 to
> >> even
> >> 48 inch frame.
> >>
> >> I only have two AM stations I'd like to come in clearer (690 KHz and
1440
> >> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and
> >> one
> >> for 1440 then just connect one or the other the radio? How long would
be
> >> wires need to be and how would I feed it into the connections on the
> >> radio
> >> (coax)?
> >
> >
> > Like Richard says, it's easier to find an old cap, and build the loop
> > around the cap. The old analog dial stereo receivers have some of
> > the best variables for this purpose. Most are multi gang caps, which
> > often can approach 1000 pf or more if you tie all the gangs together.
> > This can be handy for wide freq use as you can use switches and
> > switch gangs in or out of the circuit to change freq coverage.
> > Most stereo caps also had a few small gangs with low pf values,
>
> <good stuff cut)
>
> Almost anything is easy if you know how to do it. I was looking for
> something really simple w/o any electronic parts in it. I posted several
> URLs with plans for building a loop like the one you are talking about. I
> naively thought I might just be able to take piece of wire that was a
> fraction of the wavelength of the freq and wrap it around a frame and aim
it
> in the correct direction. But I didn't want to do all the work only to
find

> out it wouldn't work.
>
>

690. Re: How to make an antenna for receiving (only) broadcast AM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 04:50:38 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <z_a2i.276885$p17.6586@newsfe11.phx>
Source record: 41240

```
"no spam" <no@spam.net> wrote in message
news:gmG0i.34389$G23.19781@newsreading01.news.tds.net...
> >> I'm looking for plans for a simple AM antenna to connect to my stereo
to
> >> replace the little loop antenna that came with it. In the past I have
> >> used
> >> long wires but they are not very directional.
> >>
> >> I have found some fairly good plans online for what looks like wire
wound
> >> around a box but all of them seem to have potentiometer in the mix
> >> somewhere. It would be very little problem to build an aimable 18 to
> >> even
> >> 48 inch frame.
> >>
> >> I only have two AM stations I'd like to come in clearer (690 KHz and
1440
> >> KHz). Would it be possible to make a 'box' with one 'tap' for 690 and
> >> one
> >> for 1440 then just connect one or the other the radio? How long would
be
> >> wires need to be and how would I feed it into the connections on the
> >> radio
> >> (coax)?
> >
> >
> > Like Richard says, it's easier to find an old cap, and build the loop
> > around the cap. The old analog dial stereo receivers have some of
> > the best variables for this purpose. Most are multi gang caps, which
> > often can approach 1000 pf or more if you tie all the gangs together.
> > This can be handy for wide freq use as you can use switches and
> > switch gangs in or out of the circuit to change freq coverage.
> > Most stereo caps also had a few small gangs with low pf values,
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> Almost anything is easy if you know how to do it. I was looking for
> something really simple w/o any electronic parts in it. I posted several
> URLs with plans for building a loop like the one you are talking about. I
> naively thought I might just be able to take piece of wire that was a
> fraction of the wavelength of the freq and wrap it around a frame and aim
it
> in the correct direction. But I didn't want to do all the work only to
find
```

> out it wouldn't work.

OK: Start small. Identify a decent ground reasonably near the radio. Stretch as much wire as you can on a line away from the radio. Tie off (secure) the distant end as high and clear as possible.

At the radio wrap, the free end of the wire around the radio several times near where the internal antenna is located. (The exact location can be easily found by any of several clever methods, not counting taking the back off.) Strip the insulation off the free end and attach it to the ground. I expect you will be gratified by the increase in signal strength. Caution, if you run this antenna near operating electrical/electronic equipment, you may pick up interference that will negate the increase in the desired signal. You will have to play with this. You may have to endure three or four unimpressive performances before you have that one kick-ass success that makes you let out a whoop. Life's like that.

691. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 06:21:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p5ki43dajsskehlp8qech9c360qqi1r7q2@4ax.com>
Source record: 41241

On 14 May 2007 19:43:14 -0700, dykesc <cupstidd@bellsouth.net> wrote:

> 1:1 Liter Bottle Choke 4:1 MFJ Balun (tuner
>bypassed)
>
>3.94Mhz 57 -j169 14 -j39
>
>7.185Mhz 62 -j212 19 -j48
>
>14.29Mhz 70 -j313 12 -j63
>

Hi Dykes,

This is what I meant about measurements made in isolation not being as informative without other information.

Oddly enough, it looks like the 4:1 is mounted backwards.

However, I reserve making a final judgement pending review of my OCF models (your results are just too luckily hitting the ham bands).

73's
Richard Clark, KB7QHC

692. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 10:07:13 UTC
From: Andr&#65533; <nospam@free.fr>
Message-ID: <46498651$0$25818$426a34cc@news.free.fr>
Source record: 41242

"Fred" <whru@msn.com> a &#65533;crit dans le message de news:
1179202212.299571.112660@h2g2000hsg.googlegroups.com...
> I am trying to match my TS-50 with an AT-50 to a random length wire of
> about 50 to 60 ft. At this point 160 through 20 meters tune up fine
> however, on 15 and 10 meters the tuner gives me a failure indication.
> My question, is there a optimum wire length? even on a random lenght
> antenna.
> Thanks for any advice.
> Fred

Tuners have difficulties when the length of the wire is close to 0.5lambda,
lambda, 1.5lambda etc.
73

Andr&#65533;

http://f5ad.free.fr/
> wb6iiq
>

693. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 12:24:49 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-1505070824490001@jbw-mac.itd.nrl.navy.mil>
Source record: 41243

In article <PmH1i.6489$296.5006@newsread4.news.pas.earthlink.net>, "Peter O. Brackett" <none@no-such-domain.nul> wrote:

> Most of us RRAA'ers seem to accept the physical reality inherent in the
> assertions of James Clerk Maxwell's (Actually Oliver Heavisides!) elegant
> and widely celebrated simple set of four partial differential equations and
> their auxilliary relations.

Hello, and "assertions" as you put have been verified time and again through experiment. It was Maxwell, not Heaviside, that quantified the relationship of electric and magnetic fields in his 1873 treatise on electricity and magnetism. In doing so, Maxwell tied together the experimental results of Coulomb, Volta, Oersted, Ampere, Faraday, Henry and Gauss. The four Maxwell equations, the Lorentz force law and 3 subsidiary relations (characterizing the medium) constitute the basic laws of electromagnetic theory.

Many of your questions and statements are not supported by EM theory and by extension, would not be verifiable via experiment. As I implied in an earlier thread, you don't have to understand vector calculus and Maxwell's equations to enjoy ham radio. However, just because one can use the ARRL handbooks to get up on the air does confer the required information to design say, an arbitrary antenna with specified electrical characteristics. This is why we have engineers who, like it or not, move modern society forward and provide us with those technologies that most of us daily take for granted.

If you really want a more in-depth understanding (beyond the technical/hobby level), and are not an EE by profession, I would suggest auditing an undergrad EE course on the subject. Be advised though, if you are weak in applied mathematics (primarily calculus) you may be in for a bumpy ride. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

694. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 12:42:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <hVh2i.6347$H_.1412@newssvr21.news.prodigy.net>
Source record: 41244

Jim Kelley wrote:
> On May 14, 7:44 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> In order to get a valid measurement of the delay
>> through a coil, the coil needs to be loaded with
>> its characteristic impedance to minimize the
>> reflected current.
>
> What if a 3' long stainless steel whip is loading the coil?

That makes the antenna a standing wave antenna. Here
are the characteristics of standing waves vs traveling
waves for 1/4WL of wire. The phase of standing wave
current is useless for phase measurements because it
it fixed very close to zero degrees over the entire
antenna.

http://www.w5dxp.com/travstnd.gif

Standing wave current has a negligible phase shift in
the coil or in the whip and therefore cannot be
used to measure the delay through a loading coil.
To the best of my knowledge, all attempted phase
measurements reported on this newsgroup, on current
through a loading coil have been made using standing
wave current with its fixed phase. No useful coil
delay information can come from such measurements.
--
73, Cecil http://www.w5dxp.com

695. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 12:55:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <w5i2i.4633$UU.1874@newssvr19.news.prodigy.net>
Source record: 41245

J. B. Wood wrote:
> "Peter O. Brackett" <none@no-such-domain.nul> wrote:
>> Most of us RRAA'ers seem to accept the physical reality inherent in the
>> assertions of James Clerk Maxwell's (Actually Oliver Heavisides!) elegant
>> and widely celebrated simple set of four partial differential equations and
>> their auxilliary relations.
>
> If you really want a more in-depth understanding (beyond the
> technical/hobby level), and are not an EE by profession, I would suggest
> auditing an undergrad EE course on the subject.

:-) Peter has a Ph.D. degree in EE. Here's a quote from his
QRZ.com bio: "I have written two theses, some 35+ professional
technical papers, several US Patents and Patent applications,
and co-authored a graduate EE textbook."
--
73, Cecil http://www.w5dxp.com

696. Bad News

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 13:29:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <hBi2i.20715$YL5.17899@newssvr29.news.prodigy.net>
Source record: 41246

http://www.reuters.com/article/technologyNews/idUSN1433448320070514?feedType=RSS&rpc=22
--
73, Cecil http://www.w5dxp.com

697. High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 14:14:29 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.15.14.14.26.692785@from.qrz.com>
Source record: 41247

We have a rather high noise level around here on 160 thru 40 (I use an MFJ-1026 to cut down on the noise and it works pretty well ... but, I digress...).

During rainy weather, though, the noise level seems to go way down, from S7+ down to S1 or S2.

Reading everything I've read about "precipitation static" and such, I would have expected it to be the other way around.

What is it about general "noise" that makes it go way down during rainy weather?

Antenna is a 160-meter inverted V up 50+ feet in the center and fed with ladder line, but I see the same effect on my 17-foot-high coax-fed dipole for 75 and 40 meters.

Noise goes down so low that I'm thinking about setting up a sprinkler to keep the antenna wet! :-)

698. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 14:27:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9rj2i.6092$RX.125@newssvr11.news.prodigy.net>
Source record: 41248

Rick (W-A-one-R-K-T) wrote:
> Noise goes down so low that I'm thinking about setting up a sprinkler to
> keep the antenna wet! :-)

Sounds like power line corona to me or maybe
a bad power line ground. When the corona discharge
path gets wet, it reduces the discharge threshold.
Guess sprinkling the power lines is not an option,
huh? :-)
--
73, Cecil http://www.w5dxp.com

699. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 14:49:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1179240557.215778.248180@n59g2000hsh.googlegroups.com>
Source record: 41249

On May 15, 5:42 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > On May 14, 7:44 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> >> In order to get a valid measurement of the delay
> >> through a coil, the coil needs to be loaded with
> >> its characteristic impedance to minimize the
> >> reflected current.
>
> > What if a 3' long stainless steel whip is loading the coil?
>
> That makes the antenna a standing wave antenna.

It makes it an antenna.

> Standing wave current has a negligible phase shift in
> the coil or in the whip and therefore cannot be
> used to measure the delay through a loading coil.

The delay through the coil depends on inductance and capacitance.

> To the best of my knowledge, all attempted phase
> measurements reported on this newsgroup, on current
> through a loading coil have been made using standing
> wave current with its fixed phase. No useful coil
> delay information can come from such measurements.

So your claim is that information about Bugcatcher coils with a load
resistor attached is more useful?

ac6xg

700. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 15:44:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fzk2i.14$H24.5@newssvr17.news.prodigy.net>
Source record: 41250

Jim Kelley wrote:
> Cecil Moore <nos...@w5dxp.com> wrote:
>> Jim Kelley wrote:
>>> Cecil Moore <nos...@w5dxp.com> wrote:
>> That makes the antenna a standing wave antenna.
>
> It makes it an antenna.

Well, putting a load resistor on a coil is a lot like
a T2FD. :-) In fact, the way that a T2FD lowers the
50 ohm SWR is by reducing the reflections from that
load resistor.

>> Standing wave current has a negligible phase shift in
>> the coil or in the whip and therefore cannot be
>> used to measure the delay through a loading coil.
>
> The delay through the coil depends on inductance and capacitance.

Yes, but the delay is not measurable using standing
wave current because standing wave current doesn't
change phase in a coil or in a wire. So far, all of
the phase measurements reported here have been using
standing wave current phase. Standing wave current
essentially doesn't change phase in a 1/4WL long
open-ended antenna.

>> To the best of my knowledge, all attempted phase
>> measurements reported on this newsgroup, on current
>> through a loading coil have been made using standing
>> wave current with its fixed phase. No useful coil
>> delay information can come from such measurements.
>
> So your claim is that information about Bugcatcher coils with a load
> resistor attached is more useful?

It is more useful for determining the delay through the
coil. If you were trying to measure the phase shift
through a 1/4WL stub, would you use the standing wave
current with its zero phase shift? Or would you terminate
the stub in its characteristic impedance and measure
the phase shift in the subsequent traveling wave?

Here are some recently generated graphics around which
I am going to put some words. Hopefully, they will
provide some stand alone information.

Given: http://www.w5dxp.com/openstus.GIF

How would you determine the phase shift at any point
in the open stub?

Given: http://www.w5dxp.com/openstus.GIF

How would you determine the phase shift at any point
in the terminated stub?

Note that the two stubs are identical except for one
being open and one being terminated so they have
identical traveling-wave phase shifts.
--
73, Cecil http://www.w5dxp.com

701. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 15:45:32 UTC
From: kd5sak <kd5sak@sbcglobal.net>
Message-ID: <wAk2i.6117$RX.3622@newssvr11.news.prodigy.net>
Source record: 41251

I have a little experience with powerline noise here in semi-rural southern Oklahoma. I can't claim any expertise but it seems to work like this; As dry weather dries the poles and hardware any arc sparking that occurs has to span greater arc lengths and gets louder. If w e get rain (not so common in the last year or so) the insulating factor of the dry poles and hardware is diminished, spark arcs are shorter and the noise is reduced. Not every electronic noisemaker is an outdoor iten, but if wet weather quiets'em down, they probably are.Last year I had 30 days of S9+ noise before the power companies "noise" crew could get to me and fix the problem. Turns out the pole with my power service connection had an arcing ground wire which they fixed in about 30 minutes. My background noise level dropped to a more tolerable S1 oor S2. My pole was an old one and the ground wire on the pole ran from the very top of the pole so it could act as a lightning rod as well as a regular ground wire (they said the newer poles aren't wired that way anymore). It, of neccessity,. ran close to insulator mounting hardware and that was my noise source. They cut the top couple of feet off the old ground wire, tightened the actual ground connections, and made my day.

Harold
KD5SAK

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
>
>
> What is it about general "noise" that makes it go way down during rainy
> weather?
>

702. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 15:50:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <XEk2i.18$H24.1@newssvr17.news.prodigy.net>
Source record: 41252

I made a posting with a mistake, canceled it, and
am reposting. If the earlier posting got through,
please ignore it.

Jim Kelley wrote:
> Cecil Moore <nos...@w5dxp.com> wrote:
>> Jim Kelley wrote:
>>> Cecil Moore <nos...@w5dxp.com> wrote:
>> That makes the antenna a standing wave antenna.
>
> It makes it an antenna.

Well, putting a load resistor on a coil is a lot like
a T2FD. :-) In fact, the way that a T2FD lowers the
50 ohm SWR is by reducing the reflections from that
load resistor.

>> Standing wave current has a negligible phase shift in
>> the coil or in the whip and therefore cannot be
>> used to measure the delay through a loading coil.
>
> The delay through the coil depends on inductance and capacitance.

Yes, but the delay is not measurable using standing
wave current because standing wave current doesn't
change phase in a coil or in a wire. So far, all of
the phase measurements reported here have been using
standing wave current phase. Standing wave current
essentially doesn't change phase in a 1/4WL long
open-ended antenna.

>> To the best of my knowledge, all attempted phase
>> measurements reported on this newsgroup, on current
>> through a loading coil have been made using standing
>> wave current with its fixed phase. No useful coil
>> delay information can come from such measurements.
>
> So your claim is that information about Bugcatcher coils with a load
> resistor attached is more useful?

It is more useful for determining the delay through the
coil. If you were trying to measure the phase shift
through a 1/4WL stub, would you use the standing wave
current with its zero phase shift? Or would you terminate
the stub in its characteristic impedance and measure
the phase shift in the subsequent traveling wave?

Here are some recently generated graphics around which
I am going to put some words. Hopefully, they will
provide some stand alone information.

Given: http://www.w5dxp.com/openstus.GIF

How would you determine the phase shift at any point
in the open stub?

Given: http://www.w5dxp.com/termstus.GIF

How would you determine the phase shift at any point
in the terminated stub?

Note that the two stubs are identical except for one
being open and one being terminated so they have
identical traveling-wave phase shifts.
--
73, Cecil http://www.w5dxp.com

703. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 16:00:07 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-1505071200070001@jbw-mac.itd.nrl.navy.mil>
Source record: 41253

In article <w5i2i.4633$UU.1874@newssvr19.news.prodigy.net>, Cecil Moore <nospam@w5dxp.com> wrote:

> :-) Peter has a Ph.D. degree in EE. Here's a quote from his
> QRZ.com bio: "I have written two theses, some 35+ professional
> technical papers, several US Patents and Patent applications,
> and co-authored a graduate EE textbook."
> --
> 73, Cecil http://www.w5dxp.com

Hello, and perhaps I was viewing Dr. Brackett's questions/comments incorrectly. Maybe he already knows the answers to the (rhetorical?) statements posited. EE covers many related disciplines these days so I am assuming that if Dr. Brackett hasn't specialized in electromagnetics/electrophysics that he still retains some basic info from those undergrad "fields" courses. In any event it was not my intent to offend Dr. Brackett or anyone else. Sincerely,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

704. Re: Bad News

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 16:46:29 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <Ftl2i.184130$DE1.166882@pd7urf2no>
Source record: 41254

Cecil Moore wrote:

> http://www.reuters.com/article/technologyNews/idUSN1433448320070514?feedType=RSS&rpc=22
>
That's not so bad. If the interference gets to be too much we can
turn to the internet -- imagine -- internet QSO's, QSL's, no worries
about RFI. By golly, you might even be able to get your ticket on
the internet, or perhaps just print your own! :-)

Irv VE6BP

P.S. Please QSL via net!

705. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 17:27:19 UTC
From: herbert.don@gmail.com
Message-ID: <1179250039.811536.181810@k79g2000hse.googlegroups.com>
Source record: 41255

Cecil doesnt seem to worry about this error, but just saying it
doesn't actually mean anything without differences. What is different
about his claim and Wests'?

On May 13, 3:52 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 13 May 2007 18:17:29 GMT, Cecil Moore <nos...@w5dxp.com>
> wrote:
>
> Tedious Xerography snipped as being obviously unread by Xerographer.
>
> >Exactly what did I miss?
>
> If you have to be taken by the hand to have it pointed out to you, you
> shouldn't be doing these kind of things without adult supervision.
>
> A
>
> >>I have taken Wes's helical coil from:
> >>http://www.k6mhe.com/n7ws/Loaded%20antennas.htm
> B
> >>and modeled it with EZNEC. ...
> >>That coil512.EZ file can be downloaded from:
>
> is distinctly false.
>
> A <> B
> Does a symbolic reply nail it down?

706. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 17:28:27 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2cqk2$mq7$1@news.service.uci.edu>
Source record: 41256

Cecil Moore wrote:
> > The delay through the coil depends on inductance and capacitance.
>
> Yes, but the delay is not measurable using standing
> wave current because standing wave current doesn't
> change phase in a coil or in a wire.

But you aren't measuring it. The point is, it's calculable.

> > So your claim is that information about Bugcatcher coils with a load
> > resistor attached is more useful?
>
> It is more useful for determining the delay through the
> coil.

The fact that it doesn't give you an answer that agrees with any other
method notwithstanding.

> If you were trying to measure the phase shift
> through a 1/4WL stub, would you use the standing wave
> current with its zero phase shift?

If I were trying to measure delay I would use pulses.

> Or would you terminate
> the stub in its characteristic impedance and measure
> the phase shift in the subsequent traveling wave?

I would want the system to be configured in exactly the same way as I
intended for it to be used.

> Given: http://www.w5dxp.com/openstus.GIF
>
> How would you determine the phase shift at any point
> in the open stub?
>
> Given: http://www.w5dxp.com/termstus.GIF
>
> How would you determine the phase shift at any point
> in the terminated stub?

The phase shift of what, with respect to what?

ac6xg

707. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 17:32:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <K8m2i.54$C96.42@newssvr23.news.prodigy.net>
Source record: 41257

herbert.don@gmail.com wrote:
> Cecil doesnt seem to worry about this error, but just saying it
> doesn't actually mean anything without differences.

Don, I worry about any error but I don't know
what the error is and Richard C. won't tell me.
But that's just his style. Upon closer reading,
Wes's coil is closer to 7 inch diameter but
that doesn't make much difference.
--
73, Cecil http://www.w5dxp.com

708. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 17:44:25 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Zjm2i.55$C96.53@newssvr23.news.prodigy.net>
Source record: 41258

Jim Kelley wrote:
> Cecil Moore wrote:
>> Yes, but the delay is not measurable using standing
>> wave current because standing wave current doesn't
>> change phase in a coil or in a wire.
>
> But you aren't measuring it. The point is, it's calculable.

But w8ji and w7el *are* measuring it and getting something
different from those calculations. They are reporting their
flawed measurements as technical fact. That's what the
whole argument is about. There is no way in heck to get a
3 nS delay out of a 100 turn, 10", 2" diameter coil.

>> It is more useful for determining the delay through the
>> coil.
>
> The fact that it doesn't give you an answer that agrees with any other
> method notwithstanding.

It means that the existing posted methods are invalid. And
that doesn't extend just to the side that asserts the
delay through the coil is close to zero. It also extends
to the other side who accepts the use of standing-wave
current as a valid measurement technique. *All* of the
measurements made using standing-wave current are bogus.

> If I were trying to measure delay I would use pulses.

How do you know the pulsed delay is the same as the
steady-state delay? Has anyone published a delay using
pulses? I'm not saying a pulsed delay won't yield valid
results - I just don't know. If it is a DC pulse, there
would be known problems.

> I would want the system to be configured in exactly the same way as I
> intended for it to be used.

Then you will find it is impossible to measure the delay
through the coil during steady-state.
--
73, Cecil http://www.w5dxp.com

709. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 18:32:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r1vj435penouo10h281ln4nvkur4qn3ej0@4ax.com>
Source record: 41259

On Tue, 15 May 2007 12:00:07 -0400, wood@itd.nrl.navy.mil (J. B. Wood)
wrote:

> In any event it was not my intent to
>offend Dr. Brackett or anyone else.

Hi John,

The only offense would have not been contributing to the nonsense.
(Now I've done it even though I like these dalliances. Stand by for
the wounded cry.)

73's
Richard Clark, KB7QHC

710. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 18:40:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k6vj43pfjk0h569v15a1s4nvndrush20qf@4ax.com>
Source record: 41260

On 15 May 2007 10:27:19 -0700, herbert.don@gmail.com wrote:

>Cecil doesnt seem to worry about this error, but just saying it
>doesn't actually mean anything without differences. What is different
>about his claim and Wests'?

Hi Herbert,

Yeah, I've noticed he's sloughed off your tough questions. The differences are in the claim of having modeled Wes' helix, he did not, it is a helix of Cecil's own invention. This is the problem of leverage sources' credibility: use their name and discard their work where it conflicts with your own. The differences (as I understand your desire for actual data content) consist in the wrong pitch and the wrong diameter. Aside from that, they are identical.

Now, how far can Cecil take a proof using this identity? All the way within ï¿½CSE (Cecil Standard Error, which as a numeric is 67%). The world of theory is wide open when you cut yourself that much slack.

73's
Richard Clark, KB7QHC

711. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 18:49:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2cvd5$qm7$1@news.service.uci.edu>
Source record: 41261

Cecil Moore wrote:
> Jim Kelley wrote:
>> But you aren't measuring it. The point is, it's calculable.
>
> But w8ji and w7el *are* measuring it and getting something
> different from those calculations. They are reporting their
> flawed measurements as technical fact. That's what the
> whole argument is about.

Only because you keep dragging them into it. I'm perfectly happy just
comparing your results with the results I get from Reg's program.

> There is no way in heck to get a
> 3 nS delay out of a 100 turn, 10", 2" diameter coil.

There is something odd about Tom's printout. It's not clear to me
exactly what the instrument is actually displaying.

>> The fact that it doesn't give you an answer that agrees with any other
>> method notwithstanding.
>
>
> It means that the existing posted methods are invalid.

:-) There exists no other possibility, naturally. I believe they call
these delusions of grandeur.

>> If I were trying to measure delay I would use pulses.
>
>
> How do you know the pulsed delay is the same as the
> steady-state delay?

In the same way, and to the same degree that I know the delay will be
the same tomorrow as it is today.

> Has anyone published a delay using
> pulses?

Delays are typically measured using pulses.

> If it is a DC pulse, there
> would be known problems.

Oh, I would never use those. :-)

>> I would want the system to be configured in exactly the same way as I
>> intended for it to be used.

>
>
> Then you will find it is impossible to measure the delay
> through the coil during steady-state.

If I thought that was true, I wouldn't have said what I did.

ac6xg

712. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 20:27:56 UTC
From: Runge1 <philsa@bigfoot.com>
Message-ID: <464a1805$0$27388$ba4acef3@news.orange.fr>
Source record: 41262

```
Powerline noise, I confirm
Check those around you 1+/-mile around you
Then point your antenna towards the lines and you'll see the noise signal
going up.
Then pray for a lot of rain !
```

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> a crit dans le message
de news: pan.2007.05.15.14.14.26.692785@from.qrz.com...
>
> We have a rather high noise level around here on 160 thru 40 (I use an
> MFJ-1026 to cut down on the noise and it works pretty well ... but, I
> digress...).
>
> During rainy weather, though, the noise level seems to go way down, from
> S7+ down to S1 or S2.
>
> Reading everything I've read about "precipitation static" and such, I
> would have expected it to be the other way around.
>
> What is it about general "noise" that makes it go way down during rainy
> weather?
>
> Antenna is a 160-meter inverted V up 50+ feet in the center and fed with
> ladder line, but I see the same effect on my 17-foot-high coax-fed dipole
> for 75 and 40 meters.
>
> Noise goes down so low that I'm thinking about setting up a sprinkler to
> keep the antenna wet! :-)
>

713. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 20:30:49 UTC
From: richardharrison@webtv.net
Message-ID: <18308-464A1879-1165@storefull-3252.bay.webtv.net>
Source record: 41263

Cecil, W5DXP wrote:
"EZNEC indicates a VF of ~ 0.016."

I calculate about 628 inches of wire in the coil compared with about 10 inches of coil length. It is 62.8 times as far to go around the turns on the coil as it is to travel through a 10 inch rod. So, velocity factor is the quotient of 10 divided by 628, or about 0.016. That agrees with EZNEC.

Best regards, Richard Harrison, KB5WZI

714. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 21:26:08 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <Qzp2i.9006$rO7.4733@newssvr25.news.prodigy.net>
Source record: 41265

Richard Clark wrote:
> On Tue, 15 May 2007 12:00:07 -0400, wood@itd.nrl.navy.mil (J. B. Wood)
> wrote:
>
>> In any event it was not my intent to
>> offend Dr. Brackett or anyone else.
>
> Hi John,
>
> The only offense would have not been contributing to the nonsense.
> (Now I've done it even though I like these dalliances. Stand by for
> the wounded cry.)
>
> 73's
> Richard Clark, KB7QHC

Brackett is a great kidder. Taking him seriously is a recipe for
madness.
73,
Tom Donaly, KA6RUH

715. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 21:33:14 UTC
From: richardharrison@webtv.net
Message-ID: <1606-464A271A-1069@storefull-3257.bay.webtv.net>
Source record: 41266

Cecil, W5DXP wrote:
"There is no way in heck to get 3 nanoseconds delay out of a 100 turn, 10-in., 2-in dia. coil."

I calculate 628 in. of wire divided by c (@ 1181.1x10 to the sixth power in./sec.) = 0.53x10 to the minus 6 power, delay through the coil. That`s just over 1/2 microsecond delay in the coil. A lot slower than Tom`s coil but my signal sticks to the wire.

Best regards, Richard Harrison, KB5WZI

716. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 21:55:37 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns993197DEA402Cdoldridgsprintca@64.59.135.159>
Source record: 41267

herbert.don@gmail.com wrote in
news:1179083688.477792.12710@q75g2000hsh.googlegroups.com:

> mmana-gal elnec exnec ao
> HF I can figure out but just what doess this mean in english? maybe
> about optimize and may be about pattern but what do3es this have to do
> with irritations?

Optimizations allow you to control certain variables. But the MMANA-GAL
optimization does not allow you to maximize gain for a particular elevation
angle. In point-to-point work this would be very useful, as you want to
pick the angle that has the least number of reflections from the ionosphere
and ground along the path (you lose about 10db per hop).

--
Dave Oldridge+
ICQ 1800667

717. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:12:42 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <S7ydnZHGOtMMrdfbRVnygwA@bt.com>
Source record: 41268

"Fred" <whru@msn.com> wrote in message
news:1179202212.299571.112660@h2g2000hsg.googlegroups.com...
> I am trying to match my TS-50 with an AT-50 to a random length wire of
> about 50 to 60 ft. At this point 160 through 20 meters tune up fine
> however, on 15 and 10 meters the tuner gives me a failure indication.
> My question, is there a optimum wire length? even on a random lenght
> antenna.
> Thanks for any advice.
> Fred
> wb6iiq
>
Fred,
Many years ago I input all the frequencies and wavelengths into an Excel spreadsheet to find a length of wire which would most closely be resonant on all amateur bands. As I recall 26.5 metres seemed to be an optimum length when fed via an ATU. It isn't resonant on any amateur band, but most ATU's will be able to tune it. It worked for me anyway 160m through to 10m. As for the performance, well it received well enough and obviously radiated enough of a signal to work 5000+ miles QRP.
Mike G0ULI

718. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:18:45 UTC
From: herbert.don@gmail.com
Message-ID: <1179267525.306960.233780@n59g2000hsh.googlegroups.com>
Source record: 41269

dos'nt make much difference? then none of this has any point then?

On May 15, 10:32 am, Cecil Moore <nos...@w5dxp.com> wrote:
> herbert....@gmail.com wrote:
> > Cecil doesnt seem to worry about this error, but just saying it
> > doesn't actually mean anything without differences.
>
> Don, I worry about any error but I don't know
> what the error is and Richard C. won't tell me.
> But that's just his style. Upon closer reading,
> Wes's coil is closer to 7 inch diameter but
> that doesn't make much difference.
> --
> 73, Cecil http://www.w5dxp.com

719. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:20:31 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464a2482$0$4718$4c368faf@roadrunner.com>
Source record: 41264

Just for laughs
Water the yard around your ground rods really good and see what
happens...includeing the ground rod to your electric meter...
Joe

"Runge1" <philsa@bigfoot.com> wrote in message
news:464a1805$0$27388$ba4acef3@news.orange.fr...
> Powerline noise, I confirm
> Check those around you 1+/-mile around you
> Then point your antenna towards the lines and you'll see the noise signal
> going up.
> Then pray for a lot of rain !
>
> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> a crit dans le message
> de news: pan.2007.05.15.14.14.26.692785@from.qrz.com...
> >
> > We have a rather high noise level around here on 160 thru 40 (I use an
> > MFJ-1026 to cut down on the noise and it works pretty well ... but, I
> > digress...).
> >
> > During rainy weather, though, the noise level seems to go way down, from
> > S7+ down to S1 or S2.
> >
> > Reading everything I've read about "precipitation static" and such, I
> > would have expected it to be the other way around.
> >
> > What is it about general "noise" that makes it go way down during rainy
> > weather?
> >
> > Antenna is a 160-meter inverted V up 50+ feet in the center and fed with
> > ladder line, but I see the same effect on my 17-foot-high coax-fed
dipole
> > for 75 and 40 meters.
> >
> > Noise goes down so low that I'm thinking about setting up a sprinkler to
> > keep the antenna wet! :-)
> >
>
>

720. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:23:35 UTC
From: herbert.don@gmail.com
Message-ID: <1179267815.866136.255210@e65g2000hsc.googlegroups.com>
Source record: 41270

I still dont see differences
just saying it doesmn't make it so. Does it?

ok different coil size, but no one seems to be able to say what this
abour (sure delay, all coils have delay and none nows how much except
that it isnt much different from another coil).

coke = pepsi woohoo!

On May 15, 11:40 am, Richard Clark <kb7...@comcast.net> wrote:
> On 15 May 2007 10:27:19 -0700, herbert....@gmail.com wrote:
>
> >Cecil doesnt seem to worry about this error, but just saying it
> >doesn't actually mean anything without differences. What is different
> >about his claim and Wests'?
>
> Hi Herbert,
>
> Yeah, I've noticed he's sloughed off your tough questions. The
> differences are in the claim of having modeled Wes' helix, he did not,
> it is a helix of Cecil's own invention. This is the problem of
> leverage sources' credibility: use their name and discard their work
> where it conflicts with your own. The differences (as I understand
> your desire for actual data content) consist in the wrong pitch and
> the wrong diameter. Aside from that, they are identical.
>
> Now, how far can Cecil take a proof using this identity? All the way
> within ±CSE (Cecil Standard Error, which as a numeric is 67%). The
> world of theory is wide open when you cut yourself that much slack.
>
> 73's
> Richard Clark, KB7QHC

721. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:25:49 UTC
From: herbert.don@gmail.com
Message-ID: <1179267949.534504.73240@h2g2000hsg.googlegroups.com>
Source record: 41271

do thje signals (not noise) go down too?

On May 15, 7:14 am, "Rick (W-A-one-R-K-T)" <get.my.em...@from.qrz.com>
wrote:
> We have a rather high noise level around here on 160 thru 40 (I use an
> MFJ-1026 to cut down on the noise and it works pretty well ... but, I
> digress...).
>
> During rainy weather, though, the noise level seems to go way down, from
> S7+ down to S1 or S2.
>
> Reading everything I've read about "precipitation static" and such, I
> would have expected it to be the other way around.
>
> What is it about general "noise" that makes it go way down during rainy
> weather?
>
> Antenna is a 160-meter inverted V up 50+ feet in the center and fed with
> ladder line, but I see the same effect on my 17-foot-high coax-fed dipole
> for 75 and 40 meters.
>
> Noise goes down so low that I'm thinking about setting up a sprinkler to
> keep the antenna wet! :-)

722. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:29:02 UTC
From: herbert.don@gmail.com
Message-ID: <1179268142.253453.259410@n59g2000hsh.googlegroups.com>
Source record: 41272

so no one knows what MMANA-GAL means?
this is a weird group.

On May 15, 2:55 pm, Dave Oldridge <doldr...@leavethisoutshaw.ca>
wrote:
> herbert....@gmail.com wrote innews:1179083688.477792.12710@q75g2000hsh.googlegroups.com:
>
> > mmana-gal elnec exnec ao
> > HF I can figure out but just what doess this mean in english? maybe
> > about optimize and may be about pattern but what do3es this have to do
> > with irritations?
>
> Optimizations allow you to control certain variables. But the MMANA-GAL
> optimization does not allow you to maximize gain for a particular elevation
> angle. In point-to-point work this would be very useful, as you want to
> pick the angle that has the least number of reflections from the ionosphere
> and ground along the path (you lose about 10db per hop).
>
> --
> Dave Oldridge+
> ICQ 1800667

723. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-15 22:34:46 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.05.15.22.34.46.194924@from.qrz.com>
Source record: 41273

On Tue, 15 May 2007 15:25:49 -0700, herbert.don wrote:

> do thje signals (not noise) go down too?

No, they stay pretty much up there.

724. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 00:30:12 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <pgs2i.121$u56.8@newssvr22.news.prodigy.net>
Source record: 41274

Not only that, but if like Kenwood AT-250, Yaesu
FC-20, ect., these only rated to match a SWR of
3:1, or LESS! Not exactly something that is High
Zo +- J ??? ! Jim NN7K

André wrote:

> Tuners have difficulties when the length of the wire is close to 0.5lambda,
> lambda, 1.5lambda etc.
> 73
>
> André
>
> http://f5ad.free.fr/
>> wb6iiq
>>
>
>

725. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 00:40:50 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <nqs2i.123$u56.5@newssvr22.news.prodigy.net>
Source record: 41275

Another reason is that as things dry out, the
connections to the pole Losen up , as the pole
shrinks, relative to the hardware. and- induction
to , say Crossarm Braces , can cause arcing ,
between those braces ! A way to check for this is
to give a pole a swift hit with a hammer. If the
noise goes away, or is changed, probably is loose
hardware on the pole . A thought for your
consideration- Jim NN7K
>
> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
>>
>> What is it about general "noise" that makes it go way down during rainy
>> weather?
>>
>
>

726. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 01:55:17 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464a56d5$0$4913$4c368faf@roadrunner.com>
Source record: 41276

Is the noise a 60 cycle hum ? or just noise in general? qrn or qrm?
I still think that it is a grounding problem .

I could be wrong but it sounds like thw same problem I had untill I
expanded my ground system and tied it to my utility (meterbase ground)
Then all the noise, vanished....
My 2 cents

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:nqs2i.123$u56.5@newssvr22.news.prodigy.net...
>
>
> Another reason is that as things dry out, the
> connections to the pole Losen up , as the pole
> shrinks, relative to the hardware. and- induction
> to , say Crossarm Braces , can cause arcing ,
> between those braces ! A way to check for this is
> to give a pole a swift hit with a hammer. If the
> noise goes away, or is changed, probably is loose
> hardware on the pole . A thought for your
> consideration- Jim NN7K
> >
> > "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> > news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
> >>
> >> What is it about general "noise" that makes it go way down during rainy
> >> weather?
> >>
> >
> >

727. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 02:14:23 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <464a690d$0$17206$39cecf19@news.twtelecom.net>
Source record: 41127

herbert.don@gmail.com wrote:

> dos'nt make much difference? then none of this has any point then?
>

You've begun to get it.

tom
K0TAR

> On May 15, 10:32 am, Cecil Moore <nos...@w5dxp.com> wrote:
>
>>herbert....@gmail.com wrote:
>>
>>>Cecil doesnt seem to worry about this error, but just saying it
>>>doesn't actually mean anything without differences.
>>
>>Don, I worry about any error but I don't know
>>what the error is and Richard C. won't tell me.
>>But that's just his style. Upon closer reading,
>>Wes's coil is closer to 7 inch diameter but
>>that doesn't make much difference.
>>--
>>73, Cecil http://www.w5dxp.com
>
>
>

728. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 03:02:56 UTC
From: richardharrison@webtv.net
Message-ID: <21975-464A7460-16@storefull-3256.bay.webtv.net>
Source record: 41128

herbert.don wrote:
"coke = pepsi woohoo!"

A loading coil is important to tune out the capacitive reactance of a too-short whip so that maximum current can be put into the antenna to get the most RF radiation out.

A loading coil usually has some loss that takes the form of heat converted from some of the energy pumped into it.

One of the debates here may have been triggered by reference to John Devoldere, ON4UN`s treatment of "short verticals" in "Low-Band DXing". He discussed several ways to resonate the too-short vertical antenna. His Fig. 9-22 on page 9-15 of his 1994 edition became notorious.

ON4UN occasionly characterizes coils as having "degrees" in the space occupied in the antenna. No one argues that a 1/4-wave vertical does not have 90 degrees, or that at a given frequency, you could not properly say a certain linear measure was not equal to a degree. So, if you are trying to resonate the antenna as a 1/4-wavelength, why not assign the missing length of antenna, in degrees, to the coil or coils which replace the missing length of antenna?

The number of turns required of the coil or coils depends on where it or they are placed in the antenna. A certain number of turns are not predetermined to represent so many degrees independent of placement.

More than just resonating the antenna, placement of the coil or coils affects current distribution which affects radiation and loss. Several problems need simultaneous solution to get the best performance.

I have mostly thought of the velocity of light as being a universal speed limit. I read long ago that energy is transferred by passing an impetus along a group of extremely short gap distances through a file of charges. The individual charges are migrating slowly, if at all, and going nowhere fast. Speeds greater than the speed of light seemed inconceivable to me. Researching the loading coil brought me to Kraus and his helical antenna. On page 253 of the 3rd edition of "Antennas" is Figure 8-32. For certain coils it shows velocities exceeding the speed of light. I guess I`m not too old to learn after all.

Best regards, Richard Harrison, KB5WZI

729. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 03:17:18 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179285438.605470.260960@n59g2000hsh.googlegroups.com>
Source record: 41129

On May 15, 1:21 am, Richard Clark <kb7...@comcast.net> wrote:
> On 14 May 2007 19:43:14 -0700, dykesc <cupst...@bellsouth.net> wrote:
>
> > 1:1 Liter Bottle Choke 4:1 MFJ Balun (tuner
> >bypassed)
>
> >3.94Mhz 57 -j169 14 -j39
>
> >7.185Mhz 62 -j212 19 -j48
>
> >14.29Mhz 70 -j313 12 -j63
>
> Hi Dykes,
>
> This is what I meant about measurements made in isolation not being as
> informative without other information.
>
> Oddly enough, it looks like the 4:1 is mounted backwards.
>
> However, I reserve making a final judgement pending review of my OCF
> models (your results are just too luckily hitting the ham bands).
>
> 73's
> Richard Clark, KB7QHC

Richard,

I'm not following your statement that the 4:1 appears to be mounted backwards. While the 1:1 values are not exactly 4 times the 4:1 values, they are at least "ballpark". Just to make sure you understand my arrangement, when measured, the 1:1 values should "ideally" represent the line input impedance without transformation. The 4:1 values (line on the high impedance side of the balun, analyzer on the low impedance side) should be down by roughly a factor of 4, right?

Also I'm not sure what you mean by my results luckily hitting the ham bands. I cut and fed the antenna to accomplish that. The OCF feedpoint (at least by design) is just off the peak of a current loop on 80, 40 and 20 meters (even harmonics).

73s
Dykes AD5VS

730. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 03:46:23 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <k8v2i.305667$g24.274244@newsfe12.phx>
Source record: 41130

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:S7ydnZHGOtMMrdfbRVnygwA@bt.com...

> Many years ago I input all the frequencies and wavelengths into an Excel
> spreadsheet to find a length of wire which would most closely be resonant
on
> all amateur bands. As I recall 26.5 metres seemed to be an optimum length
> when fed via an ATU. It isn't resonant on any amateur band, but most ATU's
> will be able to tune it. It worked for me anyway 160m through to 10m. As
for
> the performance, well it received well enough and obviously radiated
enough
> of a signal to work 5000+ miles QRP.
> Mike G0ULI

I assume that the directionality was frequency-dependent. At higher
half-wave multiples, it would have been a beverage antenna, with strongest
signals off the end(s). Was that your experience? I'm getting ready to try
the same thing, although I don't quite have 26.5 meters to play with unless
I can string part of the wire onto my neighbor's property.

731. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 05:46:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0k4l43tmv4s8b2b8508jghk1e67qej8bnt@4ax.com>
Source record: 41131

On 15 May 2007 20:17:18 -0700, dykesc <cupstidd@bellsouth.net> wrote:

>I'm not following your statement that the 4:1 appears to be mounted
>backwards. While the 1:1 values are not exactly 4 times the 4:1
>values, they are at least "ballpark". Just to make sure you understand
>my arrangement, when measured, the 1:1 values should "ideally"
>represent the line input impedance without transformation. The 4:1
>values (line on the high impedance side of the balun, analyzer on the
>low impedance side) should be down by roughly a factor of 4, right?

Hi Dykes,

Look at your data comparison again and ask: Should it be 4:1 or 1:4?

>Also I'm not sure what you mean by my results luckily hitting the ham
>bands. I cut and fed the antenna to accomplish that.

No doubt, as that is everyone's goal.

>The OCF feedpoint
>(at least by design) is just off the peak of a current loop on 80, 40
>and 20 meters (even harmonics).

I'm not arguing results, I am arguing common sense. Moving the feed
along a dipole does not change its resonances and anti-resonances
(some prefer the terms series and parallel resonances); it changes
their impedances (I will ignore slight reactances). A balanced 80M
dipole resonates on 40M and 20M (and 10M, and 5M....) too. However,
the balanced dipole shows low resonance (series) and high
anti-resonance (parallel) impedances. You are showing consistent low
resonant impedances.

Well, in my review of all of your correspondence, you neglect to tell
us just how far off from center the feed is, and how much slope there
is to the overall wire, and even how long the wire is. I originally
offered that these peculiarities will induce oddities and caught grief
(well, not actually, perhaps it was more like guff) from Tom for
noting it.

However, I have worked out OCDs in the past in response to other's
discussion and there are a world of results and I am going to attempt
to read tea leaves here to intuit the missing details:

The feed is roughly 15% to 20% from the end and there should be almost
as good a match somewhere between the 25M and 30M band. A flat OCD
will show a much poorer match in the 80M band (it will resonate
there), but sloping may introduce enough variation to pull it in

(where the ground is soaking up some of your power as sort of a Z pad).

At 25% from the end, and there should be no 20M operation as you describe.

There are possibilities at 35% to 40%.

Let me know about matches inbetween 40M and 20M.

73's
Richard Clark, KB7QHC

732. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 06:23:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4q8l43ptlioqk6a9rjkc6b4vfj3pes8tqq@4ax.com>
Source record: 41132

On Tue, 15 May 2007 22:02:56 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>On page 253 of the 3rd edition of "Antennas" is
>Figure 8-32. For certain coils it shows velocities exceeding the speed
>of light.

Hi Richard,

The velocities of what?

73's
Richard Clark, KB7QHC

733. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 11:20:10 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <87ql43pn79ergh77jea0o0sdmaffuj1ibe@4ax.com>
Source record: 41133

Multi-lingual, Mm ANAlyzer

GAL is an united abbreviation of names of DL1PBD and DK2KQ.

On 15 May 2007 15:29:02 -0700, herbert.don@gmail.com wrote:

>so no one knows what MMANA-GAL means?
>this is a weird group.
>
>On May 15, 2:55 pm, Dave Oldridge <doldr...@leavethisoutshaw.ca>
>wrote:
>> herbert....@gmail.com wrote
innews:1179083688.477792.12710@q75g2000hsh.googlegroups.com:
>>
>> > mmana-gal elnec exnec ao
>> > HF I can figure out but just what doess this mean in english? maybe
>> > about optimize and may be about pattern but what do3es this have to do
>> > with irritations?
>>
>> Optimizations allow you to control certain variables. But the MMANA-GAL
>> optimization does not allow you to maximize gain for a particular elevation
>> angle. In point-to-point work this would be very useful, as you want to
>> pick the angle that has the least number of reflections from the ionosphere
>> and ground along the path (you lose about 10db per hop).
>>
>> --
>> Dave Oldridge+
>> ICQ 1800667
>

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

734. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 12:37:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <464afb25$0$19022$4c368faf@roadrunner.com>
Source record: 41134

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:sJk%h.271$4X.38@nlpi069.nbdc.sbc.com...
> If a Texas Bugcatcher Coil could be turned into a
> traveling wave device instead of a standing wave
> device, the inherent phase shift through the coil
> would become obvious. I used the Helix option in
> EZNEC to generate a reasonably close model of a
> 75m Texas Bugcatcher coil and loaded it with a
> resistance equal to the coil's characteristic impedance
> which essentially eliminated the reflected current,
> leaving the forward current intact and visible. All
> of the data points on the following web page came from
> EZNEC. All of the files are available for downloading.
> Please take a look at:
>
> http://www.w5dxp.com/current2.htm
> --
> 73, Cecil http://www.w5dxp.com

735. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 13:43:03 UTC
From: richardharrison@webtv.net
Message-ID: <1082-464B0A67-8@storefull-3253.bay.webtv.net>
Source record: 41135

Richard Clark, KB7QHC wrote:
"The velocities of what?"

Figure 8-32 labels the ordinate values as "relative phase velocity".
Phase velocity is defined in my electronic dictionary as:
"The velocity at which a point of constant phase is propagated in a
progressive sinusoidal wave."

In other words, pick a point on a waveform. The rate at which it moves
is phase velocity. That`s the velocity of propagation.

Best regards, Richard Harrison, KB5WZI

736. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 14:32:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <df5m431u6jbe9anur3r7eq2lar06p5jbon@4ax.com>
Source record: 41136

On Wed, 16 May 2007 08:43:03 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>In other words, pick a point on a waveform. The rate at which it moves >is phase velocity. That`s the velocity of propagation.

Hi Richard,

The velocity of an imaginary point that contains no information nor energy.

73's
Richard Clark, KB7QHC

737. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 15:57:58 UTC
From: richardharrison@webtv.net
Message-ID: <167-464B2A06-39@storefull-3255.bay.webtv.net>
Source record: 41137

Richard Clark wrote:
'The velocity of a point that contains no information nor energy."

The topic of "phase shift" relates to alternating electrical current, that is volts and amps. These are essential to energy and they are represented by symbols which are manipulated to solve our problems. A sinusoidal wave is the symbol of the periodic variation of electrical properties with time. Volts and amps taken in-phase represent real energy.

All points on a sinusoidal traveling wave move with the same velocity past a fixed point. So, to determine the velocity of the motion, choice of a particular point on the wave, be it zero or peak value, no matter where the wave travels, or how attenuated, is always the zero or peak value of the alternation. For velocity, choice of the particular point to use is immaterial.

The symbol of the wave contains the information. The wave itself contains the energy.

Best regards, Richard Harrison, KB5WZI

738. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 16:37:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2fcaa$s0u$1@news.service.uci.edu>
Source record: 41138

Richard Clark wrote:
> On Wed, 16 May 2007 08:43:03 -0500, richardharrison@webtv.net (Richard
> Harrison) wrote:
>
>
>>In other words, pick a point on a waveform. The rate at which it moves
>>is phase velocity. That`s the velocity of propagation.
>
>
> Hi Richard,
>
> The velocity of an imaginary point that contains no information nor
> energy.

Why such criticism of a meager geometrical object with such useful
purpose? It seems your expectations may be too high.

ac6xg

739. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 17:01:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tkdm43hqf70fn2ftvckdgcm3e80v0fs36p@4ax.com>
Source record: 41139

On Wed, 16 May 2007 10:57:58 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark wrote:
>'The velocity of a point that contains no information nor energy."

What I in fact said was:
>>The velocity of an imaginary point that contains no information nor
>>energy.
in response to:
>>>In other words, pick a point on a waveform. The rate at which it moves
>>>is phase velocity. That`s the velocity of propagation.

My response is still valid in science and technology. Richard, if you choose to challenge this, cite an explicit reference that says Phase Velocity contains information and energy. Further demonstrate how your accrual of these characteristics on Phase Velocity does not then change it to Group Velocity. It is Group Velocity that propagates information and energy.

73's
Richard Clark, KB7QHC

740. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 17:56:45 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns99326F5F67AB2doldridgsprintca@64.59.135.159>
Source record: 41140

herbert.don@gmail.com wrote in
news:1179268142.253453.259410@n59g2000hsh.googlegroups.com:

> so no one knows what MMANA-GAL means?
> this is a weird group.

It's a popular, free program for antenna modelling.

Is your Google skill REALLY that limited? Just type "MMANA-GAL" into Google
(quotes and all) and you will get all the information you need.

--
Dave Oldridge+
ICQ 1800667

741. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 17:58:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qdhm43pb0ttesnbg3je1lo3j20ib0esdd5@4ax.com>
Source record: 41141

On Wed, 16 May 2007 09:37:17 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>Why such criticism of a meager geometrical object with such useful
>purpose? It seems your expectations may be too high.

Hi Jim,

MY expectations are too high? "With such useful purpose" is
overarching by half.

What has Phase Velocity got to do with anything, and what are its
expectations either high or low?

73's
Richard Clark, KB7QHC

742. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 18:27:22 UTC
From: richardharrison@webtv.net
Message-ID: <10601-464B4D0A-73@storefull-3251.bay.webtv.net>
Source record: 41142

Richard Clark, KB7QHC wrote:
"The velocity of an imaginary point contains no information nor energy."

You could imagine a point like that. I regret omitting the word "imaginary". It was unintentional.

I gave a dictionary definition of "phase velocity". It seems to be synonymous with propagation velocity. The same dictionary defines group velocity, and says:
"Group velocity differs from phase velocity in a medium in which the phase velocity varies with frequency."

If phase variation with frequency is severe, and if the signal contains multiple frequencies, I think it would likely alter the waveform.

Best regards, Richard Harrison, KB5WZI

743. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 19:00:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2fkq8$5ht$1@news.service.uci.edu>
Source record: 41143

Richard Clark wrote:
> On Wed, 16 May 2007 09:37:17 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
>
>>Why such criticism of a meager geometrical object with such useful
>>purpose? It seems your expectations may be too high.
>
>
> Hi Jim,
>
> MY expectations are too high? "With such useful purpose" is
> overarching by half.

Perception only. Utility in geometrical abstracts exists completely
independently of ones appreciation of them.

> What has Phase Velocity got to do with anything, and what are its
> expectations either high or low?

For the problem at hand (antennas) Kraus uses c = w/k, not dw/dk.
Naturally, he was interested in the velocity with which field lines
move across a point - the speed at which the wave propagates.
VF = v sub p over c, not v sub g over c. The second part of your
question is unintelligible to me.

ac6xg

744. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 19:16:43 UTC
From: richardharrison@webtv.net
Message-ID: <10602-464B589B-10@storefull-3251.bay.webtv.net>
Source record: 41144

Richard Clark, KB7QHC wrote:
"Richard, if you choose to challenge this, cite an explicit reference
that says Phase Velocity contains information and energy."

I already have in two previous postings in this thread. One quotation
was from Terman and the other was from Lenkurt. Both explained how a
traveling wave tube (TWT) works. It uses velocity modulation of an
electron beam to alter the phase and power of a signal carried by a coil
encircling the electron beam. There`s your information and energy.

Best regards, Richard Harrison, KB5WZI

745. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 20:46:49 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <nJidnShHIKFq8NbbnZ2dnUVZ8qijnZ2d@bt.com>
Source record: 41145

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:k8v2i.305667$g24.274244@newsfe12.phx...
>
> "Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
> news:S7ydnZHGOtMMrdfbRVnygwA@bt.com...
>
>
> > Many years ago I input all the frequencies and wavelengths into an Excel
> > spreadsheet to find a length of wire which would most closely be
resonant
> on
> > all amateur bands. As I recall 26.5 metres seemed to be an optimum
length
> > when fed via an ATU. It isn't resonant on any amateur band, but most
ATU's
> > will be able to tune it. It worked for me anyway 160m through to 10m. As
> for
> > the performance, well it received well enough and obviously radiated
> enough
> > of a signal to work 5000+ miles QRP.
> > Mike G0ULI
>
> I assume that the directionality was frequency-dependent. At higher
> half-wave multiples, it would have been a beverage antenna, with strongest
> signals off the end(s). Was that your experience? I'm getting ready to
try
> the same thing, although I don't quite have 26.5 meters to play with
unless
> I can string part of the wire onto my neighbor's property.
>
>
At the time I was fairly newly licensed in amateur radio and just concerned with putting up any old bit of 'wet string' to get a signal out. My antenna was orientated East West and probably only 15 feet up in the air. From the UK I could work QRP into the east coast US and all of Europe with pretty good success. Of course at QRP power levels you have to pick your frequencies and operating times:-)

It probably helped that in my early professional career as a Merchant Navy Radio Officer, I was expected to reliably work the UK directly from on board ship, from as far as Australia, using 1950's valve equipment putting out only 100w to a Marconi long wire antenna. It did sometimes take up to four hours to get message traffic passed, but in those days you stayed on watch until the job was done; a pretty good incentive!

The antennas were generally directional along the length of the ship, but the navigating officers always seemed to be reluctant to change course and steam pointing at the UK so I could send a message. I can't think why.

From a professional basis, the more wire up in the air the better but don't worry if you have to bend it around corners to fit. Provided the antenna is 20 feet up or so, you can get some good low angle (long distance) radiation off the antenna and low antenna can also be useful for putting out near vertical signals to work 500 to 1000 mile distances.

Merchant Navy radio installations always used to be done on the cheap using the lowest powered equipment available. The antennas were fitted around the masts wherever they would go without compromising operation of cranes and cargo loading. Depending on the cargo load, the antenna height could vary from 40 feet to 70 feet above sea level on a typical cargo ship.

One of the best antenna systems I used had two 30 foot helically wound fibre glass masts, one main, one emergency antenna. Apart from hosing down the base insulators once a week with fresh water, these worked pretty well and were essentially maintenance free.

Wires or whips, the antennas were fed via an ATU for all frequencies from 410 kHz to 22 MHz.

Stick a bit of wire up in the air. If works, great. If it doesn't, try another arrangement. Antenna modelling software is great and can really help out when designing a system, but there are so many variables in real life, that sometimes the craziest ideas work much better than theoretical designs. Try to use wire lengths that avoid very high or very low impedence matches at the frequencies you are interested in and don't worry about having to use an ATU to get a match. ATU's are a lot less hassle than traps and loading coils for general wide band hopping about on the air. If you find a particular band that you enjoy working on, then design a more efficient system just to work that band. Open wire feeder as opposed to coax can also give some useful extra radiation from the antenna system. All the ship board stuff was fed around the radio room using copper pipe, feed through insulators in the bulkhead, and multi stranded bare copper cable for the external antenna and feeds. When not being used for operating, aerials were connected to earth through a switch box to minimise equipment damage from the inevitable lightning strikes, especially in the tropics. I forgot once and the purple discharge glow and loud bangs in the radio room as lightning repeatedly hit the aerials and jumped to the nearest earth was truly spectacular. It took me a good couple of minutes to work up the courage to snap the switches round to the earth position during a slight lull in the firework display! Strangely enough, all the equipment escaped unscathed. That's valves for you :-)

Good luck

Mike G0ULI

746. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 21:47:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <AZK2i.301$H24.176@newssvr17.news.prodigy.net>
Source record: 41146

Richard Harrison wrote:
> I calculate about 628 inches of wire in the coil compared with about 10
> inches of coil length. It is 62.8 times as far to go around the turns on
> the coil as it is to travel through a 10 inch rod. So, velocity factor
> is the quotient of 10 divided by 628, or about 0.016. That agrees with
> EZNEC.

I think we are talking about two different coils. The 6" dia,
6" long, 30 turn Texas Bugcatcher coil is the one with a
VF of 0.016 per EZNEC. The only 10" coil that I remember
being mentioned is w8ji's and EZNEC cannot model that coil.

Dr. Corum's equation yields a VF of 0.0328 for the w8ji coil,
again just about double what the "threaded bolt" approach
indicates.
--
73, Cecil http://www.w5dxp.com

747. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 21:59:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <P8L2i.29119$Um6.26495@newssvr12.news.prodigy.net>
Source record: 41147

Richard Harrison wrote:
> Richard Clark, KB7QHC wrote:
> "The velocities of what?"
>
> Figure 8-32 labels the ordinate values as "relative phase velocity".
> Phase velocity is defined in my electronic dictionary as:
> "The velocity at which a point of constant phase is propagated in a
> progressive sinusoidal wave."
>
> In other words, pick a point on a waveform. The rate at which it moves
> is phase velocity. That`s the velocity of propagation.

What Kraus may be talking about is the apparent speeding
up of the signal compared to the "threaded bolt" calculation.
When 600 inches of wire is coiled into a helix, how can
EM waves travel through that 600 inches of wire faster than
it can travel through 600 inches in free space? Reckon that
is what he is talking about?
--
73, Cecil http://www.w5dxp.com

748. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 22:05:07 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <neL2i.8336$2v1.5599@newssvr14.news.prodigy.net>
Source record: 41148

Stuff talking about is arcing- 6o cycles should
have little to do with it. Also, had friend with
lamps going super bright , he got electrician to
go thru his power panel, and outlets- several 100$
later, got hold of power company, and they kept
stalling him (no problem found). after it also
ate several appliances, told him to keep checking.
As I suspicioned, on the power pole, they found
where a lightning strike had annealed the Neutral,
at it's connection to his service, and ground
wire! Point being lots of these services haven't
been looked at in years, and drying out/ vibration
on these can cause a lot of greif! Jim NN7K

merlin-7 wrote:
> Is the noise a 60 cycle hum ? or just noise in general? qrn or qrm?
> I still think that it is a grounding problem .
>
> I could be wrong but it sounds like thw same problem I had untill I
> expanded my ground system and tied it to my utility (meterbase ground)
> Then all the noise, vanished....
> My 2 cents
>
> "Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
> news:nqs2i.123$u56.5@newssvr22.news.prodigy.net...
>>
>> Another reason is that as things dry out, the
>> connections to the pole Losen up , as the pole
>> shrinks, relative to the hardware. and- induction
>> to , say Crossarm Braces , can cause arcing ,
>> between those braces ! A way to check for this is
>> to give a pole a swift hit with a hammer. If the
>> noise goes away, or is changed, probably is loose
>> hardware on the pole . A thought for your
>> consideration- Jim NN7K
>>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
>>> news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
>>>> What is it about general "noise" that makes it go way down during rainy
>>>> weather?
>>>>
>>>
>
>

749. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 22:09:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2iL2i.29121$Um6.7339@newssvr12.news.prodigy.net>
Source record: 41149

Jim Kelley wrote:
> Delays are typically measured using pulses.

Please describe the pulse you intend to use on a
1/4WL long standing-wave antenna.

> If I thought that was true, I wouldn't have said what I did.

If the delay through the loading coil in a standing-
wave antenna could be measured in situ, then there
would not be any argument. But maybe I am missing
something. How would you propose to measure the delay
through a loading coil during steady-state for a
standing-wave antenna?
--
73, Cecil http://www.w5dxp.com

750. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 22:31:13 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2g19afjs1@news.service.uci.edu>
Source record: 41150

Cecil Moore wrote:

> Please describe the pulse you intend to use on a
> 1/4WL long standing-wave antenna.

Kind of a wispy brunette one, about 5'7". What difference would it make, Cecil? One that is short compared to the delay.

> If the delay through the loading coil in a standing-
> wave antenna could be measured in situ, then there
> would not be any argument. But maybe I am missing
> something. How would you propose to measure the delay
> through a loading coil during steady-state for a
> standing-wave antenna?

When you post a question in that way I gotta wonder what you must think is going on inside an antenna. What's different about the 'situ' during steady state that causes electromagnetic fields to propagate differently than at other times?

73, ac6xg

751. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 22:55:13 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f2g24frld1@nnrp.linuxfan.it>
Source record: 41151

Cecil Moore wrote:
> > ...
> :-) Peter has a Ph.D. degree in EE. Here's a quote from his
> QRZ.com bio: "I have written two theses, some 35+ professional
> technical papers, several US Patents and Patent applications,
> and co-authored a graduate EE textbook."
> --
> 73, Cecil http://www.w5dxp.com

Cecil:

What "great doctorates" are you aware of which have made major
discoveries and new advancements?

Most, if not all, I am aware of only follow behind men such as edison,
einstein, tesla, marconi, de forest, etc, etc and write books and papers ...

Regards,
JS

752. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-16 23:12:06 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bdM2i.333$u56.282@newssvr22.news.prodigy.net>
Source record: 41152

Jim Kelley wrote:
> What difference would it
> make, Cecil? One that is short compared to the delay.

What difference would it make if the frequency of the
pulse is far removed from the operating frequency?
What difference would it make if the frequency is far
above the self-resonant frequency? What difference
would it make if the inductance is completely
swamped by the capacitance? Shirley, you jest.

> What's different about the 'situ' during
> steady state that causes electromagnetic fields to propagate differently
> than at other times?

They don't propagate differently but how does one separate
the forward wave from the reflected wave on a standing-wave
antenna? If you can do that, you will have solved the
measurement problem.
--
73, Cecil http://www.w5dxp.com

753. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 00:17:43 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <WaN2i.893$1G7.240@newsfe12.lga>
Source record: 41153

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f2g24frld1@nnrp.linuxfan.it...
> Cecil Moore wrote:
>> > ...
>> :-) Peter has a Ph.D. degree in EE. Here's a quote from his
>> QRZ.com bio: "I have written two theses, some 35+ professional
>> technical papers, several US Patents and Patent applications,
>> and co-authored a graduate EE textbook."
>> --
>> 73, Cecil http://www.w5dxp.com
>
> Cecil:
>
> What "great doctorates" are you aware of which have made major discoveries
> and new advancements?
>
> Most, if not all, I am aware of only follow behind men such as edison,
> einstein, tesla, marconi, de forest, etc, etc and write books and papers
> ...
>
> Regards,
> JS

The greatest of all of them is Dr. Nikola Tesla, (he graduate from Czech
Carl University). Wats yer point? Demonstrating low awareness ?? :-)

Yuri

754. Unusual Old Phelps Dodge (or A/S, maybe) 5/8-wave High- band VHF Whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 00:48:21 UTC
From: negevcom@verizon.net
Message-ID: <1179362901.074113.132630@e65g2000hsc.googlegroups.com>
Source record: 41154

In the 1970s-'80s, Phelps Dodge (and/or maybe) Antenna Specialists manufactured
a 5/8-wave high-band VHF whip that differed from the usual design.

Rather than incorporating the typical base-loaded match in a waterproof housing, the radiator itself was formed into a coil of about two turns with an approximate 2.5 inch diameter.

Thus, the match also served as a spring.

I am looking for one of these, new or used.

K1JJJ.ae@ verizon.net

755. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 01:31:14 UTC
From: richardharrison@webtv.net
Message-ID: <6350-464BB062-45@storefull-3253.bay.webtv.net>
Source record: 41156

Cecil. W5DXP wrote:
"When 600 inches of wire is coiled into a helix, how can EM waves travel through that 600 inches of wire faster than it can travel through 600 inches in free space?"

Good question. Maybe it figuratively travels from both ends of the coil toward the niddle. At one part of the cycle the wave is pushing excess electrons to one end of the coil while it supplies electron deficient atoms to the other end. Then the cycle reverses the charge situation at the ends of the coil. Or maybe the photons do blast off to leap across the length of the coil. My vision isn`t good enough to see what is going on inside of the coil`s conductor.

Best regards, Richard Harrison, KB5WZI

756. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 01:45:41 UTC
From: richardharrison@webtv.net
Message-ID: <6351-464BB3C5-3@storefull-3253.bay.webtv.net>
Source record: 41157

Cecil, K5DXP wrote:
"I think we are talking about two different coils."

Yes, that`s now obvious. I only worked with W8JI`s coil, and your numbers were for the bugcatcher coil.

I showed my work, so if my method was wrong, my results are probably wrong too. Someone is likely to point out the error in my ways and I`ll learn something.

Best regards, Richard Harrison, KB5WZI

757. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 01:56:52 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464ba8b4$0$15249$4c368faf@roadrunner.com>
Source record: 41155

I still would check out the grounding system on the rig.

Rain would increase the grounding of a station (with a bad grounding system) incredibley.

If the rig is not grounded properly, There is no telling what kind of noise you would pick up but as 60 cycle hums from the power grid are the most common, I would think that that would be the first (noise) you would hear.

758. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 02:04:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f2gd6h$o9q$1@nnrp.linuxfan.it>
Source record: 41158

Yuri Blanarovich wrote:
> > ...
> The greatest of all of them is Dr. Nikola Tesla, (he graduate from Czech
> Carl University). Wats yer point? Demonstrating low awareness ?? :-)
>
> Yuri
>
Well, demonstrating how unaware you are is just a side effect, you
apparently missed the whole point ...

JS

759. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 03:21:29 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179372089.716076.303000@y80g2000hsf.googlegroups.com>
Source record: 41159

On May 16, 12:46 am, Richard Clark <kb7...@comcast.net> wrote:

> Look at your data comparison again and ask: Should it be 4:1 or 1:4?
>

Richard, I guess I'm not seeing something obvious. Its a 4:1 balun
transforming the high side impedance down by a factor of 4. The 4:1
impedance measurements (line on the high impedance side of the balun,
analyzer on the low impedance side) should be down by roughly a factor
of 4, right?
I can't see anything wrong with how I presented the data.

> Moving the feed along a dipole does not change its resonances and anti-resonances
> (some prefer the terms series and parallel resonances); it changes their impedances

I agree

>However, the balanced dipole shows low resonance (series) and high
> anti-resonance (parallel) impedances.

By feeding off center my sloping dipole is not balanced.

>You are showing consistent low resonant impedances.

The OCF feedpoint (at least by design) is near (but not on) the peak
of a current loop on 80, 40 and 20 meters (even harmonics). Don't
current peaks occur at points of low impedance along an antenna? My
EZNEC current traces confirm this. Shouldn't my even harmonics
impedance measurements all be low rather than high?

By the way Richard the frequencies my impedance measurements were
taken at are not "resonant" frequencies. The resonant frequencies
(zero reactance) occur at 3.56 Mhz, 8.05 Mhz, and 15.7 Mhz. A little
too low on 80M. Too high for 40M and 20M. The tuner gets me the match
in the 40 and 20 amateur bands.

I apologize for not stating that my sloping OCF is fed at 35% of its
total length from the high end. High end at a height of about 40 feet
and low end at a height of about 10 feet. Total antenna length is 136
feet.

73s
Dykes Cupstid AD5VS

760. Nec2go Antenna Modeling: I will be at Dayton

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:00:38 UTC
From: pw342@hotmail.com
Message-ID: <1179374438.411158.91410@p77g2000hsh.googlegroups.com>
Source record: 41160

I will be at Dayton this week if anyone wants to see a demo of
Nec2go. I will be sharing space with W0TOK books.
So sorry about this blatant commercial message.
Patrick Winteiser W0OPW

761. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:30:27 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <ETQ2i.373417$6P2.343635@newsfe16.phx>
Source record: 41161

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:neL2i.8336$2v1.5599@newssvr14.news.prodigy.net...

> ... had friend with
> lamps going super bright , he got electrician to
> go thru his power panel, and outlets- several 100$
> later, got hold of power company, and they kept
> stalling him (no problem found).

I'm surprised it took more than a few minutes to diagnose this. A floating neutral is about the only thing that can cause that symptom in just one house.

762. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:39:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ckmn43tbk4jpb4aq1ditviqjvdbod1r258@4ax.com>
Source record: 41162

On Wed, 16 May 2007 14:16:43 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark, KB7QHC wrote:
>"Richard, if you choose to challenge this, cite an explicit reference
>that says Phase Velocity contains information and energy."
>
>I already have in two previous postings in this thread. One quotation
>was from Terman and the other was from Lenkurt. Both explained how a
>traveling wave tube (TWT) works. It uses velocity modulation of an
>electron beam to alter the phase and power of a signal carried by a coil
>encircling the electron beam. There`s your information and energy.

Hi Richard,

If anything, these citations that you offer move at speeds considerably SLOWER than the speed of light and is the whole purpose of the design of their structure.

It was because of this slow speed that the triode structures of even lighthouse tubes were abandoned as amplifiers. The electron beam moves at sub-luminal speed and the helix was designed to not only accommodate to the phase lag introduced by increasingly significant time delays, but to synchronize to it by optimally delayed signals wending along a retarding helix.

Now, do you have actual citations that support Phase Velocity carrying information and energy at faster than light speeds?

73's
Richard Clark, KB7QHC

763. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:42:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g4nn43hso7vvjfar0cagkrigehf6vr7f09@4ax.com>
Source record: 41163

On Wed, 16 May 2007 12:00:41 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>Richard Clark wrote:
>> On Wed, 16 May 2007 09:37:17 -0700, Jim Kelley <jwkelley@uci.edu>
>> wrote:
>>
>>
>>>Why such criticism of a meager geometrical object with such useful
>>>purpose? It seems your expectations may be too high.
>>
>>
>> Hi Jim,
>>
>> MY expectations are too high? "With such useful purpose" is
>> overarching by half.
>Perception only. Utility in geometrical abstracts exists completely
>independently of ones appreciation of them.

Hi Jim,

Wouldn't it be clearer (as you are one who complains of the lack of
clarity) to simply call this "useful purpose" as Zen?

>
>> What has Phase Velocity got to do with anything, and what are its
>> expectations either high or low?
>
>For the problem at hand (antennas) Kraus uses c = w/k, not dw/dk.
>Naturally, he was interested in the velocity with which field lines
>move across a point - the speed at which the wave propagates.
>VF = v sub p over c, not v sub g over c.

>The second part of your
>question is unintelligible to me.

As is your response. Throwing equations over the transom doesn't make
them explanations.

73's
Richard Clark, KB7QHC

764. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:53:03 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1179377583.059286.253840@h2g2000hsg.googlegroups.com>
Source record: 41164

On May 16, 12:46 am, Richard Clark <kb7...@comcast.net> wrote:

> Look at your data comparison again and ask: Should it be 4:1 or 1:4?

I must be ovelooking something obvious Richard. Measuring through the
4:1 balun with my transmission line on the high side of the balun and
my analyzer on the low side, I obtain the values listed under the 4:1
MFJ Balun column in my earlier post. It doesn't look backward to me.
I'm getting lower impedances just as I would expect. What are you
trying to tell me?

>Moving the feed along a dipole does not change its resonances and anti-resonances
> (some prefer the terms series and parallel resonances); it changes their impedances

I agree

>However, the balanced dipole shows low resonance (series) and high
> anti-resonance (parallel) impedances. You are showing consistent low
> resonant impedances.

My sloping dipole isn't balanced. Its being fed off center. The OCF
dipole (at least by design) is near (but not on) the peak of a current
loop on 80, 40 and 20 meters (even harmonics). Don't the lowest
impedances occur at current loops? Why are you surpised my impedances
are low rather than high on even harmonics?

> Well, in my review of all of your correspondence, you neglect to tell us just how far off
from center the feed is, and how much slope there
> is to the overall wire, and even how long the wire is.

My apologies. Antenna is 136 feet long. Feedpoint is 35% from the end
that is the highest in the air. Height of high end is about 40 feet.
Height of low end is about 10 feet. Feeding with 300 ohm twin lead
that is 95 feet long (actual length, not electrical length),

> Let me know about matches in between 40M and 20M.

The antenna is resonant (zero reactance) at 3.56 Mhz, 8.05 Mhz and
15.7 Mhz. My tuner is required for working in the Amateur bands.

73's
Dykes Cupstid AD5VS

765. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 04:54:04 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <MdR2i.304176$115.46300@newsfe10.phx>
Source record: 41165

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:nJidnShHIKFq8NbbnZ2dnUVZ8qijnZ2d@bt.com...

> At the time I was fairly newly licensed in amateur radio and just
concerned
> with putting up any old bit of 'wet string' to get a signal out. My
antenna
> was orientated East West and probably only 15 feet up in the air. From the
> UK I could work QRP into the east coast US and all of Europe with pretty
> good success. Of course at QRP power levels you have to pick your
> frequencies and operating times:-)
>
> It probably helped that in my early professional career as a Merchant Navy
> Radio Officer, I was expected to reliably work the UK directly from on
board
> ship, from as far as Australia, using 1950's valve equipment putting out
> only 100w to a Marconi long wire antenna. It did sometimes take up to
four
> hours to get message traffic passed, but in those days you stayed on watch
> until the job was done; a pretty good incentive!
>
> The antennas were generally directional along the length of the ship, but
> the navigating officers always seemed to be reluctant to change course and
> steam pointing at the UK so I could send a message. I can't think why.
>
> From a professional basis, the more wire up in the air the better but
don't
> worry if you have to bend it around corners to fit. Provided the antenna
is
> 20 feet up or so, you can get some good low angle (long distance)
radiation
> off the antenna and low antenna can also be useful for putting out near
> vertical signals to work 500 to 1000 mile distances.
>
> Merchant Navy radio installations always used to be done on the cheap
using
> the lowest powered equipment available. The antennas were fitted around
the
> masts wherever they would go without compromising operation of cranes and
> cargo loading. Depending on the cargo load, the antenna height could vary
> from 40 feet to 70 feet above sea level on a typical cargo ship.
>
> One of the best antenna systems I used had two 30 foot helically wound fib
re

> glass masts, one main, one emergency antenna. Apart from hosing down the
> base insulators once a week with fresh water, these worked pretty well and
> were essentially maintenance free.
>
> Wires or whips, the antennas were fed via an ATU for all frequencies from
> 410 kHz to 22 MHz.
>
> Stick a bit of wire up in the air. If works, great. If it doesn't, try
> another arrangement. Antenna modelling software is great and can really
help
> out when designing a system, but there are so many variables in real life,
> that sometimes the craziest ideas work much better than theoretical
designs.
> Try to use wire lengths that avoid very high or very low impedence matches
> at the frequencies you are interested in and don't worry about having to
use
> an ATU to get a match. ATU's are a lot less hassle than traps and loading
> coils for general wide band hopping about on the air. If you find a
> particular band that you enjoy working on, then design a more efficient
> system just to work that band. Open wire feeder as opposed to coax can
also
> give some useful extra radiation from the antenna system. All the ship
board
> stuff was fed around the radio room using copper pipe, feed through
> insulators in the bulkhead, and multi stranded bare copper cable for the
> external antenna and feeds. When not being used for operating, aerials
were
> connected to earth through a switch box to minimise equipment damage from
> the inevitable lightning strikes, especially in the tropics. I forgot once
> and the purple discharge glow and loud bangs in the radio room as
lightning
> repeatedly hit the aerials and jumped to the nearest earth was truly
> spectacular. It took me a good couple of minutes to work up the courage to
> snap the switches round to the earth position during a slight lull in the
> firework display! Strangely enough, all the equipment escaped unscathed.
> That's valves for you :-)

That's interesting. Thanks for the tips. At the moment, being new to HF,
I have only a rudimentary antenna consisting of a copper pipe dipole (built
for 10m) laying near the peak of my garage roof. Unmodified, it did 10 and
did 15 with a tuner. Then, I made one element longer with an alligator-clip
lead and about 12 feet of TV-coaxial cable; the garage isn't very long, so
it makes an L-shape in the roof. Call it an "L" antenna if you wish; I
call it an unholy mess, but it gets me on 20 and 40 with the tuner. I have
worked New Zealand, Australia, Estonia and the Ukraine as well as any number
of places in North America. The other hams, who spent their money on good
antennas, made many of my QSO's possible and I thank them.

Speaking of valves, I have hundreds of them. I am restoring an old military
tester and I'll have the valves available in a few months.

766. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 05:26:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7onn43di228brje76m86ar6efu8pm782ua@4ax.com>
Source record: 41166

On 16 May 2007 20:21:29 -0700, dykesc <cupstidd@bellsouth.net> wrote:

>On May 16, 12:46 am, Richard Clark <kb7...@comcast.net> wrote:
>
>
>> Look at your data comparison again and ask: Should it be 4:1 or 1:4?
>>
>
>Richard, I guess I'm not seeing something obvious. Its a 4:1 balun
>transforming the high side impedance down by a factor of 4. The 4:1
>impedance measurements (line on the high impedance side of the balun,
>analyzer on the low impedance side) should be down by roughly a factor
>of 4, right?
>I can't see anything wrong with how I presented the data.

Hi Dykes,

Well then, your feed point Zs are inordinately low. (Get rid of the
idea of using the 4:1.)

>The OCF feedpoint (at least by design) is near (but not on) the peak
>of a current loop on 80, 40 and 20 meters (even harmonics). Don't
>current peaks occur at points of low impedance along an antenna? My
>EZNEC current traces confirm this. Shouldn't my even harmonics
>impedance measurements all be low rather than high?

As OCF/OCD antennas have an infinite variety of feed points (where as
the balanced dipole has only one), there is nothing set in stone about
any of this until you define the degree of "off-center."

There are MANY OCDs that exhibit conventional Hi/Lo/Hi/Lo spectrums in
contrast to your Lo/Lo/Lo.... Certainly, they offer no advantage over
the conventional balanced dipole in this respect. Too often OCD
claims are made without corresponding supporting details.

>By the way Richard the frequencies my impedance measurements were
>taken at are not "resonant" frequencies. The resonant frequencies
>(zero reactance) occur at 3.56 Mhz, 8.05 Mhz, and 15.7 Mhz.

You might note, then, that meaning of harmonics has been similarly
distorted in this thread.

>A little
>too low on 80M. Too high for 40M and 20M. The tuner gets me the match
>in the 40 and 20 amateur bands.
>
>I apologize for not stating that my sloping OCF is fed at 35% of its

>total length from the high end. High end at a height of about 40 feet
>and low end at a height of about 10 feet. Total antenna length is 136
>feet.

Modeling against these criteria reveal nothing like your measurements
with:
>(zero reactance) occur at 3.56 Mhz, 8.05 Mhz, and 15.7 Mhz.
(that is the short story)

However, modeling does suggest the antenna should perform for 80/40/20 in much the way your second set of data with the reactance driven out. To say the least, you still have a hodge-podge of results probably dominated by the contribution of unbalanced currents on the feed line (a classic condition for this design that demands considerable choking).

All that remains to confirm this last observation is to someway determine the lobe patterns. If they exhibit weak nulls, then the feed line is part of the radiator. Given the choke appeared to work at the feedpoint (I assume this is what you did); then a second one is warranted, and possibly a third. The usual placement advice is 1/4 wavelength from the feed point, but given this is a multi-band antenna, that is out the window and you will have to experiment (I would start with 1/4 of the shortest wavelength away).

However, if nulls are immaterial to the enjoyment of the antenna, then theory has been satisfied and you can chalk that one up.

And to confirm my forecast of operation between 40M and 20M, it should be exhibiting a significant SWR throughout.

73's
Richard Clark, KB7QHC

767. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 05:28:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8upn435htri9mp0932o4ido0tuvl0d4mke@4ax.com>
Source record: 41167

On Wed, 16 May 2007 17:56:45 GMT, Dave Oldridge
<doldridg@leavethisoutshaw.ca> wrote:

>Is your Google skill REALLY that limited? Just type "MMANA-GAL" into Google
>(quotes and all) and you will get all the information you need.

Hi Dave,

Is this the advice we should offer everyone? What purpose would the
group have over such an abundance of information?

73's
Richard Clark, KB7QHC

768. Re: Bad News

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 10:56:39 UTC
From: microwaves@blueyonder.co.uk
Message-ID: <464c3472.264925662@news.blueyonder.co.uk>
Source record: 41168

On Tue, 15 May 2007 16:46:29 GMT, Irv Finkleman <finkirv@shaw.ca>
wrote:

>Cecil Moore wrote:
>
>> http://www.reuters.com/article/technologyNews/idUSN1433448320070514?feedType=RSS&rpc=22
>>
>That's not so bad. If the interference gets to be too much we can
>turn to the internet -- imagine -- internet QSO's, QSL's, no worries
>about RFI. By golly, you might even be able to get your ticket on
>the internet, or perhaps just print your own! :-)

It's already arrived Irv! I hear people using CQ100 on the Internet
saying it's the first time they've been on the air for years !!!
People even call CQ on it and send SSTV :-)

Peter, G3PHO

769. Re: Automatic Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 11:11:11 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <KaOdnfsrmKQWpdHbnZ2dnUVZ8vqdnZ2d@bt.com>
Source record: 41169

<snip>
> That's interesting. Thanks for the tips. At the moment, being new to
HF,
> I have only a rudimentary antenna consisting of a copper pipe dipole
(built
> for 10m) laying near the peak of my garage roof. Unmodified, it did 10
and
> did 15 with a tuner. Then, I made one element longer with an
alligator-clip
> lead and about 12 feet of TV-coaxial cable; the garage isn't very long,
so
> it makes an L-shape in the roof. Call it an "L" antenna if you wish; I
> call it an unholy mess, but it gets me on 20 and 40 with the tuner. I
have
> worked New Zealand, Australia, Estonia and the Ukraine as well as any
number
> of places in North America. The other hams, who spent their money on good
> antennas, made many of my QSO's possible and I thank them.
>
> Speaking of valves, I have hundreds of them. I am restoring an old
military
> tester and I'll have the valves available in a few months.
>
What everyone seems to forget is that modern receivers tend to have signal gains of 120dB or more when operated with everything turned up full. With this sort of sensitivity, you only need a couple of watts of radiated signal to work around the world, given the right band conditions.

With a kilowatt or so and a high gain antenna, it is possible to work just about anywhere first go. It all rather takes the fun out of operating when it is that easy.

Interesting you mention using copper pipe for a dipole. Some of my more successful antennas have been made from aluminium tube. I found they give a lovely broad bandwidth, generally the fatter the tube, the wider the bandwidth.

As you say, there are plenty of hams who have spent money on high gain antennas. Lets give them some signals that allow them to put their expensive antennas to good use:-)

Having worked passing commercial traffic with high powered equipment, I find I get much more satisfaction from completing QSO's using QRP equipment and basic antennas than using the big expensive stuff.

If you do decide to play around with valve final stages, you should find that they are much easier to tune into virtually any old bit of wire. Just be careful to monitor the grid current and keep the anode voltages down when the system is not at resonance. One of my favourite valve matching circuits was essentially a CLC design with the variable inductance formed as a goniometer - essentially two concentric tubes with wire coils wound around them. As the inside tube was rotated, the inductance coupling to the fixed outer tube varied. This sytem was quite robust and I never had any arcing problems with the inductors. The capacitors used to flash over in the high humidity of the tropics on full power sometimes, but reducing power by 25% usually solved the problem. A modern version could be produced with some plastic drain pipe and a bit of coiled springy phospor bronze or copper strip to make the connections to the rotating coil. That way you get continuously variable capacitance and inductance without any switches or the intermittant contact problems that modern wound inductors with a contact wheel suffer from.

All the best with your experiments

Mike G0ULI

770. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 12:55:01 UTC
From: mike luther <mike.luther@ziplog.com>
Message-ID: <134ok53s1p0b807@corp.supernews.com>
Source record: 41170

Another interesting variation of this ..

Jim - NN7K wrote:
> Stuff talking about is arcing- 6o cycles should
> have little to do with it. Also, had friend with
> lamps going super bright , he got electrician to
> go thru his power panel, and outlets- several 100$
> later, got hold of power company, and they kept
> stalling him (no problem found). after it also
> ate several appliances, told him to keep checking.
> As I suspicioned, on the power pole, they found
> where a lightning strike had annealed the Neutral,
> at it's connection to his service, and ground
> wire! Point being lots of these services haven't
> been looked at in years, and drying out/ vibration
> on these can cause a lot of greif! Jim NN7K
>
> merlin-7 wrote:
>> Is the noise a 60 cycle hum ? or just noise in general? qrn or qrm?
>> I still think that it is a grounding problem .
>>
>> I could be wrong but it sounds like thw same problem I had untill I
>> expanded my ground system and tied it to my utility (meterbase ground)
>> Then all the noise, vanished....
>> My 2 cents
>>
>> "Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
>> news:nqs2i.123$u56.5@newssvr22.news.prodigy.net...
>>>
>>> Another reason is that as things dry out, the
>>> connections to the pole Losen up , as the pole
>>> shrinks, relative to the hardware. and- induction
>>> to , say Crossarm Braces , can cause arcing ,
>>> between those braces ! A way to check for this is
>>> to give a pole a swift hit with a hammer. If the
>>> noise goes away, or is changed, probably is loose
>>> hardware on the pole . A thought for your
>>> consideration- Jim NN7K
>>>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
>>>> news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
>>>>> What is it about general "noise" that makes it go way down during
>>>>> rainy
>>>>> weather?
>>>>>

>>>>
>>
>>

Failure to bond the neutral-ground run at the power pole with the system ground on the primary high voltage side at a rural site with a single pole pig serving a single site can cause real problems too! Add the lightning strike issues, which then, depending on the high current / low voltage point in the wave, can move down into the facility wiring - or are involved with the ground line carried strike point on the service loop. Which then cause intermittent arcing in any of the various panels of the facility. Which can be in the meter can, in the primary exterior breaker box, or .. even .. AND .. in the interior panel at that point!

I got hit with this one at my site rather suddenly and because the power company and I have had a year's long history of really helping find some of these issues in rural high side locations, they moved quickly. Seeing surge issues at a serious telecom site which also show up as noise on the 240 side with flickering no/light load analog meter observation brought the bucket crew out in about an hour that Sunday night in the dark.

Final story. 30 years ago the power company never bonded the pole pig ground neutral with the earth ground line to the primary low voltage ground line for that segment at this transformer, required per current code! Arcing damage issues were evident relative to the grounding neutral as well as the pig neutral run .. but it looked like not internal in the pig.

Fixed! Because the company was good enough to realize that if you can see this in an analog meter needle flicker for differential flickers even no load inside the facility with 240 volt loading and minimal split voltage load across the 120 volt legs, something has to be wrong in the distribution game.

But you know, lightning can do strange things even still. Remember that the strike(s) show(s) different damage points on lines because of the high voltage vs. high current points on the waveform, which change position during the strike as it spans those tiny microseconds of the time it lives. And .. weeks later .. no possible strike during that time of the year .. here are some more of the flickers again!

Answer .. neutral float issues in the interior panel as well, even with mechanical bind screws down hard too! We all checked that inside the facilityu with the power company crew before they even went out to the pole. Fair is fair. But you know, the panel's metal buss bar rod transfer from the bound neutral to the bar routing in it had strike arc surface deterioration in it ALSO in this case! Which of all things I found, because with the panel cover off, I had walked in to start looking at things with scope meters and so on in the dark that night. And saw a tiny flicker of light way under all the wire and bonding line clamp - turn down connections!

The guy in the bucket truck who brought their part of the service into the code compliance .. after 30 years .. was surprised. Which resulted in a review of a whole host of other checks around here and there. As were the crew when I

told them the truth about the other part of it as well. We really don't know if the or which strike .. was an entry issue because of the bad ground path romp out at pole level. Or this was a hit on the service loop somewhere itself for the facility - then or at some other time as more than one strike.

I get hit directly an average of about once a year here.

But we all know that damage isn't just a one spot one swat issue. And just because the lights flicker over a neutral fault doesn't mean that you can ignore BOTH sides of the problem. Especially at telecom sites which may be unattended in operation and can suffer HUGE damage issues from this problem.

We also here realize that for a telecom site, the standard NEMA ground rod issue at the service entrance meter drop is really not smart either. Yes, you do that, check it for secure mechanical connections. But at telecom site installs, you also run a few six or eight foot side surface radials from the ground rod top out along the surface of the earth. That to help spread out the strike along the ground surface if you get it trying to come into the facility. A simple cheap trick that can save you real heartaches later. And one even I, with all the real mitigation work on the tower arrays and so on plus being a professional at this, had failed to do.

Thus the just between us sort of understanding now that at remote telecom sites such as cell towers, whatever, the tiny cost of that little array of surface ground radials at the service loop ground rod site are really a simple way to cut down on future problem possibilities. And this isn't in the code.

The source of a problem is often from multiple vectors. I was part of it too and could have helped protect me, but didn't. I was thinking, those long years ago, "Well, that's over with and all the tower and inbound feed line mitigation work is done. Everything is shunt fed on the towers and done right. I really don't have to carry a loop surface ring around the ground at the surface of the facility to the service loop entrance and so on."

Yeah .. right .. .

W5WQN

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

771. Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 15:21:16 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1179415276.169371.75800@l77g2000hsb.googlegroups.com>
Source record: 41171
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Hello,

I am considering getting Internet service through our local wireless provider. They apparently use either a parabolic antenna, or sometimes a yagi type of antenna. What kind of radiation do these antennas emit and in what directions, with this type of service? I am not sure which receiver they use with these antennas. I have been trying to find more information and so far have come up empty. I am more concerned about this for health reasons. We would probably be mounting this antenna on the side of the house or the roof, and I would like to determine the best place so there's not a lot of radiation being reflected in to the house.

Thank you very much for all feedback!
--
Chris

772. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 17:07:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2i24e$7dk$1@news.service.uci.edu>
Source record: 41173

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> What difference would it make, Cecil? One that is short compared to
>> the delay.
>
>
> What difference would it make if the frequency of the
> pulse is far removed from the operating frequency?
> What difference would it make if the frequency is far
> above the self-resonant frequency? What difference
> would it make if the inductance is completely
> swamped by the capacitance? Shirley, you jest.

The advantage to using pulses is that they are 'broadband' - they
don't have "A" frequency. The inductance and capacitance of the
system are unaffected by the small signals one impresses upon it.

>> What's different about the 'situ' during steady state that causes
>> electromagnetic fields to propagate differently than at other times?
>
>
> They don't propagate differently but how does one separate
> the forward wave from the reflected wave on a standing-wave
> antenna? If you can do that, you will have solved the
> measurement problem.

The antenna behaves physically in exactly the same way whether or not
it happens to be 'occupied' by waves, standing, sitting, or whatever
during measurement. If you want to know how long it take an
electromagnetic wave to traverse a conductor in any shape or
configuration, you pulse it and measure how long it takes, either to
get from one end to the other, or to be reflected back from the other
end. There are of course dispersion effects, and by studying the
change in the waveshape it is possible to deconvolve the frequency
dependent components. This is a matter of routine for practicioners.

73, ac6xg

773. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 17:08:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1s2p43ti44ssq4scfmta2a2tcclod6ito9@4ax.com>
Source record: 41172
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On 17 May 2007 08:21:16 -0700, szilagyic <chris@groupinfo.com> wrote:

>Hello,
>
>I am considering getting Internet service through our local wireless
>provider. They apparently use either a parabolic antenna, or
>sometimes a yagi type of antenna. What kind of radiation do these
>antennas emit and in what directions, with this type of service? I am
>not sure which receiver they use with these antennas. I have been
>trying to find more information and so far have come up empty. I am
>more concerned about this for health reasons. We would probably be
>mounting this antenna on the side of the house or the roof, and I
>would like to determine the best place so there's not a lot of
>radiation being reflected in to the house.
>
>Thank you very much for all feedback!

Hi Chris,

There is probably more radiation from your microwave leaking out than
you will find coming from any wireless ISP. More your problem is
getting enough of it, not too much.

For your end of it (transmitting), if your provider gives you a dish
or yagi, it is to purposely keep power levels down and keep an
efficient link up.

73's
Richard Clark, KB7QHC

774. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 17:35:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ck03i.468$H24.401@newssvr17.news.prodigy.net>
Source record: 41174

Jim Kelley wrote:
> The advantage to using pulses is that they are 'broadband' - they don't
> have "A" frequency. The inductance and capacitance of the system are
> unaffected by the small signals one impresses upon it.

But we are not interested in the phase delay for all
those other frequencies. We are only interested in the
phase delay at one particular frequency. And since we are
talking about distributed networks and not lumped circuits,
the inductance and capacitance of the coil does change with
frequency. Whatever measurements we make need to be made
at the frequency of operation.

> The antenna behaves physically in exactly the same way whether or not it
> happens to be 'occupied' by waves, standing, sitting, or whatever during
> measurement. If you want to know how long it take an electromagnetic
> wave to traverse a conductor in any shape or configuration, you pulse it
> and measure how long it takes, either to get from one end to the other,
> or to be reflected back from the other end.

If the pulse is not at the frequency of operation, the results
are hardly useful at all since the response of the loading coil
is frequency dependent.

So we are back to the original question. How can the delay through
a mobile loading coil be measured at the frequency of operation
in a standing-wave antenna?
--
73, Cecil, w5dxp.com

775. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 17:38:36 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2i3vb$8rk$1@news.service.uci.edu>
Source record: 41175

Richard Clark wrote:

> Hi Jim,
>
> Wouldn't it be clearer (as you are one who complains of the lack of
> clarity) to simply call this "useful purpose" as Zen?

Hi Richard,

You don't like it much, do you. I suggest not dishing out so much of it then.

I don't know about you, but I learned about the utility of 'points' in my geometry and mathematics classes. Data is, for example, often obtained by accumulating an array of them.

>>For the problem at hand (antennas) Kraus uses c = w/k, not dw/dk.
>>Naturally, he was interested in the velocity with which field lines
>>move across a point - the speed at which the wave propagates.
>>VF = v sub p over c, not v sub g over c.
>
>
>>The second part of your
>>question is unintelligible to me.
>
>
> As is your response.

You probably intended that as a clever retort.

> Throwing equations over the transom doesn't make
> them explanations.

Had I not 'thrown', you would likely have desired to know what I was talking about. It was as concise a presentation as I could conjure in 30 seconds. Equations do offer the advantage of illustrating the point without leaving much need for semantic interpretation.

73, ac6xg

776. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 17:48:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2i4ir$9am$1@news.service.uci.edu>
Source record: 41176

Cecil Moore wrote:

> If the pulse is not at the frequency of operation, the results
> are hardly useful at all since the response of the loading coil
> is frequency dependent.
>
> So we are back to the original question.

It's clear that you are still back at that question. That doesn't necessarily apply to everyone else though. What I would suggest is that you go back, re-read, and try to undertstand the post, in particular the parts you deleted.

73, ac6xg

777. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 18:06:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <HM03i.479$H24.5@newssvr17.news.prodigy.net>
Source record: 41077

Jim Kelley wrote:
> It's clear that you are still back at that question. That doesn't
> necessarily apply to everyone else though. What I would suggest is that
> you go back, re-read, and try to undertstand the post, in particular the
> parts you deleted.

What's to understand? If the measurements are not made
at the operating frequency, there is no way to prove
that they are valid.

Both the velocity factor and the characteristic
impedance of a loading coil change dramatically
with frequency.

What is wrong with using a sinusoidal traveling
wave to measure the phase shift through a coil
at its frequency of operation?
--
73, Cecil, w5dxp.com

778. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 18:08:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2i5ne$a99$1@news.service.uci.edu>
Source record: 41078

"John Smith I" blithered:

> What "great doctorates" are you aware of which have made major
> discoveries and new advancements?

For a partial listing, you can visit:

http://nobelprize.org/nobel_prizes/lists/all/

ac6xg

779. Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 18:27:55 UTC
From: David <nospam@nospam>
Message-ID: <wM-dnXySvJo3A9HbRVnytgA@bt.com>
Source record: 41079

Standard antennas often have a standing wave on them e.g. dipole or quarterwave vertical.

Antenna is resonant and presenting good impedance. SWR is 1:1.

If feeder is coax, is there a standing wave on coax?

If feeder is open wire feeder, is there a standing wave on the feeder?

780. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 18:30:20 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2i70o$b9q$1@news.service.uci.edu>
Source record: 41080

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> It's clear that you are still back at that question. That doesn't
>> necessarily apply to everyone else though. What I would suggest is
>> that you go back, re-read, and try to undertstand the post, in
>> particular the parts you deleted.
>
>
> What's to understand? If the measurements are not made
> at the operating frequency, there is no way to prove
> that they are valid.

It appears that you would benefit from an understanding of the
spectral nature of broadband pulses.

> Both the velocity factor and the characteristic
> impedance of a loading coil change dramatically
> with frequency.

> What is wrong with using a sinusoidal traveling
> wave to measure the phase shift through a coil
> at its frequency of operation?

You need to be able to demonstrate that attaching a load resistor to a
standing wave antenna in order to turn it into a traveling wave
antenna does not dramatically change the characteristics.

73, Jim AC6XG

781. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 18:51:18 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <n09p43d5av59djur56qtqr6jpv4erqmtia@4ax.com>
Source record: 41081

On Thu, 17 May 2007 19:27:55 +0100, "David" <nospam@nospam> wrote:

>Standard antennas often have a standing wave on them e.g. dipole or
>quarterwave vertical.
>
>Antenna is resonant and presenting good impedance. SWR is 1:1.
>
>If feeder is coax, is there a standing wave on coax?
>
>If feeder is open wire feeder, is there a standing wave on the feeder?
>

http://www.w2du.com/r2ch21.pdf

782. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 19:09:16 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <9a9p43hpjcgajchs032ahb3ukkjjo02hg4@4ax.com>
Source record: 41082
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Richard Clark <kb7qhc@comcast.net> hath wroth:

>There is probably more radiation from your microwave leaking out than
>you will find coming from any wireless ISP.

Ummmm... shall we do the math?

Microwave evens are required to be below 5 mw/sq-cm at a distance of 5 cm. Food and Drug Administration/Center for Devices and Radiological Health (FDA/CDRH) performance requirements in Title 21, CFR, Part 1030.10. Ugh.

I'll assume the typical 50mw wireless access point, with the usual 2dBi rubber ducky antenna. It's easy to calculate if you assume that the radiation pattern from the rubber ducky is a sphere and you ignore near field effects.
The surface area of the sphere is:
4*Pi* radius^2 = 4 * 3.14 * 5cm ^2 = 314 sq-cm.
The 50 mw of RF is spread equally over the surface so the power density is:
50 mw / 314 sq-cm = 0.16 mw/sq-cm
which is MUCH less than the 5mw/sq-cm limit for used microwave ovens, or the 1mw/sq-cm required for new microwave ovens.

The actual power density is slightly higher because the pattern is really a torus and NOT a sphere, but it's not going to change very much. My guess(tm) is double but I'm too lazy to grind the numbers exactly. Anyway, at 5cm test distance, you're safer with a wi-fi access point than with a microwave oven.

--
Jeff Liebermann jeffl@comix.santa-cruz.ca.us
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

783. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 19:14:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <KQ13i.20991$YL5.9580@newssvr29.news.prodigy.net>
Source record: 41083

Jim Kelley wrote:
> It appears that you would benefit from an understanding of the spectral
> nature of broadband pulses.

I understand Fourier analysis. What is the benefit
of using a lot of frequencies when you could use
the frequency of interest?

> You need to be able to demonstrate that attaching a load resistor to a
> standing wave antenna in order to turn it into a traveling wave antenna
> does not dramatically change the characteristics.

Proving a negative is impossible. If you are asserting
that attaching a load resistor to a loading coil dramatically
changes the characteristics, the onus of proof is upon
you.
--
73, Cecil, w5dxp.com

784. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 19:18:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JT13i.20993$YL5.8399@newssvr29.news.prodigy.net>
Source record: 41084

David wrote:
> Standard antennas often have a standing wave on them e.g. dipole or
> quarterwave vertical.
> Antenna is resonant and presenting good impedance. SWR is 1:1.
> If feeder is coax, is there a standing wave on coax?

Not if the SWR is 1:1 on the coax.

> If feeder is open wire feeder, is there a standing wave on the feeder?

Not if the SWR is 1:1 on the open-wire feeder.
--
73, Cecil, w5dxp.com

785. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 19:32:10 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2ial6edv1@news.service.uci.edu>
Source record: 41085

Cecil Moore wrote:

> What is the benefit
> of using a lot of frequencies when you could use
> the frequency of interest?

Your memory is growing short. Do you not remember challenging me to do that very thing - claiming it was impossible? I said I would use pulses, then you said it wouldn't work, bla bla bla. Circuitious, isn't it.

> If you are asserting
> that attaching a load resistor to a loading coil dramatically
> changes the characteristics, the onus of proof is upon
> you.

It should be readily apparent to just about anyone that one does in fact significantly alter the characteristics of a system by changing it from one which has a reflection at the end to one which doesn't.

73, ac6xg

786. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 19:54:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mq23i.21000$YL5.5342@newssvr29.news.prodigy.net>
Source record: 41086

Jim Kelley wrote:
> Cecil Moore wrote:
>
>> What is the benefit
>> of using a lot of frequencies when you could use
>> the frequency of interest?
>
> Your memory is growing short. Do you not remember challenging me to do
> that very thing - claiming it was impossible? I said I would use
> pulses, then you said it wouldn't work, bla bla bla. Circuitious, isn't
> it.

No, I'm still saying the same thing. What is the benefit
of using a lot of frequencies when you could use the
frequency of interest?

>> If you are asserting
>> that attaching a load resistor to a loading coil dramatically
>> changes the characteristics, the onus of proof is upon
>> you.
>
> It should be readily apparent to just about anyone that one does in fact
> significantly alter the characteristics of a system by changing it from
> one which has a reflection at the end to one which doesn't.

So I guess it is up to you to prove that the system is
somehow non-linear in one direction only. Good luck on
that one.

A non-terminated Rhombic has both forward and reflected
currents. A terminated Rhombic has only forward current.
Exactly how is the physics of the Rhombic changed by
adding a termination resistor?
--
73, Cecil, w5dxp.com

787. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 20:33:54 UTC
From: richardharrison@webtv.net
Message-ID: <6350-464CBC32-174@storefull-3253.bay.webtv.net>
Source record: 41087

Richard Clark, KB7QHC wrote:
"Now do you have actual citations that support Phase Velocity carrying information and energy at faster than light speeds?"

Yes, but I don`t necessarily believe them. Wikipedia gives recent examples of apparent violations of the limit imposed by the speed of light. However, I infer the editor did not believe them as proving a violation.

On page 253 of "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing:

"This means that the phase velocity vpg is greater in the TM 0,1 mode than in the TEM type and, therefore, greater than 3x10 to the 8th power m/sac."

The 3rd edition of "Antennas" by Kraus, et al on page 255 is found Fig. 8-34 showing phase velocity versus helix circumference. Some helices are shown with phase velocities exceeding the speed of light.

I was one who didn`t believe W8JI`s loading coil instantly induced energy from one end to the other by magnetic induction.

Best regards, Richard Harrison, KB5WZI

788. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 20:58:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f2ifo1$i8a$1@news.service.uci.edu>
Source record: 41088

Cecil Moore wrote:
> A non-terminated Rhombic has both forward and reflected
> currents. A terminated Rhombic has only forward current.
> Exactly how is the physics of the Rhombic changed by
> adding a termination resistor?

The same physics applies to all antennas, Cecil. Would you assert
that fact gives all antennas the same characteristics?

But here's the point. Your claim is that the coil as you have modeled
it, performs the same in EZNEC as it does when it is employed as part
of a 75 meter Bugcatcher antenna. At the same time you want to claim
that there's no other way to do such testing.

It's not a reasonable viewpoint, Cecil. But you're entitled to it and
I'm happy if you want to go on having it. :-)

73, Jim AC6XG

789. Re: Phase Shift through a 75m Texas Bugcatcher Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 21:04:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <5r33i.6688$H_.5365@newssvr21.news.prodigy.net>
Source record: 41089

Jim Kelley wrote:
> But here's the point. Your claim is that the coil as you have modeled
> it, performs the same in EZNEC as it does when it is employed as part of
> a 75 meter Bugcatcher antenna. At the same time you want to claim that
> there's no other way to do such testing.

No, you missed the point. If there is any other way
to do such testing, please present it. Valid testing
methods are what we are lacking.
--
73, Cecil http://www.w5dxp.com

790. Re: High noise level except when raining, why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-17 23:27:09 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464cd71d$0$9918$4c368faf@roadrunner.com>
Source record: 41090

"mike luther" <mike.luther@ziplog.com> wrote in message
news:134ok53s1p0b807@corp.supernews.com...
> Another interesting variation of this ..
>
> Jim - NN7K wrote:
> > Stuff talking about is arcing- 6o cycles should
> > have little to do with it. Also, had friend with
> > lamps going super bright , he got electrician to
> > go thru his power panel, and outlets- several 100$
> > later, got hold of power company, and they kept
> > stalling him (no problem found). after it also
> > ate several appliances, told him to keep checking.
> > As I suspicioned, on the power pole, they found
> > where a lightning strike had annealed the Neutral,
> > at it's connection to his service, and ground
> > wire! Point being lots of these services haven't
> > been looked at in years, and drying out/ vibration
> > on these can cause a lot of greif! Jim NN7K
> >
> > merlin-7 wrote:
> >> Is the noise a 60 cycle hum ? or just noise in general? qrn or qrm?
> >> I still think that it is a grounding problem .
> >>
> >> I could be wrong but it sounds like thw same problem I had untill I
> >> expanded my ground system and tied it to my utility (meterbase ground)
> >> Then all the noise, vanished....
> >> My 2 cents
> >>
> >> "Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
> >> news:nqs2i.123$u56.5@newssvr22.news.prodigy.net...
> >>>
> >>> Another reason is that as things dry out, the
> >>> connections to the pole Losen up , as the pole
> >>> shrinks, relative to the hardware. and- induction
> >>> to , say Crossarm Braces , can cause arcing ,
> >>> between those braces ! A way to check for this is
> >>> to give a pole a swift hit with a hammer. If the
> >>> noise goes away, or is changed, probably is loose
> >>> hardware on the pole . A thought for your
> >>> consideration- Jim NN7K
> >>>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> >>>> news:pan.2007.05.15.14.14.26.692785@from.qrz.com...
> >>>>> What is it about general "noise" that makes it go way down during
> >>>>> rainy

> >>>>> weather?
> >>>>>
> >>>>
> >>
> >>
>
> Failure to bond the neutral-ground run at the power pole with the system
ground
> on the primary high voltage side at a rural site with a single pole pig
serving
> a single site can cause real problems too! Add the lightning strike
issues,
> which then, depending on the high current / low voltage point in the wave,
can
> move down into the facility wiring - or are involved with the ground line
> carried strike point on the service loop. Which then cause intermittent
arcing
> in any of the various panels of the facility. Which can be in the meter
can,
> in the primary exterior breaker box, or .. even .. AND .. in the interior
panel
> at that point!
>
> I got hit with this one at my site rather suddenly and because the power
> company and I have had a year's long history of really helping find some
of
> these issues in rural high side locations, they moved quickly. Seeing
surge
> issues at a serious telecom site which also show up as noise on the 240
side
> with flickering no/light load analog meter observation brought the bucket
crew
> out in about an hour that Sunday night in the dark.
>
> Final story. 30 years ago the power company never bonded the pole pig
ground
> neutral with the earth ground line to the primary low voltage ground line
for
> that segment at this transformer, required per current code! Arcing
damage
> issues were evident relative to the grounding neutral as well as the pig
> neutral run .. but it looked like not internal in the pig.
>
> Fixed! Because the company was good enough to realize that if you can see
this
> in an analog meter needle flicker for differential flickers even no load
inside
> the facility with 240 volt loading and minimal split voltage load across
the
> 120 volt legs, something has to be wrong in the distribution game.

>
> But you know, lightning can do strange things even still. Remember that
the
> strike(s) show(s) different damage points on lines because of the high
voltage
> vs. high current points on the waveform, which change position during the
> strike as it spans those tiny microseconds of the time it lives. And ..
weeks
> later .. no possible strike during that time of the year .. here are some
more
> of the flickers again!
>
> Answer .. neutral float issues in the interior panel as well, even with
> mechanical bind screws down hard too! We all checked that inside the
facilityu
> with the power company crew before they even went out to the pole. Fair
is
> fair. But you know, the panel's metal buss bar rod transfer from the
bound
> neutral to the bar routing in it had strike arc surface deterioration in
it
> ALSO in this case! Which of all things I found, because with the panel
cover
> off, I had walked in to start looking at things with scope meters and so
on in
> the dark that night. And saw a tiny flicker of light way under all the
wire
> and bonding line clamp - turn down connections!
>
> The guy in the bucket truck who brought their part of the service into the
code
> compliance .. after 30 years .. was surprised. Which resulted in a
review of
> a whole host of other checks around here and there. As were the crew when
I
> told them the truth about the other part of it as well. We really don't
know
> if the or which strike .. was an entry issue because of the bad ground
path
> romp out at pole level. Or this was a hit on the service loop somewhere
itself
> for the facility - then or at some other time as more than one strike.
>
> I get hit directly an average of about once a year here.
>
> But we all know that damage isn't just a one spot one swat issue. And
just
> because the lights flicker over a neutral fault doesn't mean that you can
> ignore BOTH sides of the problem. Especially at telecom sites which may
be

> unattended in operation and can suffer HUGE damage issues from this
problem.
>
> We also here realize that for a telecom site, the standard NEMA ground rod
> issue at the service entrance meter drop is really not smart either. Yes,
you
> do that, check it for secure mechanical connections. But at telecom site
> installs, you also run a few six or eight foot side surface radials from
the
> ground rod top out along the surface of the earth. That to help spread
out the
> strike along the ground surface if you get it trying to come into the
facility.
> A simple cheap trick that can save you real heartaches later. And one
even
> I, with all the real mitigation work on the tower arrays and so on plus
being a
> professional at this, had failed to do.
>
> Thus the just between us sort of understanding now that at remote telecom
sites
> such as cell towers, whatever, the tiny cost of that little array of
surface
> ground radials at the service loop ground rod site are really a simple way
to
> cut down on future problem possibilities. And this isn't in the code.
>
> The source of a problem is often from multiple vectors. I was part of it
too
> and could have helped protect me, but didn't. I was thinking, those long
years
> ago, "Well, that's over with and all the tower and inbound feed line
mitigation
> work is done. Everything is shunt fed on the towers and done right. I
really
> don't have to carry a loop surface ring around the ground at the surface
of the
> facility to the service loop entrance and so on."
>
> Yeah .. right .. .
>
> W5WQN
>
>
> --
>
>
> --> Sleep well; OS2's still awake! ;)
>
> Mike Luther

>DITTO ! <

I have found that the better you ground your station the less noise you will hear in almost every case.
Also, make sure you tie your grounding system into your homes ground rod (most of the time it is at the meter base) That helps protect you from the utility providers end, plus cuts down on noise/emissions coming from your home.

QUOTE...you also run a few six or eight foot side surface radials from the
> ground rod top out along the surface of the earth. That to help spread out the
> strike along the ground surface

You can bury the radials a few inches under ground. You can even place ground rods at the ends of the radials.

The way I look at rf/lightning grounding systems is really simple.

Lets give the bad current a really good place to go to, away from my home and my rig(s) and if you tie your homes ground into your RF grounding system (which you need to do anyway) It will help protect you from problems on your electricity providers side as well.

One odd note that may apply here or not. I tied my ground system into my chain link fence, that is tied to the neighbors fence and so on. So I ended up with a RF ground that covers a square block more or less.
My noise level on some bands dropped from a S-4 to a S-1 or so, and in some bands it (below 40meters) it disappeared completely.

Joe
KI4ILB
Solar Powered ham Radio 24/7

791. Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 09:19:26 UTC
From: KB2something_or_ other <at@nokidding.com>
Message-ID: <2crq43tb57qen4rn5n1jsvoq453tse8su6@4ax.com>
Source record: 41091

On Fri, 11 May 2007 18:50:37 -0400, "John Doe" <hgorden@adelphia.net> wrote:

>THIS IS A BS SCAM!

No way man! A friend of a friend of their third cousin's 2nd ex's
3rd in laws crack dealers former coke slut swears up and down that this
isn't BS at all, but it WORKS! It's how she can afford to stay in the
stratosphere everyday.

Honest!

Would she lie to you? I think not!

I couldn't resist. (.... .. ..)

792. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 11:01:55 UTC
From: Rob <get@real.com>
Message-ID: <de0r43d6u0m1rnsdnl2s2abc99d004mlqn@4ax.com>
Source record: 41092

On Mon, 23 Oct 2006 01:12:09 GMT, "Merlin-7 KI4ILB" <merlin-7@sc.rr.com>
wrote:

>I just bought a 10 meter mobile rig (25 watt old radio shack rig).
>
>I was planing on cutting down a 102" CB whip to 10 meter band.
>
>Anyone know of any type of antenna that would work better?
>
>Thanks
> Joe
> KI4ILB
>

I know this is an old post, but I only just now found and read it,
so I hope it is of interest to someone, if not the original poster.

Now that that's over, (whew) I installed a 102" SS whip, spring, and
ball mount I got from Rat Shack on the side of my 94 Plymouth Sundance's
left rear fender, (the trunk lid is fiberglass so I couldn't mount it there)
and it works great as it was. I got a near perfect match across the 10 meter
band without a tuner and I didn't have to trim it one iota. If I needed,
there is a little room for adjustment in the mount as the whip is secured
with a hex head set screw in the mount. That should give enough wiggle room
to get a decent match without having to cut the whip.

I have a tuner, (a Drake MN-4) I use in the car, but I use in bypass
mode for 10 meters. It will tune the whip from 20 through 10 meters with an
SWR typically under 1.5:1 on all those bands. It won't tune to a useable SWR
for anything lower in frequency than 20 meters though, so I will have to
come up with another antenna that I can hopefully use with the same mount
for 40, and hopefully through 80 meters.

Again, I know this is a reply to a nearly 7 month old post, but I
hope it is of use to someone anyway.

Rob

793. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 11:30:16 UTC
From: "J.B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <f2k2o8$6ii$1@ra.nrl.navy.mil>
Source record: 41093

Jim Kelley wrote:
> "John Smith I" blithered:
>
>> What "great doctorates" are you aware of which have made major
>> discoveries and new advancements?
>
> For a partial listing, you can visit:
>
> http://nobelprize.org/nobel_prizes/lists/all/
>
> ac6xg
>
Hello, and while categorizing discoveries and advancements as "major" are in the hands of the beholder why hasn't anyone mentioned Dr. John D. Kraus, W8JK (silent key), antenna and radiotelescope designer extraordinaire? Both the EE and ham community lost a great radio pioneer. Sincerely,

794. Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 12:29:05 UTC
From: ".J.S..." <mr_nobody@nowhere.com>
Message-ID: <464d9c12$0$15885$edfadb0f@dtext01.news.tele.dk>
Source record: 41094

The antenna is a 7.5 m vertical used for 40m and up with an ATU.

Due to space limitations I have radials in only about 90 deg of the circle
around the antenna.
30 wires app 5m long on the ground.

How will this affect the efficiency in the directions with no radials ??

Cant figure out how to model radials on/in the ground in MMANA...

/js

795. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 12:57:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2ph3i.901$H24.391@newssvr17.news.prodigy.net>
Source record: 41095

.J.S... wrote:
> How will this affect the efficiency in the directions with no radials ??

EZNEC says one loses about 3.5 dB in the direction of
no radials.
--
73, Cecil http://www.w5dxp.com

796. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 13:09:31 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <h79r43l0euctippr5i312ojj6srf8omueo@4ax.com>
Source record: 41096

On Fri, 18 May 2007 07:57:34 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>.J.S... wrote:
>> How will this affect the efficiency in the directions with no radials ??
>
>EZNEC says one loses about 3.5 dB in the direction of
>no radials.
I am not doubting your word but I am curious how you modeled this in
EZNEC?

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

797. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 13:10:35 UTC
From: ".J.S..." <mr_nobody@nowhere.com>
Message-ID: <464da5cc$0$15892$edfadb0f@dtext01.news.tele.dk>
Source record: 41097

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:2ph3i.901$H24.391@newssvr17.news.prodigy.net...
> .J.S... wrote:
>> How will this affect the efficiency in the directions with no radials ??
>
> EZNEC says one loses about 3.5 dB in the direction of
> no radials.
Uhhh, not good !

Going to see if I can sneak a few radials under the grass outside of my
garden...

/js

798. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 13:29:44 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <cTh3i.22434$JZ3.8067@newssvr13.news.prodigy.net>
Source record: 41098

John Ferrell wrote:
> I am not doubting your word but I am curious how you modeled this in
> EZNEC?

I modeled it on 40m with radials elevated one
foot above ground. Note: one foot is 0.007 WL
on 40m, admittedly ballpark, but roughly half
the power seems to be lost in the direction
of no radials. Maybe someone with NEC-4 can
provide a more accurate simulation.

The good news is that losing half the power is
roughly half an S-Unit.
--
73, Cecil http://www.w5dxp.com

799. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 13:40:36 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns993443F207B76doldridgsprintca@64.59.135.159>
Source record: 41099

Richard Clark <kb7qhc@comcast.net> wrote in
news:8upn435htri9mp0932o4ido0tuvl0d4mke@4ax.com:

> On Wed, 16 May 2007 17:56:45 GMT, Dave Oldridge
> <doldridg@leavethisoutshaw.ca> wrote:
>
>>Is your Google skill REALLY that limited? Just type "MMANA-GAL" into
>>Google (quotes and all) and you will get all the information you need.
>
> Hi Dave,
>
> Is this the advice we should offer everyone? What purpose would the
> group have over such an abundance of information?

Actually, I'd rather help someone USE MMANA-GAL after they find it. And
Google is the fastest way to find it.

--
Dave Oldridge+
ICQ 1800667

800. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 15:14:59 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1179501361_11729@sp12lax.superfeed.net>
Source record: 41100

Cecil Moore wrote:
> John Ferrell wrote:
>> I am not doubting your word but I am curious how you modeled this in
>> EZNEC?
>
> I modeled it on 40m with radials elevated one
> foot above ground. Note: one foot is 0.007 WL
> on 40m, admittedly ballpark, but roughly half
> the power seems to be lost in the direction
> of no radials. Maybe someone with NEC-4 can
> provide a more accurate simulation.
>
> The good news is that losing half the power is
> roughly half an S-Unit.

Hi Cecil,

Just curious. Half the power of what?
120 radials 1 foot off ground? Input power?

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

801. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 15:22:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <kxj3i.3072$y_7.749@newssvr27.news.prodigy.net>
Source record: 41101

Chuck wrote:
> Just curious. Half the power of what?

Sorry for the confusion. The 3.5 dB is the front to back
ratio where the front is the side with radials.
--
73, Cecil, w5dxp.com

802. Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 15:28:40 UTC
From: PPP <pispaspos@gmail.com>
Message-ID: <1179502120.739572.301680@k79g2000hse.googlegroups.com>
Source record: 41102

Hi,

>From my search, I found two companies that manufacture field strength meters: Potomac Instruments and Z-Technology. I was wondering if there are others. It seems that these companies do not go past 3Ghz.

We are interested in measuring field strength all the way up to 18Ghz. Does anyone know of any manufacturers that do this?

An alternative would be to use spectrum analyzers with the right antenna, but I'm not aware of any spectrum analyzer that measure field strength. From my lab experience, we were mostly dealing with dBm. I did not see any option for V/m. Plus, they are very expensive. Thanks!

803. Re: OCF Sloping Dipole Txmsn Line Input Resistance Measurement

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 15:31:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fCj3i.924$H24.33@newssvr17.news.prodigy.net>
Source record: 41103

Richard Clark wrote:
> Look at your data comparison again and ask: Should it be 4:1 or 1:4?

Seems to me the convention for a BA-LUN is to put the balanced
number first followed by the unbalanced number.
--
73, Cecil, w5dxp.com

804. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 17:43:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k2or43p915r5c7stlrotr6b75a5jemn29e@4ax.com>
Source record: 41104

On 18 May 2007 08:28:40 -0700, PPP <pispaspos@gmail.com> wrote:

>Hi,
>
>>From my search, I found two companies that manufacture field strength
>meters: Potomac Instruments and Z-Technology. I was wondering if there
>are others. It seems that these companies do not go past 3Ghz.
>
>We are interested in measuring field strength all the way up to 18Ghz.
>Does anyone know of any manufacturers that do this?
>
>An alternative would be to use spectrum analyzers with the right
>antenna, but I'm not aware of any spectrum analyzer that measure field
>strength. From my lab experience, we were mostly dealing with dBm. I
>did not see any option for V/m. Plus, they are very expensive. Thanks!

Antenna, rectifier, capacitor - in that order. Cost, roughly $1.

73's
Richard Clark, KB7QHC

805. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 20:58:55 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1179521935.651716.235490@y80g2000hsf.googlegroups.com>
Source record: 41105

On 18 mayo, 17:28, PPP <pispas...@gmail.com> wrote:
> Hi,
>
> >From my search, I found two companies that manufacture field strength
>
> meters: Potomac Instruments and Z-Technology. I was wondering if there
> are others. It seems that these companies do not go past 3Ghz.
>
> We are interested in measuring field strength all the way up to 18Ghz.
> Does anyone know of any manufacturers that do this?
>
> An alternative would be to use spectrum analyzers with the right
> antenna, but I'm not aware of any spectrum analyzer that measure field
> strength. From my lab experience, we were mostly dealing with dBm. I
> did not see any option for V/m. Plus, they are very expensive. Thanks!

Hi,

It seems that your interest is professional measurements.

You may contact www.dare.nl. Mostly known as an EMC test house, they also make several products for EMC measurements. They have a light powered (via fibre) wide band field strength meter (RadiSense 18 GHz). You can find the product on their web site under the tab EMC products.

Best regards,

Wim
PA3DJS

806. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 21:51:38 UTC
From: Quaoar <quaoar@tenthplanet.net>
Message-ID: <N6ednRkd6ftDgtPbnZ2dnUVZ_uSgnZ2d@comcast.com>
Source record: 41106
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Jeff Liebermann wrote:
> Richard Clark <kb7qhc@comcast.net> hath wroth:
>
>> There is probably more radiation from your microwave leaking out than
>> you will find coming from any wireless ISP.
>
> Ummmm... shall we do the math?
>
> Microwave evens are required to be below 5 mw/sq-cm at a distance of 5
> cm. Food and Drug Administration/Center for Devices and Radiological
> Health (FDA/CDRH) performance requirements in Title 21, CFR, Part
> 1030.10. Ugh.
>
> I'll assume the typical 50mw wireless access point, with the usual
> 2dBi rubber ducky antenna. It's easy to calculate if you assume that
> the radiation pattern from the rubber ducky is a sphere and you ignore
> near field effects.
> The surface area of the sphere is:
> 4*Pi* radius^2 = 4 * 3.14 * 5cm ^2 = 314 sq-cm.
> The 50 mw of RF is spread equally over the surface so the power
> density is:
> 50 mw / 314 sq-cm = 0.16 mw/sq-cm
> which is MUCH less than the 5mw/sq-cm limit for used microwave ovens,
> or the 1mw/sq-cm required for new microwave ovens.
>
> The actual power density is slightly higher because the pattern is
> really a torus and NOT a sphere, but it's not going to change very
> much. My guess(tm) is double but I'm too lazy to grind the numbers
> exactly. Anyway, at 5cm test distance, you're safer with a wi-fi
> access point than with a microwave oven.
>

Nice analysis! One point: the wireless signal is constant, but the
household microwave signal is semi-discreet in time.

If the microwave is in use one hour per day [the 1 hour per day use of
a microwave oven is in my experience far greater than most people use
for the cup of tea, soup, etc.], the equivalent energy exposure of the
two sources of radiation are (using your numbers):

Household microwave oven: 1 hour * 5 mw/sq cm = 3600sec * 5mw/sq cm =
1800 mw-sec/sq cm.

Wireless transmitter: 24 hr * 0.16 mw/sq cm = 24 * 3600 sec/hr * 0.16 mw/sq cm = 13,825 mw-sec/sq cm.

The total energy exposure from the wireless is 7.68 times the microwave exposure on an integrated basis. This is admittedly a quick estimate, since almost no one is located directly to either source in practice. Yet, it is not conclusive that the wireless is trivial compared to the microwave.

Q

807. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 22:03:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Rop3i.2644$Qz.1810@trndny09>
Source record: 41107
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Quaoar" <quaoar@tenthplanet.net> wrote in message
news:N6ednRkd6ftDgtPbnZ2dnUVZ_uSgnZ2d@comcast.com...
> Jeff Liebermann wrote:
>> Richard Clark <kb7qhc@comcast.net> hath wroth:
>>
>>> There is probably more radiation from your microwave leaking out than
>>> you will find coming from any wireless ISP.
>>
>> Ummmm... shall we do the math?
>>
>> Microwave evens are required to be below 5 mw/sq-cm at a distance of 5
>> cm. Food and Drug Administration/Center for Devices and Radiological
>> Health (FDA/CDRH) performance requirements in Title 21, CFR, Part
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>>
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>> 2dBi rubber ducky antenna. It's easy to calculate if you assume that
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>> exactly. Anyway, at 5cm test distance, you're safer with a wi-fi
>> access point than with a microwave oven.
>>
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> Nice analysis! One point: the wireless signal is constant, but the
> household microwave signal is semi-discreet in time.
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> If the microwave is in use one hour per day [the 1 hour per day use of a
> microwave oven is in my experience far greater than most people use for
> the cup of tea, soup, etc.], the equivalent energy exposure of the two
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>
> Wireless transmitter: 24 hr * 0.16 mw/sq cm = 24 * 3600 sec/hr * 0.16
> mw/sq cm = 13,825 mw-sec/sq cm.
>
> The total energy exposure from the wireless is 7.68 times the microwave
> exposure on an integrated basis. This is admittedly a quick estimate,
> since almost no one is located directly to either source in practice. Yet,
> it is not conclusive that the wireless is trivial compared to the
> microwave.
>
> Q

ah, but don't forget that most users that have wireless access points also have a wireless client computer that is also transmitting the same type of signal.... and they sit within easy reach of those computers, often for long hours.

808. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 23:07:07 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464e23eb$0$19462$4c368faf@roadrunner.com>
Source record: 41108

"Rob" <get@real.com> wrote in message
news:de0r43d6u0m1rnsdnl2s2abc99d004mlqn@4ax.com...
> On Mon, 23 Oct 2006 01:12:09 GMT, "Merlin-7 KI4ILB" <merlin-7@sc.rr.com>
> wrote:
>
> >I just bought a 10 meter mobile rig (25 watt old radio shack rig).
> >
> >I was planing on cutting down a 102" CB whip to 10 meter band.
> >
> >Anyone know of any type of antenna that would work better?
> >
> >Thanks
> > Joe
> > KI4ILB
> >
>
> I know this is an old post, but I only just now found and read it,
> so I hope it is of interest to someone, if not the original poster.
>
> Now that that's over, (whew) I installed a 102" SS whip, spring, and
> ball mount I got from Rat Shack on the side of my 94 Plymouth Sundance's
> left rear fender, (the trunk lid is fiberglass so I couldn't mount it
there)
> and it works great as it was. I got a near perfect match across the 10
meter
> band without a tuner and I didn't have to trim it one iota. If I needed,
> there is a little room for adjustment in the mount as the whip is secured
> with a hex head set screw in the mount. That should give enough wiggle
room
> to get a decent match without having to cut the whip.
>
> I have a tuner, (a Drake MN-4) I use in the car, but I use in bypass
> mode for 10 meters. It will tune the whip from 20 through 10 meters with
an
> SWR typically under 1.5:1 on all those bands. It won't tune to a useable
SWR
> for anything lower in frequency than 20 meters though, so I will have to
> come up with another antenna that I can hopefully use with the same mount
> for 40, and hopefully through 80 meters.
>
> Again, I know this is a reply to a nearly 7 month old post, but I
> hope it is of use to someone anyway.
>
> Rob

>
Thanks, I have my home up for sale, so I have not had time to mount the 10 meter rig in my truck yet. Besides the rig is in storage 300 miles away from here.
I hope my home sells soon, I had to take down my tower and pack up most everything I own to show the house... I think I am going thru withdrawl...

Im glad to hear that it works well, I may toss the analiser on the 11 meter whip that is already on the truck. If it works out I may only need to add an antenna switch.
I only use the 11 meter rig durring hurricane season but it would be nice not to need to change antennas when I do need it. The truck also has a 2 meter colinear on it thats 6 feet tall or so. I would not mind adding another HF antenna but 2 long antennas on it is enough.
Thanks again
Joe

809. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 23:19:26 UTC
From: seaweedsteve <seaweedsteve@gmail.com>
Message-ID: <1179530366.603677.149100@q75g2000hsh.googlegroups.com>
Source record: 41109
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On May 18, 4:51 pm, Quaoar <qua...@tenthplanet.net> wrote:
>
> Nice analysis! One point: the wireless signal is constant

It may be on all the time, but the radio only transmits for the moment that it has to, no? You would have to be running a LOT of data through to get constant transmission if I understand correctly. So, imagine, "click>burst>wait long time>burst> wait>burst burst. I think if you could time it, it might not add up to that much time it's on.

And then a client adapter will typically be transmitting a lot less than the AP as most internet usage is assymetrical.

Finally, in the case mentioned, they are putting a yagi or dish (very directional antennas) on the side of the house. It isn't even near anybody. So, first of all, you will probably have to get up on a ladder and stick your face in the antenna to catch any rays and then it will only be a burst while your pc requests a page. And even then it will be weak, like a cellphone.

As far as the signal from the ISP, well, that's all around you whether you have an antenna or not. City folks are certainly bathed in a constant barrage of microwave and other radio signals. Good thing they are so weak.

Steve

810. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-18 23:50:01 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <etes43hd7i373ej7gi2flf32kis311sk9q@4ax.com>
Source record: 41110

On Fri, 18 May 2007 13:29:44 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>John Ferrell wrote:
>> I am not doubting your word but I am curious how you modeled this in
>> EZNEC?
>
>I modeled it on 40m with radials elevated one
>foot above ground. Note: one foot is 0.007 WL
>on 40m, admittedly ballpark, but roughly half
>the power seems to be lost in the direction
>of no radials. Maybe someone with NEC-4 can
>provide a more accurate simulation.
>
>The good news is that losing half the power is
>roughly half an S-Unit.
Thanks!
I have been using the same tactic for my modeling but I was unsure
about the accuracy of the answers.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

811. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 00:20:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Uor3i.29377$Um6.18209@newssvr12.news.prodigy.net>
Source record: 41111

John Ferrell wrote:
> I have been using the same tactic for my modeling but I was unsure
> about the accuracy of the answers.

I am also unsure about the accuracy of the answers.
But halitosis is better than no breath at all. :-)
--
73, Cecil http://www.w5dxp.com

812. Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 01:33:34 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <Pine.OSF.4.33.0705182031490.23249-100000@worf.netins.net>
Source record: 41112

On Fri, 11 May 2007, Irv Finkleman wrote:

> Date: Fri, 11 May 2007 22:50:17 GMT
> From: Irv Finkleman <finkirv@shaw.ca>
> Newsgroups: rec.radio.amateur.antenna
> Subject: Re: YOU WON'T BELIEVE THIS, IT'S CRAZY BUT IT WORKS
>
> matty@mindless.com wrote:
> > THIS REALLY CAN MAKE YOU EASY MONEY! IT WORKS!
> > BUT YOU HAVE TO FOLLOW IT CAREFULLY FOR IT TO WORK!
>
> You betcha! Just as soon as I get my shack organized!
>
> Irv VE6BP

Turned out to be a pyramid scheme, but given the subject and
newsgroup, I thought that it might be another EH Antenna thread.

--Teh

813. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 03:13:48 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <464e6b6a$0$1404$4c368faf@roadrunner.com>
Source record: 41113

"Rob" <get@real.com> wrote in message
news:de0r43d6u0m1rnsdnl2s2abc99d004mlqn@4ax.com...
> On Mon, 23 Oct 2006 01:12:09 GMT, "Merlin-7 KI4ILB" <merlin-7@sc.rr.com>
> wrote:
>
>>I just bought a 10 meter mobile rig (25 watt old radio shack rig).
>>
>>I was planing on cutting down a 102" CB whip to 10 meter band.
>>
>>Anyone know of any type of antenna that would work better?
>>
>>Thanks
>> Joe
>> KI4ILB
>>
>
> I know this is an old post, but I only just now found and read it,
> so I hope it is of interest to someone, if not the original poster.
>
> Now that that's over, (whew) I installed a 102" SS whip, spring, and
> ball mount I got from Rat Shack on the side of my 94 Plymouth Sundance's
> left rear fender, (the trunk lid is fiberglass so I couldn't mount it
> there)
> and it works great as it was. I got a near perfect match across the 10
> meter
> band without a tuner and I didn't have to trim it one iota. If I needed,
> there is a little room for adjustment in the mount as the whip is secured
> with a hex head set screw in the mount. That should give enough wiggle
> room
> to get a decent match without having to cut the whip.
>
> I have a tuner, (a Drake MN-4) I use in the car, but I use in bypass
> mode for 10 meters. It will tune the whip from 20 through 10 meters with
> an
> SWR typically under 1.5:1 on all those bands. It won't tune to a useable
> SWR
> for anything lower in frequency than 20 meters though, so I will have to
> come up with another antenna that I can hopefully use with the same mount
> for 40, and hopefully through 80 meters.
>
> Again, I know this is a reply to a nearly 7 month old post, but I
> hope it is of use to someone anyway.
>
> Rob

>

The long antenna probably tunes up on 10M because of the fiberglass trunk lid. Had the lid been metal it would have been the responsibel for the largest portion of the capacitance needed to resonate the antenna. Without this capcitance the antenna will need to be longer than normal to achive resonance on 10M. One advantage of this that you have noted is a better match to 50 ohms. Longer antenna = greater L, fibergllass lid = less capacitance which gives a higher LC ratio at resonance.

Jimmie

814. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 05:09:43 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <Tyv3i.518$px2.229@bignews4.bellsouth.net>
Source record: 41114

```
".J.S..." <mr_nobody@nowhere.com> wrote in message
news:464da5cc$0$15892$edfadb0f@dtext01.news.tele.dk...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:2ph3i.901$H24.391@newssvr17.news.prodigy.net...
>> .J.S... wrote:
>>> How will this affect the efficiency in the directions with no radials ??
>>
>> EZNEC says one loses about 3.5 dB in the direction of
>> no radials.
> Uhhh, not good !
>
> Going to see if I can sneak a few radials under the grass outside of my
> garden...
>

Or - just turn on the sprinklers while you're on the air.
Maybe the ground will compensate for the shortage of copper if its wet.
w4pmj
Hal
```

815. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 05:21:15 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <prvs43ttkhdcc3076id2el43lt1nbaquu5@4ax.com>
Source record: 41115
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Quaoar <quaoar@tenthplanet.net> hath wroth:

>Nice analysis! One point: the wireless signal is constant, but the
>household microwave signal is semi-discreet in time.

You have it backwards. When belching RF, the microwave oven power envelope looks like a half wave rectified waveform at 120Hz (twice the power line frequency) at "full power". The average power is about 70% of the peak power. However, you're correct that most people don't run a microwave oven continuously all day long. (Exception... Microwave plastic injection molding pre-heater and other industrial microwave ovens). I think (guess) that FDA/CDRH 1030.10 specifies RMS (heating) or average power, not peak power.

802.11g has an even lower average duty cycle. FCC 15.247 specs are written to prevent any one spread spectrum wireless device from hogging all the air time. That means that it not only doesn't sit on one frequency, but also turns off the power for some time to allow other devices on the same RF channel to function. I don't recall the exact numbers and am too burned out tonite to dig through the specs. However, I did find:
<http://www.elliottlabs.com/documents/OFDM.pdf>
which tries to analyze the typical transmit duty cycle for 802.11g. The authors guess is about 10% for typical traffic, which I guess is a good typical value. Like the microwave oven, most users are not belching wireless data continuously. (Exception... streaming wireless video).

>If the microwave is in use one hour per day [the 1 hour per day use of
>a microwave oven is in my experience far greater than most people use
>for the cup of tea, soup, etc.], the equivalent energy exposure of the
>two sources of radiation are (using your numbers):
>
>Household microwave oven: 1 hour * 5 mw/sq cm = 3600sec * 5mw/sq cm =
>1800 mw-sec/sq cm.

OK, I'll use that. However, note that the 5mw/sq-cm is probably average power.

>Wireless transmitter: 24 hr * 0.16 mw/sq cm = 24 * 3600 sec/hr * 0.16
>mw/sq cm = 13,825 mw-sec/sq cm.

Nope. You forgot to apply the duty cycle of 10% transmission time. That reduces it to 1383 mw-sec/sq-cm. However, you're also assuming that this user spends 24 hours in front of the wireless access point.

That's possible for confirmed programmers, hackers, and fanatical gamers, but methinks the average user will see a much shorter exposure time. If we assume a workplace model, I would guess 8 hours exposure which would reduce the exposure rate to 461 mw-sec/sq-cm, or about 1/4 that of the microwave oven.

Similarly, the 10% average duty cycle varies by the type of user. The fanatical file sharing addict will probably approach 100% duty cycle, while the light weight mail and web page surfer, will be close to 10%.

>The total energy exposure from the wireless is 7.68 times the microwave
>exposure on an integrated basis. This is admittedly a quick estimate,
>since almost no one is located directly to either source in practice.
>Yet, it is not conclusive that the wireless is trivial compared to the
>microwave.

The problem with this type of analysis is that the various assumptions that have been made in order to generate a single "typical" value have such a wide range of potential errors, that the resultant conglomerated calculated values are almost worthless. The main problem is that the typical wireless user may not also be a typical microwave oven user. In addition, we've ignored the distance from the RF emitter, which has a huge effect on exposure (inverse square law).

I suspect that I might be the worst case user. My Verizon XV6700 cell phone has an 802.11b radio inside. I often leave it on doing the WiFiFoFum data collection. Even at 10% or less duty cycle, the proximity of the RF emitter on my belt dramatically increases my exposure.

The correct way to do this would be some manner of dosimeter, similar to an ionizing radiation dosimeter. It takes into consideration duty cycle, signal strength, distance from emitter, and such. It just accumulates the total RF power exposure. I could probably design and build one, but I don't think that selling to the paranoid market is going to be a accepted as a winning business model.

--
Jeff Liebermann jeffl@comix.santa-cruz.ca.us
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

816. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 05:25:18 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <uNv3i.522$px2.441@bignews4.bellsouth.net>
Source record: 41116

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:464e6b6a$0$1404$4c368faf@roadrunner.com...
>
> "Rob" <get@real.com> wrote in message
> news:de0r43d6u0m1rnsdnl2s2abc99d004mlqn@4ax.com...
>> On Mon, 23 Oct 2006 01:12:09 GMT, "Merlin-7 KI4ILB" <merlin-7@sc.rr.com>
>> wrote:
>>
>>>I just bought a 10 meter mobile rig (25 watt old radio shack rig).
>>>
>>>I was planing on cutting down a 102" CB whip to 10 meter band.
>>>
>>>Anyone know of any type of antenna that would work better?
>>>
>>>Thanks
>>> Joe
>>> KI4ILB
>>>
>>
>> I know this is an old post, but I only just now found and read it,
>> so I hope it is of interest to someone, if not the original poster.
>>
>> Now that that's over, (whew) I installed a 102" SS whip, spring, and
>> ball mount I got from Rat Shack on the side of my 94 Plymouth Sundance's
>> left rear fender, (the trunk lid is fiberglass so I couldn't mount it
>> there)
>> and it works great as it was. I got a near perfect match across the 10
>> meter
>> band without a tuner and I didn't have to trim it one iota. If I needed,
>> there is a little room for adjustment in the mount as the whip is secured
>> with a hex head set screw in the mount. That should give enough wiggle
>> room
>> to get a decent match without having to cut the whip.
>>
>> I have a tuner, (a Drake MN-4) I use in the car, but I use in bypass
>> mode for 10 meters. It will tune the whip from 20 through 10 meters with
>> an
>> SWR typically under 1.5:1 on all those bands. It won't tune to a useable
>> SWR
>> for anything lower in frequency than 20 meters though, so I will have to
>> come up with another antenna that I can hopefully use with the same mount
>> for 40, and hopefully through 80 meters.
>>
>> Again, I know this is a reply to a nearly 7 month old post, but I

>> hope it is of use to someone anyway.
>>
>> Rob
>>
>
> The long antenna probably tunes up on 10M because of the fiberglass trunk
> lid. Had the lid been metal it would have been the responsibel for the
> largest portion of the capacitance needed to resonate the antenna. Without
> this capcitance the antenna will need to be longer than normal to achive
> resonance on 10M. One advantage of this that you have noted is a better
> match to 50 ohms. Longer antenna = greater L, fibergllass lid = less
> capacitance which gives a higher LC ratio at resonance.
>
> Jimmie

He mounted the antenna on the fender (because the trunk was fiberglass).
With that in mind, how does the trunk lid being fiberglass lessen the
capacitance of the circuit?
Doesn't the fender 'take the place' of the trunk lid?
I would reccommend someone using a metal trunk lid as a mounting surface to
install some copper wire jumpers from the lid to the rest of the body. Some
folks even go ahead and install copper jumpers to join all parts of the body
to each other and to the frame, motor, and neg battery terminal.

817. Re: Efficiency of Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 12:18:55 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <0sqt43luhv8kolrhu9i2318ol8efeafj2g@4ax.com>
Source record: 41117

On Sat, 19 May 2007 00:20:04 GMT, Cecil Moore <nospam@w5dxp.com>
wrote:

>John Ferrell wrote:
>> I have been using the same tactic for my modeling but I was unsure
>> about the accuracy of the answers.
>
>I am also unsure about the accuracy of the answers.
>But halitosis is better than no breath at all. :-)
I agree.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

818. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 17:15:57 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f2nbcn$3dr$1@aioe.org>
Source record: 41118

With the right accessories for it including its calibrated antenna(s),
and deep pockets, the Z-Technology R-507 Portable Field Strength
Meter will get you from 0.3 MHz to 1 GHz with +/- 2 dB accuracy
traceable to NIST.

The calibrated antennas allow a direct readout in units of dBmW,
dBï¿½V, or dBï¿½V/m.

http://www.ztechnology.com/

RF

819. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 18:07:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <464f3cfb$0$2817$4c368faf@roadrunner.com>
Source record: 41120

```
"Hal Rosser" <hmrosser@bellsouth.net> wrote in message
news:uNv3i.522$px2.441@bignews4.bellsouth.net...
>
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> news:464e6b6a$0$1404$4c368faf@roadrunner.com...
>>
>> "Rob" <get@real.com> wrote in message
>> news:de0r43d6u0m1rnsdnl2s2abc99d004mlqn@4ax.com...
>>> On Mon, 23 Oct 2006 01:12:09 GMT, "Merlin-7 KI4ILB" <merlin-7@sc.rr.com>
>>> wrote:
>>>
>>>>I just bought a 10 meter mobile rig (25 watt old radio shack rig).
>>>>
>>>>I was planing on cutting down a 102" CB whip to 10 meter band.
>>>>
>>>>Anyone know of any type of antenna that would work better?
>>>>
>>>>Thanks
>>>> Joe
>>>> KI4ILB
>>>>
>>>
>>> I know this is an old post, but I only just now found and read it,
>>> so I hope it is of interest to someone, if not the original poster.
>>>
>>> Now that that's over, (whew) I installed a 102" SS whip, spring, and
>>> ball mount I got from Rat Shack on the side of my 94 Plymouth Sundance's
>>> left rear fender, (the trunk lid is fiberglass so I couldn't mount it
>>> there)
>>> and it works great as it was. I got a near perfect match across the 10
>>> meter
>>> band without a tuner and I didn't have to trim it one iota. If I
>>> needed,
>>> there is a little room for adjustment in the mount as the whip is
>>> secured
>>> with a hex head set screw in the mount. That should give enough wiggle
>>> room
>>> to get a decent match without having to cut the whip.
>>>
>>> I have a tuner, (a Drake MN-4) I use in the car, but I use in bypass
>>> mode for 10 meters. It will tune the whip from 20 through 10 meters with
>>> an
>>> SWR typically under 1.5:1 on all those bands. It won't tune to a useable
>>> SWR
```

>>> for anything lower in frequency than 20 meters though, so I will have to
>>> come up with another antenna that I can hopefully use with the same
>>> mount
>>> for 40, and hopefully through 80 meters.
>>>
>>> Again, I know this is a reply to a nearly 7 month old post, but I
>>> hope it is of use to someone anyway.
>>>
>>> Rob
>>>
>>
>> The long antenna probably tunes up on 10M because of the fiberglass trunk
>> lid. Had the lid been metal it would have been the responsibel for the
>> largest portion of the capacitance needed to resonate the antenna.
>> Without this capcitance the antenna will need to be longer than normal to
>> achive resonance on 10M. One advantage of this that you have noted is a
>> better match to 50 ohms. Longer antenna = greater L, fibergllass lid =
>> less capacitance which gives a higher LC ratio at resonance.
>>
>> Jimmie
>
> He mounted the antenna on the fender (because the trunk was fiberglass).
> With that in mind, how does the trunk lid being fiberglass lessen the
> capacitance of the circuit?
> Doesn't the fender 'take the place' of the trunk lid?
> I would reccommend someone using a metal trunk lid as a mounting surface
> to install some copper wire jumpers from the lid to the rest of the body.
> Some folks even go ahead and install copper jumpers to join all parts of
> the body to each other and to the frame, motor, and neg battery terminal.
>
>

Which do you think will offer more capacitance to the antenna, a metal trunk lid wich is a 90 degrees to the antenna and relaatively wide or the narrow fender that falls away from the antenna quickly.

Jimmie

820. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 18:55:01 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <464f3a56$0$9889$4c368faf@roadrunner.com>
Source record: 41119

>>snip<<<
>
> He mounted the antenna on the fender (because the trunk was fiberglass).
> With that in mind, how does the trunk lid being fiberglass lessen the
> capacitance of the circuit?
> Doesn't the fender 'take the place' of the trunk lid?
> I would reccommend someone using a metal trunk lid as a mounting surface
to
> install some copper wire jumpers from the lid to the rest of the body.
Some
> folks even go ahead and install copper jumpers to join all parts of the
body
> to each other and to the frame, motor, and neg battery terminal.
>
>
I am the king of grounding..
One note on that...most tail pipes on cars/trucks are hung with rubber
hangers in the middle of them so that they can flex. What you end up with is
a large diameter pipe (sometimes they match up on a frequency that you use),
mostly around 10 meter band but I guess It could be any number of
frequency's depending on the length of pipe)
I have found cases where the radio was picking up, what sounded like
ignition noise but after the tail pipe was grounded in a couple of places,
the noise dissapeared.

Joe

821. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 21:53:44 UTC
From: nx7u <nx7u@cox.net>
Message-ID: <1179611624.651646.234730@p47g2000hsd.googlegroups.com>
Source record: 41121

The simplist route to measuring microwave field strength is a spectrum
analyzer and a standard-gain horn antenna.
You can then convert from the dBm measurement of the spectrum analyzer
to dBuV/m by using the calculated gain of the horn antenna, accounting
for the loss in any interconnecting coaxial cables/waveguides.
You can even build your own standard gain antenna, see http://www.w1ghz.org.
Or try eBay.

On May 18, 8:28 am, PPP <pispas...@gmail.com> wrote:
> Hi,
>
> >From my search, I found two companies that manufacture field strength
>
> meters: Potomac Instruments and Z-Technology. I was wondering if there
> are others. It seems that these companies do not go past 3Ghz.
>
> We are interested in measuring field strength all the way up to 18Ghz.
> Does anyone know of any manufacturers that do this?
>
> An alternative would be to use spectrum analyzers with the right
> antenna, but I'm not aware of any spectrum analyzer that measure field
> strength. From my lab experience, we were mostly dealing with dBm. I
> did not see any option for V/m. Plus, they are very expensive. Thanks!

822. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-19 23:16:36 UTC
From: herbert.don@gmail.com
Message-ID: <1179616596.667335.118170@p77g2000hsh.googlegroups.com>
Source record: 41122

On May 17, 11:27 am, "David" <nospam@nospam> wrote:
> Standard antennas often have a standing wave on them e.g. dipole or
> quarterwave vertical.
>
> Antenna is resonant and presenting good impedance. SWR is 1:1.
so it is either 36 or 72 ohms
>
> If feeder is coax, is there a standing wave on coax?
50 ohm coax = yes
>
> If feeder is open wire feeder, is there a standing wave on the feeder?
not 50 ohm twinline = yes

823. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 03:44:16 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <XtP3i.4343$Hk.3134@bignews8.bellsouth.net>
Source record: 41123

>>
>
> Which do you think will offer more capacitance to the antenna, a metal
> trunk lid wich is a 90 degrees to the antenna and relaatively wide or the
> narrow fender that falls away from the antenna quickly.
>
> Jimmie

But he said the trunk lid was fiberglass - not metal - so the fender is the
better choice.
I know a metal trunk lid would be better - but there was not on available.
Read his Original post again.

824. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 12:10:24 UTC
From: David <nospam@nospam>
Message-ID: <OJGdnQTYc7Ytp83bnZ2dnUVZ8qugnZ2d@bt.com>
Source record: 41124

The last reply says "twinline = yes" i.e. that there is a standing wave on the open wire feeder, even though SWR is 1:1.

In the book Antenna Theory and Design by Robert S. Elliott, on page 60 there is figure 2.2 titled "The dipole as a transmission line that is opened out". The same figure is figure 1.15 on page 18 of Antenna Theory by Constatine Balanis.

The figure shows that for a transmission line with the conductors close together,
the fields cancel. The conductors are opened out into a dipole showing the fields in phase. The diagram shows the current distribution on the dipole as approximately sinusoidal. The high current area is at centre of dipole. The diagram shows the current distribution sinewave on the dipole as also going down the feeder.

Can someone comment on the reason the current sinewave is going down the feeder? Perhaps in this example, the antenna is not resonant. I would have expected a resonant antenna to have a flatline voltage and flatline current on the feeder with only a standing wave on the dipole.

Is the current sinewave on the feeder a standing wave?

What is reason for standing wave not being on feeder? Do the forward and reflected waves cancel at dipole centre? Are the waves in phase causing resonance or a build up of signal, like pushing a swing in phase to get the swing higher and higher?

825. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 13:23:18 UTC
From: richardharrison@webtv.net
Message-ID: <17710-46504BC6-8@storefull-3257.bay.webtv.net>
Source record: 41125

Jeff Liebermann wrote:
"The average power is about 70% of the peak power."

The way I figure it, the average power is 0.707 x peak volts x 0.707x peak amps = 0,5x peak power.

Best regards, Richard Harrison, KB5WZI

826. Antennas too close for comfort?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 16:18:16 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <KJmdnRTsELow6c3bnZ2dnUVZ_h6vnZ2d@insightbb.com>
Source record: 41126

I'm planning on putting up a Diamond V2000 (6m,2m,70cm) on a side arm with the apex of an inverted Vee HF dipole hanging underneath. The two rigs these antennas go to, overlap on two bands - 10m and 6m. With the antennas in such close proximity, is there any danger of one rig 'blowing out' the front end of the other?

--
Bob D. ND9B

827. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 18:45:09 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <WbOdnQrcGqDpCs3bnZ2dnUVZ8smonZ2d@bt.com>
Source record: 41027

"David" <nospam@nospam> wrote in message
news:OJGdnQTYc7Ytp83bnZ2dnUVZ8qugnZ2d@bt.com...
> The last reply says "twinline = yes" i.e. that there is a standing wave on
> the open wire feeder, even though SWR is 1:1.
>
> In the book Antenna Theory and Design by Robert S. Elliott, on page 60
there
> is figure 2.2 titled "The dipole as a transmission line that is opened
out".
> The same figure is figure 1.15 on page 18 of Antenna Theory by Constatine
> Balanis.
>
> The figure shows that for a transmission line with the conductors close
> together,
> the fields cancel. The conductors are opened out into a dipole showing the
> fields in phase. The diagram shows the current distribution on the dipole
as
> approximately sinusoidal. The high current area is at centre of dipole.
The
> diagram shows the current distribution sinewave on the dipole as also
going
> down the feeder.
>
> Can someone comment on the reason the current sinewave is going down the
> feeder? Perhaps in this example, the antenna is not resonant. I would have
> expected a resonant antenna to have a flatline voltage and flatline
current
> on the feeder with only a standing wave on the dipole.
>
> Is the current sinewave on the feeder a standing wave?
>
> What is reason for standing wave not being on feeder? Do the forward and
> reflected waves cancel at dipole centre? Are the waves in phase causing
> resonance or a build up of signal, like pushing a swing in phase to get
the
> swing higher and higher?
>
>
David

As far as I am aware, the feeder forms part of the antenna system.
Everything from the antenna socket onwards of a transmitter potentially
forms part of the antenna and is potentially radiating signals. With a
resonant dipole, the signals in each half are in antiphase. With two closely

spaced parallel conductors, the signals in each of the conductors cancel each other out (at least partially) due to them being of equal but opposite phases. In the case of coax cable, the signal from one conductor in the centre of the cable is enclosed by the outer sheath and again the signals are cancelled out. Theory and measurements indicate that the radio frequency signals actually propagate alone the surface of the conductors, so the signal propagates along the outer surface of the central conductor of the coax cable and along the inside of the screen. Some signal also passes along the outside of the screen of a coaxial cable, upsetting the theoretically perfect balance, hence the recommendation to use a balun when using coax, it helps to stop out of balance currents flowing along the outside of the cable into the radiating part of an antenna system. This is due to the way wire coaxial cable is constructed. Waveguides and solid screen coaxial cables do not normally carry any current or voltage on their outer surfaces.

For conventional wire type antenna systems, it is the high voltage at the antenna ends that determines how much power is radiated from the antenna. A perfectly resonant antenna could be represented by a standing wave with high current and zero voltage at the antenna socket of the transceiver, gradually transforming through the antenna tuning unit, feeder system and antenna to zero current and very high voltage at the antenna ends.

From the instant the transmit key is pressed, the waves start to propagate along the feeder to the antenna and if the antenna is resonant, reflections from the end of the antenna reinforce following waves in phase and power builds in the system. After quite a few cycles a steady state is approached. As transmissions are usually made using several MHz of frequency, the 50 or 100 cycles used to establish a steady state are not of any great consequence. When transmissions are made at very low frequencies, there is a need to consider the time taken for radiating antenna systems to build to resonance, hence the very low data rates used in worldwide submarine transmissions, etc.

Mike G0ULI

828. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 18:53:42 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1179687283_17651@sp12lax.superfeed.net>
Source record: 41028

David wrote:
>
> In the book Antenna Theory and Design by Robert S. Elliott, on page 60 there
> is figure 2.2 titled "The dipole as a transmission line that is opened out".
> The same figure is figure 1.15 on page 18 of Antenna Theory by Constatine
> Balanis.
>
> The figure shows that for a transmission line with the conductors close
> together,
> the fields cancel.

Hi David,

Just a small point. The fields cancel
only at some distance from the
transmission line. If you get close
enough to the wires, the field on each
is easily detected.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

829. Re: Antennas too close for comfort?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 18:58:45 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <OcWdnWjL3Mw5B83bRVnygQA@bt.com>
Source record: 41029

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:KJmdnRTsELow6c3bnZ2dnUVZ_h6vnZ2d@insightbb.com...
> I'm planning on putting up a Diamond V2000 (6m,2m,70cm) on a side arm with
> the apex of an inverted Vee HF dipole hanging underneath. The two rigs
these
> antennas go to, overlap on two bands - 10m and 6m. With the antennas in
such
> close proximity, is there any danger of one rig 'blowing out' the front
end
> of the other?
>
> --
> Bob D. ND9B
>
>
Bob

If possible, stick a couple of back to back silicon diodes across the
begining of the receive path. This has proved adequate to protect commercial
receivers from 1kW transmissions on adjacent parallel antennas.

Mike G0ULI

830. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 19:49:12 UTC
From: herbert.don@gmail.com
Message-ID: <1179690552.416930.47880@z28g2000prd.googlegroups.com>
Source record: 41031

```
There are no twinlines with 72 Ohms
no 1;1
= standing wave
On May 20, 5:10 am, "David" <nospam@nospam> wrote:
> The last reply says "twinline = yes" i.e. that there is a standing wave on
> the open wire feeder, even though SWR is 1:1.
Swr cannot be 1;1

>
> In the book Antenna Theory and Design by Robert S. Elliott, on page 60 there
> is figure 2.2 titled "The dipole as a transmission line that is opened out".
> The same figure is figure 1.15 on page 18 of Antenna Theory by Constatine
> Balanis.
>
> The figure shows that for a transmission line with the conductors close
> together,
> the fields cancel. The conductors are opened out into a dipole showing the
> fields in phase. The diagram shows the current distribution on the dipole as
> approximately sinusoidal. The high current area is at centre of dipole. The
> diagram shows the current distribution sinewave on the dipole as also going
> down the feeder.
>
> Can someone comment on the reason the current sinewave is going down the
> feeder? Perhaps in this example, the antenna is not resonant. I would have
> expected a resonant antenna to have a flatline voltage and flatline current
> on the feeder with only a standing wave on the dipole.
>
> Is the current sinewave on the feeder a standing wave?
>
> What is reason for standing wave not being on feeder? Do the forward and
> reflected waves cancel at dipole centre? Are the waves in phase causing
> resonance or a build up of signal, like pushing a swing in phase to get the
> swing higher and higher?
```

831. rhon 25 base for sale.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 20:07:20 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <46509cc9$0$4692$4c368faf@roadrunner.com>
Source record: 41030

This is a rhon 25 concrete base, over 1 yard of Concrete !!

PLUS for $160,000, I will throw in a 1,640 sf home, A 12 by 16 shed with AC and cable TV!!! on a .4 acre lot , In Summerville, SC.

Sorry I could not help myself.

I took down my tower so that I could show the house but I cant bring myself to cut the tower base off flush with the concrete. Right now there is a round garden table over it with its umbrella going thru the table into what would have been the place to mount a rotor at the bottom of the tower.

ON the plus side, (when this home sells, I get to start over and can change a few things.

However, I really miss my HF rig!!!

Joe
KI4ILB
Please somebody buy my home soon so I can get my station back up!
I think I am going into withdrawal...

832. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-20 21:07:05 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <bvd153lhu5jpr18s5k0uksmakge7h57dhe@4ax.com>
Source record: 41032

On 20 May 2007 12:49:12 -0700, herbert.don@gmail.com wrote:

>There are no twinlines with 72 Ohms

Wrong. There is twinlead that has the characteristic impedance of 72
ohms.

833. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 00:53:35 UTC
From: richardharrison@webtv.net
Message-ID: <3418-4650ED8F-486@storefull-3258.bay.webtv.net>
Source record: 41033

David wrote:
"Antenna is resonant and presenting good impedance. SWR is 1:1.

If the feeder is coax, is there a standing wave on the coax?

If the feeder is open wire, is there a standing wave on the feeder?"

SWR is 1:1 means the line is flat. The line matches the antenna regardless of configuration. There is no reflection from the load. Standing waves are produced by a combination of a reflected wave with the incident wave. No SWR means no reflectiion if coax, open wire, or any other feedline configuration is in use.

Best rergards, Richard Harrison, KB5WZI

834. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 01:45:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <QQ64i.21418$YL5.11329@newssvr29.news.prodigy.net>
Source record: 41034

David wrote:
> Is the current sinewave on the feeder a standing wave?

Standing wave current is usually drawn as an envelope
using maximum absolute values. If the current is drawn
as a sine wave, it may be a snapshot of a traveling wave.
A snapshot of the traveling wave on 50 ohm coax feeding
a 50 ohm antenna would be a sine wave.

The Balanis diagram is definitely standing waves
as it is NOT a sine wave but rather an envelope
of maximum absolute values. And it also is not
100% accurate as the current envelope is a
perfect half circle.
--
73, Cecil http://www.w5dxp.com

835. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 01:47:02 UTC
From: Quaoar <quaoar@tenthplanet.net>
Message-ID: <CMSdncA1PL2bZ83bnZ2dnUVZ_rTinZ2d@comcast.com>
Source record: 41035
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Jeff Liebermann wrote:
> Quaoar <quaoar@tenthplanet.net> hath wroth:
>
>> Nice analysis! One point: the wireless signal is constant, but the
>> household microwave signal is semi-discreet in time.
>
> You have it backwards. When belching RF, the microwave oven power
> envelope looks like a half wave rectified waveform at 120Hz (twice the
> power line frequency) at "full power". The average power is about 70%
> of the peak power. However, you're correct that most people don't run
> a microwave oven continuously all day long. (Exception... Microwave
> plastic injection molding pre-heater and other industrial microwave
> ovens). I think (guess) that FDA/CDRH 1030.10 specifies RMS (heating)
> or average power, not peak power.
>
> 802.11g has an even lower average duty cycle. FCC 15.247 specs are
> written to prevent any one spread spectrum wireless device from
> hogging all the air time. That means that it not only doesn't sit on
> one frequency, but also turns off the power for some time to allow
> other devices on the same RF channel to function. I don't recall the
> exact numbers and am too burned out tonite to dig through the specs.
> However, I did find:
> <http://www.elliottlabs.com/documents/OFDM.pdf>
> which tries to analyze the typical transmit duty cycle for 802.11g.
> The authors guess is about 10% for typical traffic, which I guess is a
> good typical value. Like the microwave oven, most users are not
> belching wireless data continuously. (Exception... streaming wireless
> video).
>
>> If the microwave is in use one hour per day [the 1 hour per day use of
>> a microwave oven is in my experience far greater than most people use
>> for the cup of tea, soup, etc.], the equivalent energy exposure of the
>> two sources of radiation are (using your numbers):
>>
>> Household microwave oven: 1 hour * 5 mw/sq cm = 3600sec * 5mw/sq cm =
>> 1800 mw-sec/sq cm.
>
> OK, I'll use that. However, note that the 5mw/sq-cm is probably
> average power.
>
>> Wireless transmitter: 24 hr * 0.16 mw/sq cm = 24 * 3600 sec/hr * 0.16
>> mw/sq cm = 13,825 mw-sec/sq cm.
>

> Nope. You forgot to apply the duty cycle of 10% transmission time.
> That reduces it to 1383 mw-sec/sq-cm. However, you're also assuming
> that this user spends 24 hours in front of the wireless access point.
> That's possible for confirmed programmers, hackers, and fanatical
> gamers, but methinks the average user will see a much shorter exposure
> time. If we assume a workplace model, I would guess 8 hours exposure
> which would reduce the exposure rate to 461 mw-sec/sq-cm, or about 1/4
> that of the microwave oven.
>
> Similarly, the 10% average duty cycle varies by the type of user. The
> fanatical file sharing addict will probably approach 100% duty cycle,
> while the light weight mail and web page surfer, will be close to 10%.
>
>> The total energy exposure from the wireless is 7.68 times the microwave
>> exposure on an integrated basis. This is admittedly a quick estimate,
>> since almost no one is located directly to either source in practice.
>> Yet, it is not conclusive that the wireless is trivial compared to the
>> microwave.
>
> The problem with this type of analysis is that the various assumptions
> that have been made in order to generate a single "typical" value have
> such a wide range of potential errors, that the resultant
> conglomerated calculated values are almost worthless. The main
> problem is that the typical wireless user may not also be a typical
> microwave oven user. In addition, we've ignored the distance from the
> RF emitter, which has a huge effect on exposure (inverse square law).
>
> I suspect that I might be the worst case user. My Verizon XV6700 cell
> phone has an 802.11b radio inside. I often leave it on doing the
> WiFiFoFum data collection. Even at 10% or less duty cycle, the
> proximity of the RF emitter on my belt dramatically increases my
> exposure.
>
> The correct way to do this would be some manner of dosimeter, similar
> to an ionizing radiation dosimeter. It takes into consideration duty
> cycle, signal strength, distance from emitter, and such. It just
> accumulates the total RF power exposure. I could probably design and
> build one, but I don't think that selling to the paranoid market is
> going to be a accepted as a winning business model.
>
>

I challenge your 10% duty cycle on wireless. My Belkin router is
contantly transmitting, if I can believe the wireless activity LED. No
matter, this is not a personal challenge, just a search for reality.

Q

836. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 01:51:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZW64i.1230$u56.652@newssvr22.news.prodigy.net>
Source record: 41036

Richard Harrison wrote:
> David wrote:
>> "Antenna is resonant and presenting good impedance. SWR is 1:1.
>> If the feeder is coax, is there a standing wave on the coax?
>> If the feeder is open wire, is there a standing wave on the feeder?"
>
> SWR is 1:1 means the line is flat. The line matches the antenna
> regardless of configuration. There is no reflection from the load.
> Standing waves are produced by a combination of a reflected wave with
> the incident wave. No SWR means no reflectiion if coax, open wire, or
> any other feedline configuration is in use.

Perhaps what David is actually saying is that the
50 ohm SWR meter reads 1:1 in both cases?

If a 50 ohm SWR meter reads 1:1 looking into open-wire
line, there is an SWR on the open-wire line of ~12:1,
i.e. 600/50.
--
73, Cecil http://www.w5dxp.com

837. Re: Wireless Internet service antenna, radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 02:02:58 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <2ku153hsidh53kr3r7a0rv16at9v72ppgr@4ax.com>
Source record: 41037
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Quaoar <quaoar@tenthplanet.net> hath wroth:

>I challenge your 10% duty cycle on wireless. My Belkin router is
>contantly transmitting, if I can believe the wireless activity LED. No
>matter, this is not a personal challenge, just a search for reality.

See:
<http://www.elliottlabs.com/documents/OFDM.pdf>
The author measured peak and average power, using the ratio to
determine the average duty cycle. Flooding the pipe with lots of
traffic (i.e. streaming video) might result in perhaps 80-90%
transmission time, depending on whether it has to wait for
acknowledgements (TCP), or just spews data (UDP). However, typical
mixed traffic seems to have a very low duty cycle, which is where I
conjured my 10%. Duz this help or do you want more detail?

Also, the LED is NOT a direct indication that the device is
transmitting. The transmission times are so short, that the LED would
barely be visible if directly connected to the T/R switch. You would
only see a faint flicker. In order to see the flashing light better,
the designers implimented a pulse stretcher function, that extends the
time the LED is turned on, so that you could actually see the light.

I would be happy to duplicate the tests and post the resultant
oscilloscope pictures and calculations. It's actually a very simple
setup and test. However, I'm burned out and have a few things to do
tonite. Give me a few days as I'm planning to take some time off to
catch up on all my broken promises and chores.

--
Jeff Liebermann jeffl@comix.santa-cruz.ca.us
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

838. BROADCAST ANTENNAS ON THE EMPIRE STATE BUILDING

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 02:18:55 UTC
From: Sky King <kenwood1701@hotmail.com>
Message-ID: <Oi74i.46$yl.14@newsfe12.lga>
Source record: 41038

http://www.lnl.com/esbantennas.htm

839. Re: Standing wave on feeders

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 04:22:29 UTC
From: richardharrison@webtv.net
Message-ID: <536-46511E85-581@storefull-3252.bay.webtv.net>
Source record: 41039

I miswrote:
"No SWR means no reflection-----."
No SWR would be no signal. SWR is the ratio of maximum to minimum voltage or current on a line. On a flat line, the ratio is 1:1. I meant to write: No standing wave means no reflection.

Best regards, Richard Harrison, KB5WZI

840. Re: 10 meter mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 10:48:22 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465178f2$0$4874$4c368faf@roadrunner.com>
Source record: 41040

"Hal Rosser" <hmrosser@bellsouth.net> wrote in message
news:XtP3i.4343$Hk.3134@bignews8.bellsouth.net...
>>>
>>
>> Which do you think will offer more capacitance to the antenna, a metal
>> trunk lid wich is a 90 degrees to the antenna and relaatively wide or the
>> narrow fender that falls away from the antenna quickly.
>>
>> Jimmie
>
>
> But he said the trunk lid was fiberglass - not metal - so the fender is
> the better choice.
> I know a metal trunk lid would be better - but there was not on available.
> Read his Original post again.
>

Read my post again, I was commenting on why the long(27Mhz) antenna tuned up
on 10M. I he had a metal lid he would have had to trim the antenna.

Jimmie

841. Re: BROADCAST ANTENNAS ON THE EMPIRE STATE BUILDING

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 18:40:24 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-8DC5DB.13402421052007@newsclstr03.news.prodigy.net>
Source record: 41041

In article <Oi74i.46$yl.14@newsfe12.lga>,
Sky King <kenwood1701@hotmail.com> wrote:

> http://www.lnl.com/esbantennas.htm

Cool document. I wonder what has happened since 911?

842. Force 12 C-3S Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 20:20:48 UTC
From: DMD <dmb@mon_email.com>
Message-ID: <Fan4i.37011$8d4.157613@weber.videotron.net>
Source record: 41042

Hi

I like to put down and clean my C-3S antenna this summer (if we have finally a summer here...). I looking for my manual in the shack since a month.

Anybody have a copy in PDF file of this ... book.

Thanks in advance

73

Dany VE2EBK at Hotmail.com

843. mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-21 23:56:05 UTC
From: skippy <skippy@computer.com>
Message-ID: <vv-dnXizTYILrM_bnZ2dnUVZ_qupnZ2d@comcast.com>
Source record: 41043

I would like to experiment more with antennas, but am concerned about roof issues (creating leaks) and mechanical issues like how do I calculate the side loading for a 50 ft. random wire running from 1 5-foot tripod on my roof.

I googled around, and looked at some antenna books at the public lib, but have has little success. Any suggestions? I looked at FAQ's, but haven't found much.

Thanks.

844. antennas antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 07:01:11 UTC
From: N8WWM_Is_God <N8WWM_Is_God.985877@radiobanter.com>
Message-ID: <N8WWM_Is_God.985877@radiobanter.com>
Source record: 41044

```
Miscellaneous Options
Automatically parse links in text
Attach Files
Valid file extensions: bmp doc gif jpe jpeg jpg pdf png psd txt zip

Thread Subscription
Notification Type:

Post a Poll
Yes, post a poll with this thread
Number of poll options: (Maximum: 10)

--
N8WWM_Is_God
```

845. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 10:55:51 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <wtidnfU9lqbhUc_bnZ2dnUVZ8s-qnZ2d@bt.com>
Source record: 41045

"skippy" <skippy@computer.com> wrote in message
news:vv-dnXizTYILrM_bnZ2dnUVZ_qupnZ2d@comcast.com...
> I would like to experiment more with antennas, but am concerned about
> roof issues (creating leaks) and mechanical issues like how do I
> calculate the side loading for a 50 ft. random wire running from 1
> 5-foot tripod on my roof.
>
> I googled around, and looked at some antenna books at the public lib,
> but have has little success. Any suggestions? I looked at FAQ's, but
> haven't found much.
>
> Thanks.

Skippy

Wind loading is unlikely to be a factor with random wire systems. It is mainly a factor when considering antenna towers fitted with an array at the top. Wind load increases by a factor of four every time the wind speed doubles. So if you had a tower and antenna array with a side on area of say 5 square metres and a wind load of say 20 Kg force with a 20mph wind, that sideways force would be 80 Kg with 40 mph wind and 320 Kg with an 80 mph wind.

320Kg of sideways force applied along the length on an antenna tower would be enough to start to shift even very large chunks of concrete used in a base.

Unless you have a very weak roof structure, the load imposed by a wire on a 5 foot pole is unlikely to be an issue.

Searches of the Internet show hundreds of different formulae available to calculate windloads, however most of them appear to relate to building regulations and the effect of wind loading on walls, roofs and other structures. The reason you cannot find a definitive answer is that the presure exerted by the wind depends not only on it's speed, but also the temperature, cold air is denser than warm air and applies a greater sideways presure to any structure in the way.

From the RSGB Radio Communication Handbook 6th Edition typical wind drag at 100mph is 5.81 pounds per foot length of 2 inch tubing, 0.17 pounds per foot length of 14 swg wire, 135 pounds for a typical three element 14MHz yagi antenna and 260lb for a typical cubical quad antenna.

Using a spreadsheet, these figures seem to translate into a wind loading of approximately 35 pounds per square foot at 100 mph or approximately 170 Kg per square metre at 160 kph if you prefer metric measures.

So very approximately, sideways wind load works out to the following:-

Windspeed Wind Load per Square Foot Wind Load per Square Metre
12.5 mph 1/2 pound
2.6 Kg
25 mph 2 pounds
11 Kg
50 mph 9 pounds
43 Kg
100 mph 35 pounds
170 Kg

These are very approximate figures and are only suitable for a ball park estimate of wind loading on your antenna systems. When calculating the strength of support guys needed to resist wind pressure add a safety factor of six or more.

Mike G0ULI

846. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 12:38:45 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4652e443@clear.net.nz>
Source record: 41046

Mike Kaliski wrote:
> "skippy" <skippy@computer.com> wrote in message
> news:vv-dnXizTYILrM_bnZ2dnUVZ_qupnZ2d@comcast.com...
>
>>I would like to experiment more with antennas, but am concerned about
>>roof issues (creating leaks) and mechanical issues like how do I
>>calculate the side loading for a 50 ft. random wire running from 1
>>5-foot tripod on my roof.
>>
>>I googled around, and looked at some antenna books at the public lib,
>>but have has little success. Any suggestions? I looked at FAQ's, but
>>haven't found much.
>>
>>Thanks.
>
>
> Skippy
>
> Wind loading is unlikely to be a factor with random wire systems. It is
> mainly a factor when considering antenna towers fitted with an array at the
> top. Wind load increases by a factor of four every time the wind speed
> doubles. So if you had a tower and antenna array with a side on area of say
> 5 square metres and a wind load of say 20 Kg force with a 20mph wind, that
> sideways force would be 80 Kg with 40 mph wind and 320 Kg with an 80 mph
> wind.
>
> 320Kg of sideways force applied along the length on an antenna tower would
> be enough to start to shift even very large chunks of concrete used in a
> base.
>
> Unless you have a very weak roof structure, the load imposed by a wire on a
> 5 foot pole is unlikely to be an issue.
>
> Searches of the Internet show hundreds of different formulae available to
> calculate windloads, however most of them appear to relate to building
> regulations and the effect of wind loading on walls, roofs and other
> structures. The reason you cannot find a definitive answer is that the
> presure exerted by the wind depends not only on it's speed, but also the
> temperature, cold air is denser than warm air and applies a greater sideways
> presure to any structure in the way.
>
> From the RSGB Radio Communication Handbook 6th Edition typical wind drag at
> 100mph is 5.81 pounds per foot length of 2 inch tubing, 0.17 pounds per foot
> length of 14 swg wire, 135 pounds for a typical three element 14MHz yagi

> antenna and 260lb for a typical cubical quad antenna.
>
> Using a spreadsheet, these figures seem to translate into a wind loading of
> approximately 35 pounds per square foot at 100 mph or approximately 170 Kg
> per square metre at 160 kph if you prefer metric measures.
>
> So very approximately, sideways wind load works out to the following:-
>
> Windspeed Wind Load per Square Foot Wind Load per Square Metre
> 12.5 mph 1/2 pound
> 2.6 Kg
> 25 mph 2 pounds
> 11 Kg
> 50 mph 9 pounds
> 43 Kg
> 100 mph 35 pounds
> 170 Kg
>
> These are very approximate figures and are only suitable for a ball park
> estimate of wind loading on your antenna systems. When calculating the
> strength of support guys needed to resist wind pressure add a safety factor
> of six or more.
>
> Mike G0ULI
>
>
Hi Mike.
Well I have used such an arrangement on 2 house roofs in my time.
The first on a crrugated asbestos fibre roof! Yes it was along time ago!
Fortunately it terminated a G5RV ant very well and I got DXCC and WAC
with 100 watts back in the 70's.
No problems with leaks though it was well braced.
Later I put a wooden cradle on the peak of a ceramic tile roof for the
centre of another G5RV (my favourite GP antenna) that was not in such a
good QTH but it worked fine for more than 20 years without damage to the
roof at all, perhaps the cradle (which I still have spread the stresses
well.
I have also put a steerable vertical array for 20 M on an "iron" roof
mounted on insulators and had no problems there either. Of course the
corrugated iron had to be carefully bonded together as it was the ground
plane with the verticals about 1/8 wave apart fed with tapped coax to
steer the beam around in about 60 degree steps.
So with a bit of care and common sense I think you will be OK. The only
kind of roof that would really bother me is a good old Pommy slate one.
They are both very fragile and extremely slippery when even slightly wet.
As to random wires, I have never been a fan of those since I got a nasty
RF burn about 48 years ago when I was only running 40 watts on 7 MHz.
I like an antenna with an impeadance a bit below infinity at the
entrance to the shack!
&#'s Cliff Wright ZL1BDA ex G3NIA.

847. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 13:06:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <IVB4i.9605$rO7.5955@newssvr25.news.prodigy.net>
Source record: 41047

cliff wright wrote:
> I like an antenna with an impeadance a bit below infinity at the
> entrance to the shack!

1/4 wavelength away from that very high impedance
is a very low impedance.
--
73, Cecil http://www.w5dxp.com

848. RF-proof shorts

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 13:53:35 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <lct553to79ijgh6f01kf45s50r60ih1eq2@4ax.com>
Source record: 41048

Protects the... whatever...

http://www.engadget.com/2007/05/20/isabodywear-underwear-fends-off-cellphone-radiation/

bob
k5qwg

849. Re: RF-proof shorts

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 17:03:49 UTC
From: jawod <jawod@fuse.net>
Message-ID: <46532275.2020702@fuse.net>
Source record: 41049

Bob Miller wrote:
> Protects the... whatever...
>
> http://www.engadget.com/2007/05/20/isabodywear-underwear-fends-off-cellphone-radiation/
>
> bob
> k5qwg
I understand how standing waves are blocked but what if you're sitting down?

850. Re: Elnec and eznec irritations.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 19:08:49 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f2vf40$q2e$1@f04n12.cac.psu.edu>
Source record: 41050

Richard Clark wrote:
> On Wed, 16 May 2007 17:56:45 GMT, Dave Oldridge
> <doldridg@leavethisoutshaw.ca> wrote:
>
>> Is your Google skill REALLY that limited? Just type "MMANA-GAL" into Google
>> (quotes and all) and you will get all the information you need.
>
> Hi Dave,
>
> Is this the advice we should offer everyone? What purpose would the
> group have over such an abundance of information?

It would sure free up bandwidth for Art to argue with people...

- 73 de Mike KB3EIA -

851. VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-22 22:09:37 UTC
From: David Harmon <source@netcom.com>
Message-ID: <46826959.334584703@news.west.earthlink.net>
Source record: 41051

When making the standard VHF-UHF ground plane antenna as illustrated in all the books, with four ground radials sloped down at a 45 degree angle, are those radials a tuned length? How much difference would it make if they were some random length considerably longer than specified? (as, for example, using the antenna on a different band by merely changing the center vertical element.)

852. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 00:25:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13572f8970lpm41@corp.supernews.com>
Source record: 41052

The antenna you're describing is a dipole. Half of the dipole is the upper vertical wire. The lower half is the radials. Changing the length of one half has the same general effect as changing the other half.

Roy Lewallen, W7EL

David Harmon wrote:
> When making the standard VHF-UHF ground plane antenna as illustrated in
> all the books, with four ground radials sloped down at a 45 degree
> angle, are those radials a tuned length? How much difference would it
> make if they were some random length considerably longer than specified?
> (as, for example, using the antenna on a different band by merely
> changing the center vertical element.)
>

853. High School looking for IRLP contacts VK, ZL or Asia-pacific

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 01:14:49 UTC
From: Mac <vk2evb@hotmail.com>
Message-ID: <46539585_8@news.peopletelecom.com.au>
Source record: 41054
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew

Hi There,

The Bishop Druit College Radio Club
http://www.qsl.net/mm0axl/mncarg/bdc.html
situated in the Mid North Coast of NSW Australia at Coffs Harbour are
looking forward
to making Local or DX IRLP contacts on Fridays 0315 - 0345 UTC.

Contacts will be on IRLP node 6625 via local repeater VK2RDO on 146.650Mhz.

The young people in the club have been experimenting with building simple FM
radio recievers, and have been contemplating the design of plasma balls
using ordinary light
globes and car spark coils.

Contacts with interested parties or similar school electronic/radio groups
would be great but unfortunately the club only has limited time during the
local
lunchtime period.

If interested and can help arrange a contact please email:

Gary VK2ZKT gryan@bdc.nsw.edu.au

or

Peter VK2EVB vk2evb@wia.org.au

854. Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 01:51:48 UTC
From: Bill Ogden <wogden@attglobal.net>
Message-ID: <3sM4i.6820$XU7.692@newsfe12.lga>
Source record: 41053

A discussion on the towers reflector mentioned, in passing, that a current balun helped lower received noise. The discussion was about something else and this aspect was not explored.

Is this common? I had never heard of it before, but I many holes in my understanding of antennas. Under what circumstances would this apply? Where would the balun (toroids) be placed? Feed point or at bottom of tower? (My particular interest is for use with a half sloper and for 160/80/40 meters.)

Bill
W2WO

855. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 02:22:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13579bp7hmpm176@corp.supernews.com>
Source record: 41055

Without a balun, your feedline could become part of the antenna. If noise is being radiated by such things as house wiring, the feedline part of the antenna is likely to pick up more noise because it goes near and into the house. A current balun prevents the feedline from becoming part of the antenna and so it can reduce the noise.

A lot of local noise is predominantly vertically polarized. So if you have a horizontal antenna without a balun, the feedline, which often is vertical, can pick up a lot more noise than the antenna. Again, a balun prevents feedline pickup and can make things quieter.

If you're feeding the antenna with coaxial cable, put the balun at the feedpoint. If feeding with twinlead, put it where the feedline connects to the tuner or receiver.

To learn more about baluns, see http://eznec.com/Amateur/Articles/Baluns.htm.

Roy Lewallen, W7EL

Bill Ogden wrote:
> A discussion on the towers reflector mentioned, in passing, that a current
> balun helped lower received noise. The discussion was about something else
> and this aspect was not explored.
>
> Is this common? I had never heard of it before, but I many holes in my
> understanding of antennas. Under what circumstances would this apply? Where
> would the balun (toroids) be placed? Feed point or at bottom of tower? (My
> particular interest is for use with a half sloper and for 160/80/40 meters.)
>
> Bill
> W2WO
>
>

856. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 03:30:42 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4653b55a$1@clear.net.nz>
Source record: 41056

Cecil Moore wrote:
> cliff wright wrote:
>
>> I like an antenna with an impeadance a bit below infinity at the
>> entrance to the shack!
>
>
> 1/4 wavelength away from that very high impedance
> is a very low impedance.
Ah yes indeed Cecil. BUT what is the impeadance at the ATU at the
frequency you are using, for a given length of random wire?
A lot of house lots or "sections" (as we call them here in NZ) these
days tend to give you about 60 Ft/20 metres in the clear and that gives
you a Really high impeadance when end fed on 7 Mhz!!!
A good old centre fed ladder feeder is so much more controllable and
less lossy, that's why I'm a Z match fan too.
ZL1BDA

857. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 04:03:44 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <A2P4i.17936$3G3.15704@newsfe06.phx>
Source record: 41057

"PPP" <pispaspos@gmail.com> wrote in message
news:1179502120.739572.301680@k79g2000hse.googlegroups.com...
> Hi,
>
> >From my search, I found two companies that manufacture field strength
> meters: Potomac Instruments and Z-Technology. I was wondering if there
> are others. It seems that these companies do not go past 3Ghz.
>
> We are interested in measuring field strength all the way up to 18Ghz.
> Does anyone know of any manufacturers that do this?
>
> An alternative would be to use spectrum analyzers with the right
> antenna, but I'm not aware of any spectrum analyzer that measure field
> strength. From my lab experience, we were mostly dealing with dBm. I
> did not see any option for V/m. Plus, they are very expensive. Thanks!
>
I've never had a spectrum analyzer measure field strength directly, although
maybe the Test & Measurement science is getting close. The missing link is
"antenna factor" (AF) which accounts for the db gain, usually negative, for
the antenna you're using. In my experience, every time we needed
quantitative measurements of field strength, we rented (or the government
lab sent us) one or more antennas and their calibration curves. AF unit is
dB/m.
See http://www.ce-mag.com/99ARG/Williams97.html for a neat explanation of
the conversion process to field strength.

I implied that T&M science might be able to yield field strength directly.
This would be by storing the calibration curves for selected (stock)
antennas in the instrument itself, much as we have been storing settings,
traces, etc, for many years. Dunno if anybody's doing it. I could have
used it a time or two.

858. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 04:51:15 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <D56dnaw-MOSsVc7bnZ2dnUVZ_oKnnZ2d@giganews.com>
Source record: 41058

Just today, I happened to revisit a voltage balun I wound years ago for my FD 80/40m inverted vees. It started out as an Amidon AB240 kit (Amidon #FT-240-61 or Fair-Rite #5961003801 ferrite core). On the network analyzer, it looked kinda cruddy... the ratio wasn't quite 1:1, and there was a bit too much reactance in the measurement. I rewound it as a super-inductor/choke balun with RG-58 like this: http://www.iol.ie/~bravo/low_band_antennae.htm

Now, it IS 1:1 (by nature of the RG-58), and there is hardly any rectance (less than an ohm up to about 20MHz). Common-mode reactance is about 200 ohms at 1.8 MHz, and 400 ohms at 3.5 MHz. I didn't bother checking above 80m.

Vy 73,
Bryan WA7PRC
PS: The correct link to Roy's info is a PDF file:
http://www.eznec.com/Amateur/Articles/Baluns.pdf

Roy Lewallen wrote:
> Without a balun, your feedline could become part of the antenna. If
> noise is being radiated by such things as house wiring, the feedline
> part of the antenna is likely to pick up more noise because it goes near
> and into the house. A current balun prevents the feedline from becoming
> part of the antenna and so it can reduce the noise.
>
> A lot of local noise is predominantly vertically polarized. So if you
> have a horizontal antenna without a balun, the feedline, which often is
> vertical, can pick up a lot more noise than the antenna. Again, a balun
> prevents feedline pickup and can make things quieter.
>
> If you're feeding the antenna with coaxial cable, put the balun at the
> feedpoint. If feeding with twinlead, put it where the feedline connects
> to the tuner or receiver.
>
> To learn more about baluns, see
> http://eznec.com/Amateur/Articles/Baluns.htm.
>
> Roy Lewallen, W7EL
>
> Bill Ogden wrote:
> > A discussion on the towers reflector mentioned, in passing, that a
current
> > balun helped lower received noise. The discussion was about something
else
> > and this aspect was not explored.

> >
> > Is this common? I had never heard of it before, but I many holes in my
> > understanding of antennas. Under what circumstances would this apply?
Where
> > would the balun (toroids) be placed? Feed point or at bottom of tower?
(My
> > particular interest is for use with a half sloper and for 160/80/40
meters.)
> >
> > Bill
> > W2WO

859. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 05:13:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1357jc0ofp83pc3@corp.supernews.com>
Source record: 41059

Roy Lewallen wrote:
> . . .
> To learn more about baluns, see
> http://eznec.com/Amateur/Articles/Baluns.htm.

Correction -- that should be

http://eznec.com/Amateur/Articles/Baluns.pdf.

I apologize for the error.

Roy Lewallen, W7EL

860. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 06:47:39 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <WmWPxaCLO+UGFASV@ifwtech.co.uk>
Source record: 41060

In addition to Roy's article,
http://eznec.com/Amateur/Articles/Baluns.pdf

you should probably read:
http://www.yccc.org/Articles/W1HIS/CommonModeChokesW1HIS2006Apr06.pdf
= http://tinyurl.com/qnzs3

and also an excellent paper by K9YC:
http://audiosystemsgroup.com/RFI-Ham.pdf

The W1HIS article is written from your viewpoint, as it begins: "Your ability to hear weak MF and HF signals is limited by noise, generated mostly by solid-state electronic switches within your own house, conducted via the 60-Hz power line to your shack, and from there to your antenna by common-mode current on the feedline. Putting common-mode chokes on your feedline, power, and other cables will substantially reduce your received noise level."

However, W1HIS did get rather carried away with the project, and ended up with ferrite everywhere! For the rest of us, the best advice is: "When the problem goes away, then stop buying ferrite."

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

861. Re: What would I hear on a 300 GHz AM Radio Receiver?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 08:08:51 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <4653F6A1.5AD45A3C@earthlink.net>
Source record: 41061
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Radium wrote:
>
> Hi:

Radium is trolling over here too, I see.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

862. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 08:30:52 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9939BC55C9A3Bnonenowhere@61.9.191.5>
Source record: 41062

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in
news:A2P4i.17936$3G3.15704@newsfe06.phx:

> I've never had a spectrum analyzer measure field strength directly,
> although maybe the Test & Measurement science is getting close. The
> missing link is "antenna factor" (AF) which accounts for the db gain,
> usually negative, for the antenna you're using. In my experience,

There are both EMC receivers and Spectrum Analysers intended for field strength measurement, and modern digital system allow the antenna response to be stored in the instrument and field strength automatically calculated for different freqencies.

My FSM software (http://www.vk1od.net/fsm/) which is designed for making field strength measurments using a conventional SSB comms receiver, an antenna, a known attenuator, and a PC. FSM can read a file of Antenna Factor vs Frequency and calculate a spline interpolation for the frequency of measurement to (along with other factors) calculate the received field strength in dBuV/m. I would be very surprised if any modern digital instruments don't do likewise, either directly in the instrument or in PC based analysis software, though there is a great advantage in indication of field strength directly on the instrument.

In a recent test, the radiocomms regulator here loaded such a table of modelled AF for an untuned loop antenna system (http://www.vk1od.net/SmallUntunedSquareLoop/ssulNEC.htm) into a R&S EMC receiver and made swept measurements using the loop over HF, and compared them to the results from measurements using a R&S active loop (AF about 20dB lower than the passive loop). The difference of the medians was less than a dB which speaks well for the NEC model!

Field strength is a bit of black magic to most hams.

Owen

863. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 08:42:41 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9939BE568E76nonenowhere@61.9.191.5>
Source record: 41063

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
news:WmWPxaCLO+UGFASV@ifwtech.co.uk:

...
> you should probably read:
> http://www.yccc.org/Articles/W1HIS/CommonModeChokesW1HIS2006Apr06.pdf
> = http://tinyurl.com/qnzs3
...
> However, W1HIS did get rather carried away with the project, and ended
> up with ferrite everywhere! For the rest of us, the best advice is:
> "When the problem goes away, then stop buying ferrite."

I saw that some time ago and did wonder if he held shares in one or more magnetics companies!

Perhaps the need for gross suppression points to a fundamental design issue, perhaps even an OHS issue.

But, it is a good article, it shows a range of techniques for applying ferrites for suppression.

On a lighter note, I had a job with a telecommunications carrier some years ago, their scope included operating a national GSM mobile network. On my first day on the job, I received an email from one of the phone reps offering a fold up lead and aluminium radiation shield with a central hole about the size on an ear, which one unfolded and placed against the head over the ear before applying the mobile phone to the ear. I said to the guy alongside "have you checked this email, it is pretty liberal of the company to allow customer reps to be creating FUD (fear, uncertainty and doubt) about the safety of mobile phones". He got on the phone and advised that they guy had already been sacked, he had violated a condition of his employment that he not represent competitive products, mustn't have taken 10 minutes. What do they teach business graduates at university these days?

Owen

864. Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 14:37:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <f31jic$g29@unix1.cc.ksu.edu>
Source record: 41064

Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of the December, 1965, issue of 73 MAGAZINE, after discussing power-supply filters and high- and low-pass TV filters, wrote:

(Paraphrasing) "The most popular of all pi networks is the output circuit of a transmitter ... with which the output of almost any transmitter can be matched to almost any antenna ... another advantage is the reduction of harmonics....

(Actual quote) "The big disadvantage of this system is the low efficiency. It is not possible to run more than 50% efficiency and it tends to be more like 30%. Other methods of feeding the antenna will result in efficiencies of as high as 65% to 70%."

Is that "low efficiency" of 30-50% really true?

--Myron, W0PBV.
--
--Myron A. Calhoun.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

865. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 14:55:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s7l853hsae8c65hvlaqkrklf88k5gvo07s@4ax.com>
Source record: 41065

On 23 May 2007 09:37:00 -0500, mcalhoun@ksu.edu wrote:

>Is that "low efficiency" of 30-50% really true?

Hi Myron,

No. Efficiencies are found (or broken) elsewhere. As Terman offers,
the Loaded Q of the Tube output tank runs between 8 and 15 (the
efficiency you quote would have that plummet). The generalization
offered ("It is not possible to run more than 50% efficiency") is also
the conventional error of not being able to distinguish between a
Conjugate Match and a Z Match.

73's
Richard Clark, KB7QHC

866. Re: Current balun for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 15:54:00 UTC
From: Bill Ogden <wogden@attglobal.net>
Message-ID: <8OY4i.13$tS3.2@newsfe12.lga>
Source record: 41066

Thank you, Roy and others.

My background noise on 80 and 160 seems high, but it does not sound like man-made noise (as best I can judge by ear). The antenna in question is a half sloper. I will try some clamp-on cores the next time I crank it down. (I just cranked it up yesterday, so my timing is bad.) The coax runs down outside of the tower (with the standard UST standoff cable guides). Using the half sloper, the tower itself (and the outside of the coax, and all the other cables coming down from the tower) are part of the antenna, of course. Perhaps the ferrite cores will reduce some of the noise pickup.)

I realize that not everyone likes half slopers. I do not have any other tall supports other than my 55-foot tower. I have a terminated inverted V near the top (and a Steppir on top). The half sloper is attached at about 40' (top of second section of the crankup). I have a good number of radials. The SWR wanders around across 80 meters, but is below 3:1 everywhere. It seems to transmit well, but seems too noisy on reception.

The "terminated dipole" has a resistor to ground at each end. (It is from TenTec. Moderately low SWR from 160 to 20 meters; not great; probably not worth the cost.)

Bill
W2WO

867. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 15:56:59 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1179935819.634043.246530@w5g2000hsg.googlegroups.com>
Source record: 41067

On May 23, 7:37 am, mcalh...@ksu.edu wrote:
> Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
> the December, 1965, issue of 73 MAGAZINE, after discussing power-
> supply filters and high- and low-pass TV filters, wrote:
>
> (Paraphrasing) "The most popular of all pi networks is the output
> circuit of a transmitter ... with which the output of almost any
> transmitter can be matched to almost any antenna ... another
> advantage is the reduction of harmonics....
>
> (Actual quote) "The big disadvantage of this system is the low
> efficiency. It is not possible to run more than 50% efficiency
> and it tends to be more like 30%. Other methods of feeding the
> antenna will result in efficiencies of as high as 65% to 70%."
>
> Is that "low efficiency" of 30-50% really true?
>
> --Myron, W0PBV.
> --
> --Myron A. Calhoun.
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
> NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
> Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

Does that author bother to explain WHY he thinks that to be true?
Where exactly is the power lost? Given that pi-coupled class-C vacuum
tube output stages commonly run 75% and higher efficiency, he's
immediately proven wrong by example. I'm assuming that you haven't
left out some important context from the quotation. It's usual now,
as it was in 1965, to get at least 75% efficiency, and possible to get
well above that, using a pi output network; that depends more on the
operating conditions for the output stage than on the output network
itself. It would be interesting to hear why W8QUR thought to write
that statement about efficiency. It would also be interesting to know
if his article elicited letters-to-the-editor wondering about that,
back then.

Cheers,
Tom

868. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 17:20:43 UTC
From: mcalhoun@ksu.edu
Message-ID: <f31t5b$55@unix1.cc.ksu.edu>
Source record: 41068

>>Is that "low efficiency" of 30-50% really true?

>Does that author bother to explain WHY he thinks that to be true?

No. That's why I was surprised enough to ask the newsgroup.

>Given that pi-coupled class-C vacuum tube output stages commonly run
>75% and higher efficiency, he's immediately proven wrong by example.

Good point!

>I'm assuming that you haven't left out some important context from
>the quotation...

It was only a half-page article in a small-format magazine in the first
place, and I did not leave out anything significant!

>It would be interesting to hear why W8QUR thought to write that
>statement about efficiency. It would also be interesting to know
>if his article elicited letters-to-the-editor wondering about that,
>back then.

We'll probably never know. That was 40+ years ago, and W8QUR isn't
in the online callbook, so it will be hard to ask him. At one time
I read the following issues and don't remember any comments or
corrections, but that was a long time ago!
--
--Myron A. Calhoun, W0PBV.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

869. Travel Trailer Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 18:44:11 UTC
From: Larry Caldwell <firstnamelastinitial@peaksky.com>
Message-ID: <MPG.20be2b57250b2036989b15@news.peaksky.com>
Source record: 41069

This is sort of an odd question, so I hope someone here can help me with it. I sometimes take my travel trailer camping in the late fall and winter, which leaves many hours of darkness to entertain myself. I camp in remote, unimproved campgrounds, so mostly operate on the trailer's 12 volt system and propane.

I'm installing a sound system in the trailer, and have selected a Dual XDM6810 car stereo as the receiver/amp. I want to give the radio the best chance for decent reception in fringe areas, which means figuring out how to install a good antenna. I can mount the receiver either in the front or rear, but once the radio is mounted the antenna location is limited by the length of the lead wire.

1. I plan to install a conventional automotive whip antenna. The top and sides of the trailer are out because tangling with branches and brush would tear the antenna off of the trailer. That leaves mounting on the trailer tongue, the rear bumper, or on a detachable mount of some kind. Any suggestions? A rear bumper mount would put the antenna parallel to the metal skin of the trailer for most of its length. Would that be a problem? I suppose I could also install an electric antenna through the roof, though that would cost me some battery life and be a potential source of leaks. I'm looking for advice on location, brands and types of antennae. Am I overlooking a good idea out of ignorance?

2. What happened to loading coils? When I installed aftermarket automotive radios back in the '60s, they had a tuning coil. You extended the whip to the desired length, tuned the radio to a weak station, then turned the coil adjustment to give the best reception. Is there an aftermarket loading coil that I could use, or do the sophisticated electronics of modern car radios not require antenna coils? The AM sensitivity of this radio is listed at 22 uV, which I don't recall as being all that great.

Things I have already thought of:

- The propane furnace uses a DC universal motor to circulate air. I already found an RF choke to install in the power circuit, and can also put a noise suppressing capacitor across the furnace fan terminals if necessary.

- This receiver has an external line input and will also read MP3 CDs, so I can always plug in a satellite receiver or play MP3 CDs.

- I have a Radio Shack DX-440 (Sangean ATS-803A) SW/LW/SSB portable that will keep me entertained in truly fringe areas.

--
For email, replace firstnamelastinitial
with my first name and last initial.

870. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 19:06:48 UTC
From: richardharrison@webtv.net
Message-ID: <20261-465490C8-71@storefull-3258.bay.webtv.net>
Source record: 41070

Myron, W0PBV wrote:
"Is that low efficiency of 30-50% really true?"

No. The pi network would not be so popular were that true.

The efficiency of a Class B or Class C amplifier is higher than that and the network by itself is very low loss. RF amplifiers typically have efficiencies well above 50% because much of their source resistance is of the lossless variety.

Search the internet for: "pi network antenna tuner". One entry near the top of the list is from Collins for its 180S-1 Antenna Tuner. It is basically a 1000 watt "pi" network for matching various antenna impedances to a 50 ohm coaxial transmission line in the range of 3-30 MHz. In most cases it is used as an "L" network, but when the "L" network cannot match the desired antenna, the complete "pi" circuit is used. The vacuum variable capacitor employed in the output circuit can be connected either in series or shunt with the antenna. The 180S-1 is useful for tuning trailing wires on large aircraft.

Ralph Hanna, W8QUR had it wrong when saying "The big disadvantage of this system is the low efficiency."

Best regards, Richard Harrison, KB5WZI

871. Re: Travel Trailer Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 19:44:20 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <HMKdnSMc3tZHBMnbRVnysQA@bt.com>
Source record: 41071

"Larry Caldwell" <firstnamelastinitial@peaksky.com> wrote in message
news:MPG.20be2b57250b2036989b15@news.peaksky.com...
> This is sort of an odd question, so I hope someone here can help me with
> it. I sometimes take my travel trailer camping in the late fall and
> winter, which leaves many hours of darkness to entertain myself. I camp
> in remote, unimproved campgrounds, so mostly operate on the trailer's 12
> volt system and propane.
>
> I'm installing a sound system in the trailer, and have selected a Dual
> XDM6810 car stereo as the receiver/amp. I want to give the radio the
> best chance for decent reception in fringe areas, which means figuring
> out how to install a good antenna. I can mount the receiver either in
> the front or rear, but once the radio is mounted the antenna location is
> limited by the length of the lead wire.
>
> 1. I plan to install a conventional automotive whip antenna. The top
> and sides of the trailer are out because tangling with branches and
> brush would tear the antenna off of the trailer. That leaves mounting
> on the trailer tongue, the rear bumper, or on a detachable mount of some
> kind. Any suggestions? A rear bumper mount would put the antenna
> parallel to the metal skin of the trailer for most of its length. Would
> that be a problem? I suppose I could also install an electric antenna
> through the roof, though that would cost me some battery life and be a
> potential source of leaks. I'm looking for advice on location, brands
> and types of antennae. Am I overlooking a good idea out of ignorance?
>
> 2. What happened to loading coils? When I installed aftermarket
> automotive radios back in the '60s, they had a tuning coil. You
> extended the whip to the desired length, tuned the radio to a weak
> station, then turned the coil adjustment to give the best reception. Is
> there an aftermarket loading coil that I could use, or do the
> sophisticated electronics of modern car radios not require antenna
> coils? The AM sensitivity of this radio is listed at 22 uV, which I
> don't recall as being all that great.
>
> Things I have already thought of:
>
> - The propane furnace uses a DC universal motor to circulate air. I
> already found an RF choke to install in the power circuit, and can also
> put a noise suppressing capacitor across the furnace fan terminals if
> necessary.
>
> - This receiver has an external line input and will also read MP3 CDs,
> so I can always plug in a satellite receiver or play MP3 CDs.

>
> - I have a Radio Shack DX-440 (Sangean ATS-803A) SW/LW/SSB portable that
> will keep me entertained in truly fringe areas.
>
> --
> For email, replace firstnamelastinitial
> with my first name and last initial.

Larry,

The general rule with all antennas is to have them as big, high and in the clear as possible. The ideal location for an antenna would be on the trailer roof, however you say that this will probably result in the antenna being ripped off by low branches, etc. The fender or bumper mount puts the antenna too low and alongside the metal bodywork, so as you have observed, that isn't a good option.

If you are up for a bit of DIY...

Is it possible to adopt a midway solution and copy the truck driver system of mounting an antenna on one of the side mirror mounts. This would keep the antenna low enough to avoid branches, but clear of most of the bodywork.

For sheer robustness and reasonable performance, I have found helically wound fiberglass whip antennas intended for CB use work well on AM and FM frequencies. Just change the plug to suit the antenna socket of your radio. Failing that, a 1 metre length of stanless steel wire (1/8" or 3 mm diameter) connected to the centre of a coax cable with the cable screen bonded to the vehicle chassis and suitably weatherproofed can provide good performance.

The stainless steel whip would almost certainly be light enough to mount on most wing mirror supports. The hardest part is routing the cable through to the interior of the vehicle from the wing mirror.

Using a stainless whip also allows additional wire to be connected using a crocodile clip and thrown up over the nearest tree at your campsite. This would certainly pull in signals to even the most remote location. My CB antenna had a small metal tuning stub on the top, so the same trick could be used.

Mike G0ULI

872. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 20:08:07 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <75395359n96l7g77rnap7fhs1030k95gpc@4ax.com>
Source record: 41072

On 23 May 2007 09:37:00 -0500, mcalhoun@ksu.edu wrote:

>Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
>the December, 1965, issue of 73 MAGAZINE, after discussing power-
>supply filters and high- and low-pass TV filters, wrote:
>
> (Paraphrasing) "The most popular of all pi networks is the output
> circuit of a transmitter ... with which the output of almost any
> transmitter can be matched to almost any antenna ... another
> advantage is the reduction of harmonics....
>
> (Actual quote) "The big disadvantage of this system is the low
> efficiency. It is not possible to run more than 50% efficiency
> and it tends to be more like 30%. Other methods of feeding the
> antenna will result in efficiencies of as high as 65% to 70%."
>
>Is that "low efficiency" of 30-50% really true?

As others have stated, No.

Clearly at that time the author was talking about a vacuum tube transmitter where the pi-network was used to transform the load impedance (usually 50 ohm) up to the load that the tube(s) want to see.

The usual implementation was the low-pass form of shunt C(s), series L, although this isn't the only option. The network can be thought of as two L-networks back-to-back with a "virtual" impedance common to the midpoint. The usual design sets a overall network Q (the sum of the two L-network Q's) at something between 10 and 12 for harmonic suppression reasons.

The loss in the network is usually considered to be only in the inductor, (although this isn't totally correct) because inductors generally have lower unload Qs than the air or vacuum variable capacitors that are typically used.

The network efficiency using this assumption is then:

eff = 1 - (Ql/Qu)

So for example if the inductor Q = 200 (a reasonable value) and the network Q is set to 12 then the efficiency is 94%, a long way from what the author claims.

At higher frequencies with tubes with high output capacitance it may be necessary to design for a higher loaded Q than we would like. In

this case, the efficiency will reduce as is often the case with amplifiers on 10-meters for example.

All of this stuff in any ARRL Handbook and can be worked out by the reader.

873. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 20:08:37 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f32705$j0p$1@news.netins.net>
Source record: 41073

On Sat, 12 May 2007 19:25:22 -0500, Mike Coslo wrote:

> tehrasha@gmail.com wrote in news:1178935164.295223.69320
> @o5g2000hsb.googlegroups.com:
>
>> Can the 20m, 75ohm matching stub perform double duty as a common mode
>> choke?
>>
>> ie: will it hurt if i wind the stub around something like 4" PVC?
>
> Best thing to do is try it and let us know your results. I would
> guess that it might have some small effect on the match. In my own case,
> there really isn't a good place to put the coil near the antenna, so a
> choke is better right before entering the house.
>
> - Mike -

I eneded up making a new 20m stub out of RG-6 and wrapped 11 turns onto some 4" PVC. I then mounted this to the feed point of the antenna.

http://teh.3leggedcat.com/ham/matching-stub.jpg

I made a similar coil at work, where I have access to better test equipment, and if I did the measurements correctly, the choke peaks right at the 20m band.

As for the rest of bands, the measurements appear to be normal for this antenna. Approx 80kHz of 80m, 250kHz of 40m, and full band on 30/20/15 and 10 with SWR < 1.5.

An added bonus might be that the SWR on 12m is 1.3, so it looks like I have a HF7V now. :)

--Teh

874. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 21:53:53 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993A5057661EFnonenowhere@61.9.191.5>
Source record: 41074

mcalhoun@ksu.edu wrote in news:f31jic$g29@unix1.cc.ksu.edu:

> Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
> the December, 1965, issue of 73 MAGAZINE, after discussing power-
> supply filters and high- and low-pass TV filters, wrote:
>
> (Paraphrasing) "The most popular of all pi networks is the output
> circuit of a transmitter ... with which the output of almost any
> transmitter can be matched to almost any antenna ... another
> advantage is the reduction of harmonics....
>
> (Actual quote) "The big disadvantage of this system is the low
> efficiency. It is not possible to run more than 50% efficiency
> and it tends to be more like 30%. Other methods of feeding the
> antenna will result in efficiencies of as high as 65% to 70%."
>
> Is that "low efficiency" of 30-50% really true?
>

Myron,

The temptation is to see that the second paragraph is about Pi networks, though it doesn't actually use the term. It does refer to a "system" and goes on to discuss efficiency in the context of "feeding the antenna".

There is no doubt that practical Pi networks in transmitters operate at efficiencies much greater than 50%, and the design efficiency is a trade-off with harmonic suppression (for the low pass configuration in a typical PA).

If the term "system" is to include more than just the Pi network, then lower system efficiciency will prevail, but without a clear definition of the "system", it is not possible to comment on the reasonableness. For example, if a Pi coupled transmitter feeds a full wave dipole via a substantial length of coax, system efficiency might well be much less than 10%. Does he include DC to RF conversion loss in his view of system efficiency?

Owen

875. Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-23 22:08:31 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993A52D1F72D0nonenowhere@61.9.191.5>
Source record: 41075

I recently saw an article with the following:

"I would like to express my thanks to <xxxxxxxx> for continuing the advancement of the transmission line transformer. We have become somewhat of co-workers, sharing information back and forth about how these efficient devices work in the HF, MF, and VHF parts of spectrum. He has done some recent experiments on new ferrite cores and found that by reducing the number of turns the actual potential difference on each turn is greater which increased the core loss. This means that the losses in these transmission line transformers are voltage dependant and not flux related."

I am trying to understand how it is that losses are "voltage dependant and not flux related". Aren't flux and voltage related? Is he trying to say there are core losses that result from a voltage impressed across the winding, but the losses are caused mainly by electric field rather than the magnetic field? My understanding was that whilst there are dielectric losses in ferrite and iron power materials, the magnetic losses dominate in most applications.

Is there a sound basis for the quote, or is it advertising bunk?

Owen

876. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 00:10:45 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <qK45i.136$aH7.18@newsfe12.lga>
Source record: 41076

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:20261-465490C8-71@storefull-3258.bay.webtv.net...
> Myron, W0PBV wrote:
> "Is that low efficiency of 30-50% really true?"
>
> No. The pi network would not be so popular were that true.
>
> The efficiency of a Class B or Class C amplifier is higher than that and
> the network by itself is very low loss. RF amplifiers typically have
> efficiencies well above 50% because much of their source resistance is
> of the lossless variety.
>
> Best regards, Richard Harrison, KB5WZI
>

If the efficiency or loses were in 50% range, we would be "ungluing" the components in the PI network at the 2 kW power levels. Can you picture 1 kW being "lost" in the coil and capacitors?
Typical matching network or tuners in the transceivers have loss about 10% when power output is measured with tuner in or out while maintaining same input.
Amps with decent copper and quality caps should be less than 10% in loses.

Yuri, K3BU

877. Re: Butternut HF6V Matching Stub question...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 01:33:11 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9939DB4A7832Fmcoslocomcastnet@216.196.97.136>
Source record: 40927

Tehrasha Darkon <darkon@netins.net> wrote in
news:f32705$j0p$1@news.netins.net:

> I eneded up making a new 20m stub out of RG-6 and wrapped 11 turns
> onto some 4" PVC. I then mounted this to the feed point of the
> antenna.
>
> http://teh.3leggedcat.com/ham/matching-stub.jpg
>
> I made a similar coil at work, where I have access to better test
> equipment, and if I did the measurements correctly, the choke peaks
> right at the 20m band.
>
> As for the rest of bands, the measurements appear to be normal for
> this antenna. Approx 80kHz of 80m, 250kHz of 40m, and full band on
> 30/20/15 and 10 with SWR < 1.5.
>
> An added bonus might be that the SWR on 12m is 1.3, so it looks like I
> have a HF7V now. :)

Excellent! I might go try that on mine.

- 73 de Mike KB3EIA -

878. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 03:33:45 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46550794$0$3197$4c368faf@roadrunner.com>
Source record: 40928

"Owen Duffy" <none@no.where> wrote in message
news:Xns993A5057661EFnonenowhere@61.9.191.5...
> mcalhoun@ksu.edu wrote in news:f31jic$g29@unix1.cc.ksu.edu:
>
>> Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
>> the December, 1965, issue of 73 MAGAZINE, after discussing power-
>> supply filters and high- and low-pass TV filters, wrote:
>>
>> (Paraphrasing) "The most popular of all pi networks is the output
>> circuit of a transmitter ... with which the output of almost any
>> transmitter can be matched to almost any antenna ... another
>> advantage is the reduction of harmonics....
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>> (Actual quote) "The big disadvantage of this system is the low
>> efficiency. It is not possible to run more than 50% efficiency
>> and it tends to be more like 30%. Other methods of feeding the
>> antenna will result in efficiencies of as high as 65% to 70%."
>>
>> Is that "low efficiency" of 30-50% really true?
>>
>
> Myron,
>
> The temptation is to see that the second paragraph is about Pi networks,
> though it doesn't actually use the term. It does refer to a "system" and
> goes on to discuss efficiency in the context of "feeding the antenna".
>
> There is no doubt that practical Pi networks in transmitters operate at
> efficiencies much greater than 50%, and the design efficiency is a trade-
> off with harmonic suppression (for the low pass configuration in a
> typical PA).
>
> If the term "system" is to include more than just the Pi network, then
> lower system efficiciency will prevail, but without a clear definition of
> the "system", it is not possible to comment on the reasonableness. For
> example, if a Pi coupled transmitter feeds a full wave dipole via a
> substantial length of coax, system efficiency might well be much less
> than 10%. Does he include DC to RF conversion loss in his view of system
> efficiency?
>
> Owen

Giving W8QUR the benifit of the doubt
I thought he may be including feedline losses which could be from 1 to 2 db

for coax compared to balanced line used with a balanced output network.
I think something may be lost in the paraphrasing and this is probably a
comparison of balanced to unbalanced systems rather than a comparison of
Pi-net to other types of tuner networks.

Jimmie

879. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 04:14:00 UTC
From: Rick <Ratradio@pacbell.net>
Message-ID: <ci85i.9416$RX.5962@newssvr11.news.prodigy.net>
Source record: 40929

If the ground radials go from 45 degree sloping downward to straight horizontal, at what point does it become a ground plane and not a dipole?

Roy Lewallen wrote:
> The antenna you're describing is a dipole. Half of the dipole is the
> upper vertical wire. The lower half is the radials. Changing the length
> of one half has the same general effect as changing the other half.
>
> Roy Lewallen, W7EL
>
> David Harmon wrote:
>> When making the standard VHF-UHF ground plane antenna as illustrated in
>> all the books, with four ground radials sloped down at a 45 degree
>> angle, are those radials a tuned length? How much difference would it
>> make if they were some random length considerably longer than specified?
>> (as, for example, using the antenna on a different band by merely
>> changing the center vertical element.)
>>

880. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 04:21:24 UTC
From: KEYCLOWN AUCTION RATOUT CENTRAL <keyklownzrnutjobs@yahoo.com>
Message-ID: <1179980484.229236.142560@q75g2000hsh.googlegroups.com>
Source record: 40930

On May 24, 1:14 am, Rick <Ratra...@pacbell.net> wrote:
> If the ground radials go from 45 degree sloping downward to straight
> horizontal, at what point does it become a ground plane and not a dipole?
>
>
>
> Roy Lewallen wrote:
> > The antenna you're describing is a dipole. Half of the dipole is the
> > upper vertical wire. The lower half is the radials. Changing the length
> > of one half has the same general effect as changing the other half.
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> > Roy Lewallen, W7EL
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> > David Harmon wrote:
> >> When making the standard VHF-UHF ground plane antenna as illustrated in
> >> all the books, with four ground radials sloped down at a 45 degree
> >> angle, are those radials a tuned length? How much difference would it
> >> make if they were some random length considerably longer than specified?
> >> (as, for example, using the antenna on a different band by merely
> >> changing the center vertical element.)- Hide quoted text -
>
> - Show quoted text -

The antenna is not a dipole unless it has only one "radial".
A ground plane is just that...several radials sloping and creating the
surface seen by the vertical element.

881. BECAUSE THE UNION MAKES THE FORCE

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 04:36:25 UTC
From: brisa <brisasuave30@hotmail.com>
Message-ID: <1179981384.796659.185460@w5g2000hsg.googlegroups.com>
Source record: 40931

THESE TIRED TO WORK HARD AND TO HAVE SINGLE MONEY TO PAY ACCOUNTS OR SOMETIMES NOR FOR THAT? THE MONEY IS FOR ALL AND A HARD WORK DESERVES AN EXCELLENT ONE IT PAYS! I OFFER YOU TO BE PART OF THIS AID IN COMMON, BECAUSE THE UNION MAKES THE FORCE, PROVES THE FORCE OF SOLIDARITY BY INTERNET, AYUDATE AND AID TO THE OTHERS PLEASE BEFORE ELIMINATING THIS WARNING, WOULD BE THANKFUL THAT LEA FIRST AND IT MAKES THE DECISION LATER. THIS IS NOT A SWINDLE, IS NOT ILLEGAL, IS NOT NECESSARY TO ABSOLUTELY SELL NOTHING, IS FOR SLUGGISH IS FOR PEOPLE WHO NEED AID AND WANT TO HELP THE OTHERS. MAKES SAFE MONEY LEGALLY, FAST AND VIA INTERNET! MAKES SAFE MONEY LEGALLY, FAST AND VIA INTERNET! (Suggestion: It prints this one article so that it reads it with thoroughness and thus it can include/understand it better and follow his form step by step of application.) HELLO TO ALL. - You need a car, to pay to the initial of your house or department, to pay education of your children, you need very deserved vacations, to lamentably begin a saving or any thing for your family but your pay only reaches to pay the accounts sometimes and nor after that. If you identify yourself with previous, the welcome thing to the club, if in addition you are conscientious that stops to win money is necessary to work always honestly, then east business is for you. It says thus: ORIGINAL MESSAGE While it sailed by these pages of the news, also like you it is doing it now, appeared to me an article similar to this that it said: You can gain thousands of dollars in few weeks with an investment of U.S. $6 dollars (six dollars). Immediately I thought: " OH, no! , another swindle more? ", but like majority of us, the curiosity could more, and I continued reading, and it continued saying: "You will send U.S. $ 1,00 (a dollar) to each one of the 6 names and directions mentioned in this article, later You will write down your name and direction at the end of the list having replaced to I number # 6, and it will at least send or put east article in 200 NEWS GROUPS (there are million of these anywhere in the world). " Note: If one is in another country, must exchange his national a dollars, because in all the countries they change dollars and is easier for all. For that reason we will make this business only with dollars and not complicaremos us. Any trick, the difference from this system to others does not exist, is that you have a list of 6 instead of 5, this means that your average of gain he will be After thinking it time and time again and to consult it with friends, I decided to prove it, I thought that the only thing that it could lose era the value of 6 stamps and U.S. $6 dollars and that it would take it like an investment, truth! I thought that to invest 6 dollars plus the costs of shipment by mail they were a compared triviality with which I give in my work by a pay which I am thankful but that it is not sufficient nor just. As probably many of us were a little worried

about the legality about all this. Then it consults to the Central Mail and they confirmed to me that in fact he was totally legal. I remained astonished and I invested to my U.S. $6 dollars immediately... IMAGINENSE THAT! ... the few days later, I began to receive MONEY by mail! Was happy, like boy with new toy, and very surprised! And it thought that this would finish more in few days and tries to forget to me the subject, in any case already had recovered the investment, but the money continued arriving. In my first week I made between U.S. $20 dollars and $30 dollars. For the end of the second week it had made a total of U.S. $1,000 (thousand dollars)! PODIA NOT TO BELIEVE it! ; in the third week U.S. $10,000 (ten thousand dollars) and still continued arriving more! ; in my fourth week had a total of U.S. $41,000 dollars and this continues arriving more quickly (in my house, they go it opening you exceed and I obtaining "NEWSGROUP". THIS WAS PUT SERIOUS. All this was worth the trouble, the investment of U.S. $6 dollars and 6 stamps, gave its fruits, and to think that I spent more of U.S. $6 dollars weekly in drawings and lottery, and did not pass anything. The truth is that this can pass as long as works conscientiously and placing this warning in the greater possible amount of newsgroup, this works simple, while more people see it, more money I win, but even so I assure to you that you will win much more that putting 6 dollars in the best bank of on credit fixed world of 1 year. You will be receiving money worldwide, of places that nor know and in few days! Possibly he will want to rent a PO. BOX. By the amount of you exceed that it will be receiving. ASEGURESE OF WHICH ALL CORRECT DIRECTIONS ESTEN. Now So that of all this (IT IS WHAT IS GOING IT TO LIKE): Of 200 publications of this one letter in different newsgroup, we say that single receipt 5 replaced (IT IS NECESSARY TO BE PESSIMISTIC). Then I made US$5 Dollars with my name in the position #6, of this letter. Now each one of the people who sent the dollar, also makes a number of 200 publications of this one letter in different newsgroup and single 5 people to each one of the 5 original ones respond, this makes U.S. $25 more than I receive (up to here already I recovered my investment more and), now these 25 people put a minimum of 200 publications of this one letter in different newsgroup with my name in #4 place, and single 5 replaced of each one are received. It would be making other U.S. $125 additional, now these 125 people put a minimum of 200 publications of this letter in different newsgroup with my name in #3 place and single one receives 5 answers each, I I receive an additional one of U.S. $625, OK, Here this the part but amused, each one of these 625 people place puts their letters with other 200 publications of this one letter in different newsgroup with my name in #2 and each one receives only 5 answers. This causes that I receive U.S. $3.125. However these 3,125 people sent their letter and in addition they published this one letter in 200 different newsgroup, with my name in #1 place, and only 5 people respond of the 200 newsgroup, this does that I receive U.S. $15,625 dollars. Of an investment of U.S. $6. - dollars, do not think that he is FABULOUS and as I before said, that single 5 people respond of 200 newsgroup, (the real average is of 20 to 30 people) . IF THEY WANT THEY REMOVE

CALCULATIONS! IF SINGLE 15 PEOPLE RESPOND ..... THIS WOULD BE EQUAL A: In the position #6 =US $ 15,00. - In the position #5=US $ 225,00. - In the position #4=US $ 3,375, 00. - In the position #3 =US $ 50,625, 00 - In position #2=US $ 759,375, 00. - ((((Now the good thing comes, not scare. - In the position #1 ..... (((((U.S. $ 11.390.625, 00))))) ... if, ELEVEN MILLION DOLLARS or EUROS! This is the power of the multiplication of the capital to which all we have right! As I said, this can happen but it is necessary to work intelligently and each one of us must fulfill putting this warning not in 200 but in 400 newsgroup, to send post office to everybody, to make marketing, etc. and all gratuitous means of the powerful Internet virtual, in the end your work will give fruits because you worked with effort, honesty and transparency. Once its name no longer is in the list, removes the last announcement from the newsgroup and sends other U.S. $6 dollars to the names in that list, putting its name in the place # 6 and soon will return to repeat all the process, and to begin to put them in the newsgroup again, which must remember is that million people like You and like I anywhere in the world, they are connected to Internet daily and therefore some will read these articles, so I believe that nobody will have problems to invest to U.S. $6 dollars, and to see if this really works. Some people get to think...."and if nobody responds" ..... to me as it is the possibility that this happens? , if there are thousands and thousands of honest people (who, as we) they look for a way to have financial independence and to pay accounts! , and they are arranged to treat, because "THERE IS no WORSE FIGHT THAN, THE ONE THAT NOT FOR! ", esteem that are 20,000 to 50,000 new users of INTERNET Every day, (in all world). ** REMEMBERS, HAGALO IN HONEST, CLEAN FORM AND CORRECTLY, THUS IT WILL WORK WITH COMPLETE CERTAINTY. By the way: if you it defrauds to the people, putting messages with his name and it does not send any money to the others in those lists, you you will not receive ANYTHING almost! SO THAT ALL THIS HAPPENS? BECAUSE IT IS NOT HARVESTED WHAT NOT SOWING. REMEMBER, HAGALO IN HONEST, CLEAN FORM AND CORRECTLY, of way so that it wins money and does not squander the time, if it does, will receive money of all the people who enter this business will obtain positive results, at heart these money are turning around the world, and the people that will thank for it, are the pluses needed anywhere in the world (I do not say of extreme poverty), but people, who by those things of the life are in jams and this them aid to come out ahead. "A THING IS SAFE TO THAT YOU SEND TO HIM ON WITH 1 DOLLAR, BY COMMITMENT VERY SURELY IT WILL PUBLISH TO YOU IN HIS NEXT LISTS IN THE NEWGROUPS AND BY CONSEQUENCE YOU WILL RECEIVE MORE MONEY "... MUST FOLLOW THE RULES OF THE BUSINESS, OR BUT IT WILL SEE ITSELF VERY AFFECTED BY PEOPLE INESCRUPULOSAS, LUCK FOR ALL! You asegúrese to print this article NOW, to remove all the information as she needs it. The process is very easy and consists of 3 (three) simple steps
STEP Nº 1: Obtain 6 sheets of paper and you write in each one of them "PLEASE INCLUDES MY NAME IN HIS LIST OF CORRESPONDENCE Or e MAIL" or "PLEASE ADD MY NAME TO YOUR LIST". Soon, its name also writes, direction and (OPTIONAL: electronic mail or email). And if it wants as

a pretty detail also places in which POSITION appeared each name of the people of its List when You sent your DOLLAR (Ej.: "He was in the 3 position" or" You were in slot 3 ") like making it more complete. That one is, to make money and to pass it well at the same time, everything with good will. Now it doubles this one page where the previous thing has written, around a bill of 1 dollar American, it does not send to checks nor another type of payments, single American Dollars. Póngalo everything within 1 on and mándelo to each one of the 6 listed people, the idea to double the paper around the dollar is for assuring that it is going to arrive at his destiny and THAT IS IMPORTANT. Of another way the people who work in the mail could detect that she is money and to remain with the THOUSANDS of YOU EXCEED that they are to him arriving; so that she recommends herself to surround everything, additionally, in a dark paper or of coal so that she does not see herself through on. What this doing is to create a service and like so, does COMPLETELY LEGAL. From now on this not sending a EURO or DOLLAR to him to some person without any reason, this paying to a EURO or DOLLAR by a legitimate service (I assure to Him, again, that this is completely legal). Immediately afterwards, it sends the 6 you exceed to following directions:

1. Guillermo Jimenez Ramos Urb. Villas de Feliza 154 Calle Lucy Boscana
Mayaguez, Puerto Rico 00680-7301

2. Mirta Weise. Calle: Eustaquio Frías 4361(Ingeniero Pablo Nogués) Código Postal:1613 Buenos Aires Argentina

3. Jaime Cruz Ravelo Calle 69 Sur No. 102C-24 Bq 6 Apto 307 Ciudadela La Libertad II Etapa Bogota D.C. (Colombia)

4. Edgar Fernando Gerardo Moreno. Calle Tarento 116 Entre Roma y Nápoles Cluster 12 Col. Hacienda Santa Fé C.P. 45655, Tlajomulco de Zuñiga, Jalisco (Mexico)

5. Ursula Maria Mora Devoto. Calle Manuel Quiroz 180 Dpto. 208 Santiago de Surco, Lima (Perú)

6. Olga Vargas Egusquiza. Calle Leon Velarde 115 Urb. Los Libertadores San Martin de Porres, Lima (Peru)

VERIFY OF WHICH ALL THE DIRECTIONS ARE CORRECT. STEP Nº 2: Now it eliminates I number #1 of list of above and moves the other names a number upwards (#6 becomes #5, and # 5 it turns #4, etc...) and it adds his NAME AND ITS DIRECTION like #6 of the list. STEP Nº 3: Change everything what creates advisable of this one article, but deal with to maintain it the closest possible thing to the original one. Now it puts his article in at least 200 NEWSGROUP (exists more than 24.000.000 newsgroup), single need 200, but the more it puts, the more money him it will arrive. STEP Nº 4: THIS STEP IS OPTIONAL: You also can send this article to other well-known people or strangers, relatives or friends through electronic mails or e-mails; for which

such You will have to make steps previous and in addition to add its email to the correspondence direction and simply to send this article by email or sticking it like message of text or like attached file. Important: Remember to select, to copy and to stick solely the article or letter of format HTML of the message! NOTE: "OF COURSE, NEWSGROUP CAN SEE THOUSANDS IT or UNTIL MILLION OF PEOPLE WHEREAS an ELECTRONIC MAIL SEES IT THAT or WHO THEY RECEIVE IT ". Here some indications of how introducing itself go to newsgroup: THIS IS IMPORTANT THE MAS PART OF THE BUSINESS OF PLACING THE WARNING WITH TU NAME NOT IN 200, BUT I PROPOSE TO YOU TO PUT IT IN 400 NEWGROUPS OF AS AT LEAST HALF IN EXTRAJEROS. HOW TO HANDLE the "NEWGROUPS in simple steps. Nº 1. - You do not need to write up all this letter to do hers own. He only puts his cursor in the beginning of this letter, clicks and he leaves it pressed and bájelo until the end of the letter and larguelo. All the letter will have to be "shaded". Then, note and clicks in "Edit" or "edition" it arrives of his screen, selects here "to copy" or (Ctrl +C). This will cause that all the letter is in the temporary memory of its computer. Nº 2. - Notepad" or "Word" Opens to a new file "and takes the cursor it arrives of the page in target, Presses "edit" and of the menu it selects "paste" or "to beat" or (Ctrl+V). Now it will have this letter in his computer and will be able to add its name in the place #6 of the list following the instructions of above. Nº 3. - This letter in its new file of notepad like "txt Records Case out " or "text file", and whenever it wants to change something, it will be able to do without problems. BEFORE PUBLISHING THIS ARTICLE IN ANY NEWSGROUP, IT REMEMBERS THAT ALL THE WEBSITES HAVE DIFFERENT INSTRUCTIONS TO PUBLISH ARTICLE IN ITS NEWS either GROUPS or NEWSGROUP the BEST thing IS THAN THEY FOLLOW INSTRUCTIONS OF HOW MAKING IT NEXT VERAN SOME SUGGESTIONS; THESE CAN VARY ACCORDING TO THE VERSIONS OF PROGRAMS, WEBSITES, ETC. FOR WHICH USES INTERNET EXPLORER. IF NO IT KNOWS MUCH OF FORUMS, IT CAN USE THE GOOGLE TO LOOK FOR NEWSGROUP AND BEGINS TO LOOK FOR WHERE TO PLACE ITS WARNING. Nº 4. - Go to newsgroup and you select "post an article" or "to write new message/discussion " in some newsgroup first is selected specific group and later loads the article in publishing new message. Nº 5. - The complete content of txt Marks. case out and you copy using same previous technique. Return to newsgroup "TO NEWS" and "IT STICKS IT" there you this creating and filling with paste this letter within its program or "posting" Presses the button "post" FOR WHICH THEY HANDLE NETSCAPE. Within the Netscape program, it goes to the titled window "Window" and select " NetscapeNews ". Then it chooses of the menu "Options", select "to Show all Newsgroup" Immediately will appear a list of all the newsgroup of their server, click in any newsgroup. Of this newsgroup it clicks underneath "TO NEWS", which would have to be it arrives, in the left end of the newsgroup page This him it took to the box of messages. Nº 6. - Fill east space. This it will be the title that will see all when cross by the list of a group in individual for example puts WINS SAFE, FAST AND LEGAL MONEY SINGLE 6 DOLLARS OF INVESTMENT. Mark complete content of txt cases out and copies using the same technique previous. Return to newsgroup "TO NEWS" and you this creating and filling with

paste or sticking this one letter within its program or "posting" Nº
7. - Press "send", that this in the left superior part and you have
finalized with its first newsgroup. ..... CONGRATULATIONS!
Everything what must do is to put in different Newsgroup (groups) and
to publish this one letter or article; when it already has practice,
single will take about 30 seconds him by each newsgroup. One it forms
to find NEWSGROUP, it is through the finders and Servants of the News.
REMEMBER: WHILE MAS NEWSGROUP OBTAINS, MAS MONEY ANSWERS WILL RECEIVE!
BUT IT MUST ENTER AT LEAST... 200 NEWSGROUP. AND ALREADY THIS! Single a
note more, if it knows to translate this message to other languages
(it can make it with the Tool Language of Word or by Internet), can in
addition, to insert them in forums of different countries like, the
USA, England, France, Germany, Russia, Brazil, (this I say it like
advice to expand the possibilities that he sees much but people it),
imagines that their mail sees it in China.

NEWS FINDERS
http://www.dejanews.com
http://www.supernews.com http://tile.net/news/
http://www.ii.com/internet/messaging/newsgroups/

LISTING OF HISPANIC NEWS
http://www.foromania.com
http://www.mundolatino.org/usenet.htm http://www.google.com.co/grphp?hl=es&tab=wg&q=

882. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 05:08:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cb7a53tsq3r1lku6fvb8r24i491hmvusj7@4ax.com>
Source record: 40932

On Wed, 23 May 2007 23:33:45 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:

>Giving W8QUR the benifit of the doubt
is like saying a 4 cylinder Hummer's efficiency would be improved if
you removed the chassis.

73's
Richard Clark, KB7QHC

883. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 05:10:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <if7a53da8cfhqa2efej5jgn3hcd44l3vgt@4ax.com>
Source record: 40933

On Thu, 24 May 2007 04:14:00 GMT, Rick <Ratradio@pacbell.net> wrote:

>If the ground radials go from 45 degree sloping downward to straight
>horizontal, at what point does it become a ground plane and not a dipole?

Hi Rick,

It becomes a "ground plane" (as you think of it) only when you plant
the radials (fully horizontal) into the ground - otherwise, with
elevation, it is an elaborate vertical dipole.

73's
Richard Clark, KB7QHC

884. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 10:30:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135aqa8iv60ou72@corp.supernews.com>
Source record: 40934

It's unfortunate that so many people feel the need to divide antennas like so many other things into binary categories. When the radials are horizontal, they radiate very little. As they're bent downward, they radiate more and more. So the transition, if you must have one, occurs wherever you want to consider the radiation to be "significant".

But even a ground plane with horizontal radials behaves like a dipole in some respects, like current distribution. So if you make the radials longer, it has an effect on the current distribution that's similar to making the top longer, but in the opposite direction. And the impedance change caused by lengthening the radials is similar to that of lengthening the top. So in some ways it's still a dipole.

The point I was hinting at is that calling ground plane radials "ground" doesn't impart magical properties to them. They are conductors with current flowing on them, so they create fields like any other conductors with currents. And the total current flowing in the radials is equal to the current flowing in the top wire.

Roy Lewallen, W7EL

Rick wrote:
> If the ground radials go from 45 degree sloping downward to straight
> horizontal, at what point does it become a ground plane and not a dipole?
>
> Roy Lewallen wrote:
>> The antenna you're describing is a dipole. Half of the dipole is the
>> upper vertical wire. The lower half is the radials. Changing the
>> length of one half has the same general effect as changing the other
>> half.
>>
>> Roy Lewallen, W7EL
>>
>> David Harmon wrote:
>>> When making the standard VHF-UHF ground plane antenna as illustrated in
>>> all the books, with four ground radials sloped down at a 45 degree
>>> angle, are those radials a tuned length? How much difference would it
>>> make if they were some random length considerably longer than specified?
>>> (as, for example, using the antenna on a different band by merely
>>> changing the center vertical element.)
>>>

885. Re: BECAUSE THE UNION MAKES THE FORCE

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 11:56:31 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180007791.859304.77790@m36g2000hse.googlegroups.com>
Source record: 40935

SPAM HOLE!

886. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 13:01:05 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <l0g5i.9195$2v1.3050@newssvr14.news.prodigy.net>
Source record: 40936

mcalhoun@ksu.edu wrote:
> Is that "low efficiency" of 30-50% really true?

50 ohm solid-state transceivers have a fixed filter
on their outputs which is often a multi-stage pi-
network. That fact alone should answer the question.
--
73, Cecil http://www.w5dxp.com

887. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 13:18:05 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180012742_12927@sp12lax.superfeed.net>
Source record: 40937

Cecil Moore wrote:
> mcalhoun@ksu.edu wrote:
>> Is that "low efficiency" of 30-50% really true?
>
> 50 ohm solid-state transceivers have a fixed filter
> on their outputs which is often a multi-stage pi-
> network. That fact alone should answer the question.

Doesn't the impedance transformation
ratio have an effect on the efficiency
of a pi network?

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

888. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 13:43:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yEg5i.2727$u56.277@newssvr22.news.prodigy.net>
Source record: 40938

Chuck wrote:
> Doesn't the impedance transformation ratio have an effect on the
> efficiency of a pi network?

The question is not: Can a particular pi-network plus
load be 30-50% efficient? Certainly, it can. The question
is: Are all pi-networks 30-50% efficient? The answer is "No!".
--
73, Cecil http://www.w5dxp.com

889. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 14:49:11 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180018211_13327@sp12lax.superfeed.net>
Source record: 40939

Cecil Moore wrote:
> Chuck wrote:
>> Doesn't the impedance transformation ratio have an effect on the
>> efficiency of a pi network?
>
> The question is not: Can a particular pi-network plus
> load be 30-50% efficient? Certainly, it can.

No disagreement, Cecil. My question
wasn't intended as a response to your
post. Sorry about that.

The question
> is: Are all pi-networks 30-50% efficient? The answer is "No!".

If that is the question, then no
disagreement there either.

We don't know all of what W8QUR said,
and none of what he meant, but there are
contexts in which each of his three
assertions could be correct. I guess the
one thing he doesn't seem to have said
is that all pi-networks are 30-50%
efficient. ;-)

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

890. Re: Travel Trailer Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 15:04:40 UTC
From: jeff.boone@nwea.org
Message-ID: <1180019080.649104.29880@p47g2000hsd.googlegroups.com>
Source record: 40940

On May 23, 11:44 am, Larry Caldwell <firstnamelastinit...@peaksky.com>
wrote:
>
> I'm installing a sound system in the trailer, and have selected a Dual
> XDM6810 car stereo as the receiver/amp. I want to give the radio the
> best chance for decent reception in fringe areas, which means figuring
> out how to install a good antenna. I can mount the receiver either in
> the front or rear, but once the radio is mounted the antenna location is
> limited by the length of the lead wire.
>
> 1. I plan to install a conventional automotive whip antenna. The top
> and sides of the trailer are out because tangling with branches and
> brush would tear the antenna off of the trailer. That leaves mounting
> on the trailer tongue, the rear bumper, or on a detachable mount of some
> kind. Any suggestions? A rear bumper mount would put the antenna
> parallel to the metal skin of the trailer for most of its length. Would
> that be a problem? I suppose I could also install an electric antenna
> through the roof, though that would cost me some battery life and be a
> potential source of leaks. I'm looking for advice on location, brands
> and types of antennae. Am I overlooking a good idea out of ignorance?
>

My camper came from the factory with an antenna mounted on the roof,
that
folds down to lay parallel to the roof. The cable was fed down to the
inside of
a cabinet where you could mount a receiver. Chech your local RV
dealers, I
bet they could fix you up with something similar.

Jeff

891. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 15:08:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RTh5i.9941$rO7.7629@newssvr25.news.prodigy.net>
Source record: 40941

Chuck wrote:
> No disagreement, Cecil. My question wasn't intended as a response to
> your post. Sorry about that.

Didn't mean to sound grouchy - it was before my first cup
of coffee.

> We don't know all of what W8QUR said, and none of what he meant, but
> there are contexts in which each of his three assertions could be
> correct. I guess the one thing he doesn't seem to have said is that all
> pi-networks are 30-50% efficient. ;-)

We do know what seemed to be inferred about the inference
of what W8QUR said. :-)
--
73, Cecil, w5dxp.com

892. Re: Travel Trailer Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 15:24:39 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <X6i5i.7959$YW1.4867@trnddc04>
Source record: 40942

"Larry Caldwell" <firstnamelastinitial@peaksky.com> wrote in message
news:MPG.20be2b57250b2036989b15@news.peaksky.com...
> This is sort of an odd question, so I hope someone here can help me with
> it. I sometimes take my travel trailer camping in the late fall and
> winter, which leaves many hours of darkness to entertain myself. I camp
> in remote, unimproved campgrounds, so mostly operate on the trailer's 12
> volt system and propane.
>
> I'm installing a sound system in the trailer, and have selected a Dual
> XDM6810 car stereo as the receiver/amp. I want to give the radio the
> best chance for decent reception in fringe areas, which means figuring
> out how to install a good antenna. I can mount the receiver either in
> the front or rear, but once the radio is mounted the antenna location is
> limited by the length of the lead wire.
>
> 1. I plan to install a conventional automotive whip antenna. The top
> and sides of the trailer are out because tangling with branches and
> brush would tear the antenna off of the trailer. That leaves mounting
> on the trailer tongue, the rear bumper, or on a detachable mount of some
> kind. Any suggestions? A rear bumper mount would put the antenna
> parallel to the metal skin of the trailer for most of its length. Would
> that be a problem? I suppose I could also install an electric antenna
> through the roof, though that would cost me some battery life and be a
> potential source of leaks. I'm looking for advice on location, brands
> and types of antennae. Am I overlooking a good idea out of ignorance?
>
> 2. What happened to loading coils? When I installed aftermarket
> automotive radios back in the '60s, they had a tuning coil. You
> extended the whip to the desired length, tuned the radio to a weak
> station, then turned the coil adjustment to give the best reception. Is
> there an aftermarket loading coil that I could use, or do the
> sophisticated electronics of modern car radios not require antenna
> coils? The AM sensitivity of this radio is listed at 22 uV, which I
> don't recall as being all that great.
>
> Things I have already thought of:
>
> - The propane furnace uses a DC universal motor to circulate air. I
> already found an RF choke to install in the power circuit, and can also
> put a noise suppressing capacitor across the furnace fan terminals if
> necessary.
>
> - This receiver has an external line input and will also read MP3 CDs,
> so I can always plug in a satellite receiver or play MP3 CDs.

>
> - I have a Radio Shack DX-440 (Sangean ATS-803A) SW/LW/SSB portable that
> will keep me entertained in truly fringe areas.
>
My trailer came from the factory with a whip antenna mounted on the roof.
It had a small spring at the base to lessen the effects of hits.

If you mount an antenna high enough to hit overhanging branches, I would
suggest that it be mounted on the driver's side of the vehicle. In most
cases, there is more overhead clearance. Also, on occasion, it is possible
to get full clearance by driving the antenna around overhead branches.

893. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 17:17:17 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <aOSdnUO6jY54VcjbnZ2dnUVZ8tqinZ2d@bt.com>
Source record: 40943

```
"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:46550794$0$3197$4c368faf@roadrunner.com...
>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns993A5057661EFnonenowhere@61.9.191.5...
> > mcalhoun@ksu.edu wrote in news:f31jic$g29@unix1.cc.ksu.edu:
> >
> >> Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
> >> the December, 1965, issue of 73 MAGAZINE, after discussing power-
> >> supply filters and high- and low-pass TV filters, wrote:
> >>
> >> (Paraphrasing) "The most popular of all pi networks is the output
> >> circuit of a transmitter ... with which the output of almost any
> >> transmitter can be matched to almost any antenna ... another
> >> advantage is the reduction of harmonics....
> >>
> >> (Actual quote) "The big disadvantage of this system is the low
> >> efficiency. It is not possible to run more than 50% efficiency
> >> and it tends to be more like 30%. Other methods of feeding the
> >> antenna will result in efficiencies of as high as 65% to 70%."
> >>
> >> Is that "low efficiency" of 30-50% really true?
> >>
> >
> > Myron,
> >
> > The temptation is to see that the second paragraph is about Pi networks,
> > though it doesn't actually use the term. It does refer to a "system" and
> > goes on to discuss efficiency in the context of "feeding the antenna".
> >
> > There is no doubt that practical Pi networks in transmitters operate at
> > efficiencies much greater than 50%, and the design efficiency is a
trade-
> > off with harmonic suppression (for the low pass configuration in a
> > typical PA).
> >
> > If the term "system" is to include more than just the Pi network, then
> > lower system efficiciency will prevail, but without a clear definition
of
> > the "system", it is not possible to comment on the reasonableness. For
> > example, if a Pi coupled transmitter feeds a full wave dipole via a
> > substantial length of coax, system efficiency might well be much less
> > than 10%. Does he include DC to RF conversion loss in his view of system
> > efficiency?
```

> >
> > Owen
>
> Giving W8QUR the benifit of the doubt
> I thought he may be including feedline losses which could be from 1 to 2
db
> for coax compared to balanced line used with a balanced output network.
> I think something may be lost in the paraphrasing and this is probably a
> comparison of balanced to unbalanced systems rather than a comparison of
> Pi-net to other types of tuner networks.
>
> Jimmie
>
>

In the 1960's it was common to refer to efficiency as relating to the entire system converting AC or DC power into RF out of the antenna. Total system efficiencies of 30-50% would have been normal taking into account the losses involved in running valve heaters, HT valve supplies and final stage cooling fans. The reference to Pi matching output circuits is a bit of a red herring. These were probably the most commonly used system used to match transmitters that were required to operate on a wide range of frequencies because they were so effective at this task, and relatively cheap to manufacture. Other more efficient matching methods could be used for fixed frequency valve transmitters.

Even up to the 1980's, many shipboard emergency transmitters were valve based. Radio Officers were required to make regular checks and efficiency calculations to ensure that the emergency transmitters and receivers could operate for a minimum specified period from a bank of emergency batteries. Even with several hundred amp hours of battery capacity, only around 16 hours of full power (100watts) operation was the maximum that could be expected.

Mike G0ULI

894. Re: DC waves??? Magic frequency???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 21:07:32 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f34uqg$qr6$1@nnrp.linuxfan.it>
Source record: 40944

J.B. Wood wrote:
>> > ....
> Hello, and while categorizing discoveries and advancements as "major"
> are in the hands of the beholder why hasn't anyone mentioned Dr. John D.
> Kraus, W8JK (silent key), antenna and radiotelescope designer
> extraordinaire? Both the EE and ham community lost a great radio
> pioneer. Sincerely,

"Discovering radio" (Nicola Tesla) is major ...
Inventing the light bulb (Edison) is major ...
The discovery of fire (caveman) is major ...
The first spacecraft (nasa) is major ...
The first turbine (Nicola Tesla) is major ...
The first atomic bomb (various scientists) is major ...
The egypt pyramids (unknown?) are major ...
The first transistor (bell labs) is major ...

Naa, categorizing is easy! Like I said, "great doctorates" are mostly
oxymoron-ish ... and belong "in the other category."

JS

895. HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 21:13:48 UTC
From: n9mxq <n9mxq@[noSpaM}aim.com>
Message-ID: <cvidnUQ72I-ZncvbnZ2dnUVZ_rGinZ2d@insightbb.com>
Source record: 40945

Hello group, I'm hoping you all can help me identify an antenna I inherited some years ago and just now dug out.

It appears to be HF in banding, but I don't have an analyzer to check it out.

At the bottom is 3 points for radial wires to attach. I'd like to ID this monster and maybe put it into service...

Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna

Email me direct, or reply here.

Thanks in advance.

Gene N9MXQ

896. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 21:38:13 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993B4DB08E51Bnonenowhere@61.9.191.5>
Source record: 40946

Roy Lewallen <w7el@eznec.com> wrote in
news:135aqa8iv60ou72@corp.supernews.com:

...
> The point I was hinting at is that calling ground plane radials
> "ground" doesn't impart magical properties to them. They are
> conductors with current flowing on them, so they create fields like
> any other conductors with currents. And the total current flowing in
> the radials is equal to the current flowing in the top wire.

... if you assume that no current flows on the feedline / mast, and it
seems that doesn't happen by accident.

Owen

897. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 21:46:38 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1180043198.102244.88700@x18g2000prd.googlegroups.com>
Source record: 40947

On May 23, 1:08 pm, Wes Stewart <n7ws*@*yahoo.com> wrote:
> On 23 May 2007 09:37:00 -0500, mcalh...@ksu.edu wrote:
>
> >Ralph Hanna, W8QUR, in a brief article "Pi Networks" on page 108 of
> >the December, 1965, issue of 73 MAGAZINE, after discussing power-
> >supply filters and high- and low-pass TV filters, wrote:
>
> > (Paraphrasing) "The most popular of all pi networks is the output
> > circuit of a transmitter ... with which the output of almost any
> > transmitter can be matched to almost any antenna ... another
> > advantage is the reduction of harmonics....
>
> > (Actual quote) "The big disadvantage of this system is the low
> > efficiency. It is not possible to run more than 50% efficiency
> > and it tends to be more like 30%. Other methods of feeding the
> > antenna will result in efficiencies of as high as 65% to 70%."
>
> >Is that "low efficiency" of 30-50% really true?
>
> As others have stated, No.
>
> Clearly at that time the author was talking about a vacuum tube
> transmitter where the pi-network was used to transform the load
> impedance (usually 50 ohm) up to the load that the tube(s) want to
> see.
>
> The usual implementation was the low-pass form of shunt C(s), series
> L, although this isn't the only option. The network can be thought of
> as two L-networks back-to-back with a "virtual" impedance common to
> the midpoint. The usual design sets a overall network Q (the sum of
> the two L-network Q's) at something between 10 and 12 for harmonic
> suppression reasons.
>
> The loss in the network is usually considered to be only in the
> inductor, (although this isn't totally correct) because inductors
> generally have lower unload Qs than the air or vacuum variable
> capacitors that are typically used.
>
> The network efficiency using this assumption is then:
>
> eff = 1 - (Ql/Qu)
>
> So for example if the inductor Q = 200 (a reasonable value) and the
> network Q is set to 12 then the efficiency is 94%, a long way from

> what the author claims.
>
> At higher frequencies with tubes with high output capacitance it may
> be necessary to design for a higher loaded Q than we would like. In
> this case, the efficiency will reduce as is often the case with
> amplifiers on 10-meters for example.
>
> All of this stuff in any ARRL Handbook and can be worked out by the
> reader.

I haven't thought terribly deeply about this, but it occurs to me you're caught between a rock and a hard place any time you are stuck with a tube whose output capacitance represents a low reactance at the operating frequency, and which wants to see a high load impedance. However you resonate that capacitance, you end up with a high Q. It is convenient that the Q of coils goes up as the frequency increases, and for practical tubes at VHF/UHF, you can use transmission lines that are physically large enough to have very high Qu.

In fact, it's not just the tube capacitance that gives you grief--it's the ratio of the reactance and the desired load resistance. And for a pure pi network, it's also the ratio between the resistance you're matching: if you want to present a 5000 ohm load to a tube and transform that to 50 ohms, the Q of the pi will be at least 10, at which point the network has degenerated into a simple L with no output capacitance. If you need to get from 10k ohms to 10 ohms, then the loaded Q is 31.6 minimum.

But if you add just one more inductor forming a cascade of two L networks each performing a 31.6:1 impedance transformation (for the 10k to 10 ohm example), the Ql of each will be about 5.6. The capacitance at the plate end becomes much smaller, though, so this method is only practical at lower frequencies. The comparison between the "minimum Q" pi degenerated into a single L network and the cascade of two L networks is interesting: the -3dB bandwidth of the single L is about 6%, versus 26% for the cascade of two; but the harmonic attenuation is better for the cascade: at the second harmonic, it's 42dB versus 33.5, and at the third, 59dB versus 42dB. Loss with Q=100 coils is also better for the cascade, about .48dB versus .72, although if you use the same volume for the single coil case as you do for the two coil network, the loss is pretty similar since the larger coil has higher Qu. You can carry this even further and cascade more L sections to get a flatter wide passband, better harmonic suppression, and reasonably low loss.

Cheers,
Tom

898. Re: HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 22:01:08 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993B519379BABnonenowhere@61.9.191.5>
Source record: 40948

n9mxq <n9mxq@[noSpaM}aim.com> wrote in news:cvidnUQ72I-ZncvbnZ2dnUVZ_rGinZ2d@insightbb.com:

> Hello group, I'm hoping you all can help me identify an antenna I
> inherited some years ago and just now dug out.
>
> It appears to be HF in banding, but I don't have an analyzer to check
it
> out.
>
> At the bottom is 3 points for radial wires to attach. I'd like to ID
> this monster and maybe put it into service...
>
> Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna
>
> Email me direct, or reply here.

Gene,

It looks like a trapped multiband HF vertical for 10, 15, 20, 40, 80m.

I don't know the brand, it isn't a Hustler 5BTV and I would reckon it isn't made by Hustler.

Owen

899. Re: HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 22:09:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f352f0gsv1@news.service.uci.edu>
Source record: 40949

n9mxq wrote:

> Hello group, I'm hoping you all can help me identify an antenna I
> inherited some years ago and just now dug out.
>
> It appears to be HF in banding, but I don't have an analyzer to check it
> out.
>
> At the bottom is 3 points for radial wires to attach. I'd like to ID
> this monster and maybe put it into service...
>
> Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna
>
> Email me direct, or reply here.
>
> Thanks in advance.
>
> Gene N9MXQ

Hi Gene -

It looks like an R7000. Cushcraft. Not one of their better designs.

73, ac6xg

900. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 22:14:18 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <bu2c53l3svd5qf1o1fbrbqjfjpsvlvemhg@4ax.com>
Source record: 40950

On 24 May 2007 14:46:38 -0700, K7ITM <k7itm@msn.com> wrote:

[all my good stuff snipped]
>
>
>I haven't thought terribly deeply about this, but it occurs to me
>you're caught between a rock and a hard place any time you are stuck
>with a tube whose output capacitance represents a low reactance at the
>operating frequency, and which wants to see a high load impedance.
>However you resonate that capacitance, you end up with a high Q. It
>is convenient that the Q of coils goes up as the frequency increases,
>and for practical tubes at VHF/UHF, you can use transmission lines
>that are physically large enough to have very high Qu.
>
>In fact, it's not just the tube capacitance that gives you grief--it's
>the ratio of the reactance and the desired load resistance. And for a
>pure pi network, it's also the ratio between the resistance you're
>matching: if you want to present a 5000 ohm load to a tube and
>transform that to 50 ohms, the Q of the pi will be at least 10, at
>which point the network has degenerated into a simple L with no output
>capacitance. If you need to get from 10k ohms to 10 ohms, then the
>loaded Q is 31.6 minimum.
>
>But if you add just one more inductor forming a cascade of two L
>networks each performing a 31.6:1 impedance transformation (for the
>10k to 10 ohm example), the Ql of each will be about 5.6. The
>capacitance at the plate end becomes much smaller, though, so this
>method is only practical at lower frequencies. The comparison between
>the "minimum Q" pi degenerated into a single L network and the cascade
>of two L networks is interesting: the -3dB bandwidth of the single L
>is about 6%, versus 26% for the cascade of two; but the harmonic
>attenuation is better for the cascade: at the second harmonic, it's
>42dB versus 33.5, and at the third, 59dB versus 42dB. Loss with Q=100
>coils is also better for the cascade, about .48dB versus .72, although
>if you use the same volume for the single coil case as you do for the
>two coil network, the loss is pretty similar since the larger coil has
>higher Qu. You can carry this even further and cascade more L
>sections to get a flatter wide passband, better harmonic suppression,
>and reasonably low loss.
>

Yep.

A number of years ago in this group our departed friend, Reg, made a
comment more or less saying that the fewer (non-ideal) reactances were

in the matching network, the lower the losses were.

I offered an example that proved this wrong. I'm extremely strapped for time but I think the thread has something to do with L-networks if anyone cares to search for it.

Wes

901. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 22:41:15 UTC
From: skippy <skippy@computer.com>
Message-ID: <1pGdnd0nzdQWicvbnZ2dnUVZ_uGknZ2d@comcast.com>
Source record: 40951

Mike:

I think you are dealing at a much more sophisticated level than I am. I guess the wind loading was not my primary concern, so much as the weight of the wire, and what size lag screw to use going into a 2X4 truss. I'm a software guy, not a mechanical guy, and I know just enough to worry that I don't know what I am doing! I see little tips on the 'net like "...using a chimney mount subjects the antenna to products of combustion and shortens antenna life..." which sounds quite reasonable when I read it, but had not occurred to me before. An example of my concerns: I have a lot of trees. Say I hang a long random wire, perhaps 100' of #14 copperclad steel. Say we have a wind storm-the loading on the wire from the wind doesn't concern me as much as a large branch breaking and hitting this pretty strong(?) steel wire, and... So do I arrange for some sort of mechanical equivalent of a fuse that will break and drop the wire before it tears the tripod (and a piece of roof) off? What are the mechanical considerations? If someone hung a wire antenna, and gave no thought to static charge/lightning concerns, I would think them negligant. What are the equivalent mechanical concerns? I am not finding much about this in the ARRL Antenna book. I'm sure you guys are commonly thinking of a lot of "common sense" stuff when you are on the roof that I am not even aware of.

Mike Kaliski wrote:
> "skippy" <skippy@computer.com> wrote in message
> news:vv-dnXizTYILrM_bnZ2dnUVZ_qupnZ2d@comcast.com...
>> I would like to experiment more with antennas, but am concerned about
>> roof issues (creating leaks) and mechanical issues like how do I
>> calculate the side loading for a 50 ft. random wire running from 1
>> 5-foot tripod on my roof.
>>
>> I googled around, and looked at some antenna books at the public lib,
>> but have has little success. Any suggestions? I looked at FAQ's, but
>> haven't found much.
>>
>> Thanks.
>
> Skippy
>
> Wind loading is unlikely to be a factor with random wire systems. It is
> mainly a factor when considering antenna towers fitted with an array at the
> top. Wind load increases by a factor of four every time the wind speed
> doubles. So if you had a tower and antenna array with a side on area of say
> 5 square metres and a wind load of say 20 Kg force with a 20mph wind, that
> sideways force would be 80 Kg with 40 mph wind and 320 Kg with an 80 mph

> wind.
>
> 320Kg of sideways force applied along the length on an antenna tower would
> be enough to start to shift even very large chunks of concrete used in a
> base.
>
> Unless you have a very weak roof structure, the load imposed by a wire on a
> 5 foot pole is unlikely to be an issue.
>
> Searches of the Internet show hundreds of different formulae available to
> calculate windloads, however most of them appear to relate to building
> regulations and the effect of wind loading on walls, roofs and other
> structures. The reason you cannot find a definitive answer is that the
> presure exerted by the wind depends not only on it's speed, but also the
> temperature, cold air is denser than warm air and applies a greater sideways
> presure to any structure in the way.
>
> From the RSGB Radio Communication Handbook 6th Edition typical wind drag at
> 100mph is 5.81 pounds per foot length of 2 inch tubing, 0.17 pounds per foot
> length of 14 swg wire, 135 pounds for a typical three element 14MHz yagi
> antenna and 260lb for a typical cubical quad antenna.
>
> Using a spreadsheet, these figures seem to translate into a wind loading of
> approximately 35 pounds per square foot at 100 mph or approximately 170 Kg
> per square metre at 160 kph if you prefer metric measures.
>
> So very approximately, sideways wind load works out to the following:-
>
> Windspeed Wind Load per Square Foot Wind Load per Square Metre
> 12.5 mph 1/2 pound
> 2.6 Kg
> 25 mph 2 pounds
> 11 Kg
> 50 mph 9 pounds
> 43 Kg
> 100 mph 35 pounds
> 170 Kg
>
> These are very approximate figures and are only suitable for a ball park
> estimate of wind loading on your antenna systems. When calculating the
> strength of support guys needed to resist wind pressure add a safety factor
> of six or more.
>
> Mike G0ULI
>
>

902. Re: HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 22:56:26 UTC
From: n9mxq <n9mxq@[noSpaM}aim.com>
Message-ID: <W-SdnbdkqqOPhcvbnZ2dnUVZ_vfinZ2d@insightbb.com>
Source record: 40952

I don't think that is it... This one mounts on the end of a mast, the
R7000 mounts beside the mast....

Jim Kelley wrote:
>
>
> n9mxq wrote:
>
>> Hello group, I'm hoping you all can help me identify an antenna I
>> inherited some years ago and just now dug out.
>>
>> It appears to be HF in banding, but I don't have an analyzer to check
>> it out.
>>
>> At the bottom is 3 points for radial wires to attach. I'd like to ID
>> this monster and maybe put it into service...
>>
>> Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna
>>
>> Email me direct, or reply here.
>>
>> Thanks in advance.
>>
>> Gene N9MXQ
>
> Hi Gene -
>
> It looks like an R7000. Cushcraft. Not one of their better designs.
>
> 73, ac6xg
>

903. Aircom Plus coax + PL-259 connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-24 23:14:26 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf5c72i.2c4k.bit-bucket@shell.config.com>
Source record: 40953

Would anyone know off-hand if "normal" PL-259 connectors can be
installed on Aircom Plus coax? Or, do I need to buy their "AIRCOM PLUS
PL259 UHF Connector DC-800" -- at $10 a pop?'

tnx es gud dx
Jones
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

904. Re: Aircom Plus coax + PL-259 connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 02:12:41 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46564614$0$2384$4c368faf@roadrunner.com>
Source record: 40954

"Allodoxaphobia" <bit-bucket@config.com> wrote in message
news:slrnf5c72i.2c4k.bit-bucket@shell.config.com...
> Would anyone know off-hand if "normal" PL-259 connectors can be
> installed on Aircom Plus coax? Or, do I need to buy their "AIRCOM PLUS
> PL259 UHF Connector DC-800" -- at $10 a pop?'
>
> tnx es gud dx
> Jones
> --
> Marvin L Jones | jonz | W3DHJ | linux
> 38.24N 104.55W | @ config.com | Jonesy | OS/2
> *** Killfiling google posts: <http://jonz.net/ng.htm>

Im kinda guessing but I think you can use a '259 but have to use their N
connector.

Jimmie

905. Re: VHF Ground plane radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 02:32:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f35hs1$9df$1@nnrp.linuxfan.it>
Source record: 40955

David Harmon wrote:
> When making the standard VHF-UHF ground plane antenna as illustrated in
> all the books, with four ground radials sloped down at a 45 degree
> angle, are those radials a tuned length? How much difference would it
> make if they were some random length considerably longer than specified?
> (as, for example, using the antenna on a different band by merely
> changing the center vertical element.)
>
>
So, these guys are telling you that the antenna you describe is a
dipole? Funny, you call it a ground plane antenna (gpa) and I can draw
a mental picture of exactly what you are attempting to build. If you
had called it a dipole, I'd have expected the common half wave wire fed
in the middle.

You get my drift, nice to have two different names for the two vastly
mechanically-differing constructions of metal and insulators.

By the way, have you ever heard a yagi called a "Multiple Dipole Antenna
Working in Tandem?" <GRIN!>

As to your question, cut the radials ~5% longer than the vertical
element, droop them at a angle which give you a good match to your 50
ohm coax (or ~45 degrees.)

Better yet, consider a half wave end fed antenna which requires no
counterpoise (radials, check out the radiation pattern of the halfwave
endfed):
http://www.70mhz.org/halfwav.htm
Simply change dimensions to fit your freq(s), much easier to hang a
single vertical wire in the air than one vertical and four
horizontal--no matter what the freq.

Best regards,
JS

906. Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 10:14:27 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1180088067.768928.159030@k79g2000hse.googlegroups.com>
Source record: 40956

When someone asks me what's the optimal radial ground screen, I mostly answer: "120 radials with a length of 0.4 lambda".

This answer is somehow fixed in my mind, based on a study and experiments undertaken long time ago by ...?

Does anybody have a pointer/link/url to this study or can someone deliver me more details ?

I already did some Googling, but could not find the article I once red.

Thanks in advance,
Arie Voors.

907. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 10:28:05 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993BD03723DC8nonenowhere@61.9.191.5>
Source record: 40957

4nec2 <4nec2@gmx.net> wrote in news:1180088067.768928.159030
@k79g2000hse.googlegroups.com:

> When someone asks me what's the optimal radial ground screen, I mostly
> answer: "120 radials with a length of 0.4 lambda".
>
> This answer is somehow fixed in my mind, based on a study and
> experiments undertaken long time ago by ...?
>
> Does anybody have a pointer/link/url to this study or can someone
> deliver me more details ?
>
> I already did some Googling, but could not find the article I once
> red.
>
> Thanks in advance,
> Arie Voors.
>
>

Hi Arie,

Perhaps this is the paper of which you are thinking:
http://k6mhe.com/BLE.html .

Great work on 4NEC2, thanks.

Owen

908. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 10:29:05 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993BD0623AC89nonenowhere@61.9.191.5>
Source record: 40958

4nec2 <4nec2@gmx.net> wrote in news:1180088067.768928.159030
@k79g2000hse.googlegroups.com:

> When someone asks me what's the optimal radial ground screen, I mostly
> answer: "120 radials with a length of 0.4 lambda".
>
> This answer is somehow fixed in my mind, based on a study and
> experiments undertaken long time ago by ...?
>
> Does anybody have a pointer/link/url to this study or can someone
> deliver me more details ?
>
> I already did some Googling, but could not find the article I once
> red.
>
> Thanks in advance,
> Arie Voors.
>
>

I should also have mentioned LB's article at
http://www.cebik.com/gp/gr.html .

Owen

909. Re: mechanical and roof issues

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 11:05:01 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <eeCdnfOcT9q5XsvbnZ2dnUVZ8tChnZ2d@bt.com>
Source record: 40959

"skippy" <skippy@computer.com> wrote in message
news:1pGdnd0nzdQWicvbnZ2dnUVZ_uGknZ2d@comcast.com...
> Mike:
>
> I think you are dealing at a much more sophisticated level than I am. I
> guess the wind loading was not my primary concern, so much as the weight
> of the wire, and what size lag screw to use going into a 2X4 truss. I'm
> a software guy, not a mechanical guy, and I know just enough to worry
> that I don't know what I am doing! I see little tips on the 'net like
> "...using a chimney mount subjects the antenna to products of combustion
> and shortens antenna life..." which sounds quite reasonable when I read
> it, but had not occurred to me before. An example of my concerns: I
> have a lot of trees. Say I hang a long random wire, perhaps 100' of #14
> copperclad steel. Say we have a wind storm-the loading on the wire from
> the wind doesn't concern me as much as a large branch breaking and
> hitting this pretty strong(?) steel wire, and... So do I arrange for
> some sort of mechanical equivalent of a fuse that will break and drop
> the wire before it tears the tripod (and a piece of roof) off? What are
> the mechanical considerations? If someone hung a wire antenna, and gave
> no thought to static charge/lightning concerns, I would think them
> negligant. What are the equivalent mechanical concerns? I am not
> finding much about this in the ARRL Antenna book. I'm sure you guys are
> commonly thinking of a lot of "common sense" stuff when you are on the
> roof that I am not even aware of.
>
>
> Mike Kaliski wrote:
> > From the RSGB Radio Communication Handbook 6th Edition typical wind drag
at
> > 100mph is 5.81 pounds per foot length of 2 inch tubing, 0.17 pounds per
foot
> > length of 14 swg wire, 135 pounds for a typical three element 14MHz yagi
> > antenna and 260lb for a typical cubical quad antenna.
> >
> > Using a spreadsheet, these figures seem to translate into a wind loading
of
> > approximately 35 pounds per square foot at 100 mph or approximately 170
Kg
> > per square metre at 160 kph if you prefer metric measures.
> >
> > So very approximately, sideways wind load works out to the following:-
> >
> > Windspeed Wind Load per Sq Foot Wind Load per Sq Metre
> > 12.5 mph 1/2 pound 2.6 Kg

> > 25 mph 2 pounds 11 Kg
> > 50 mph 9 pounds 43 Kg
> > 100 mph 35 pounds 170 Kg
> >
> > These are very approximate figures and are only suitable for a ball park
> > estimate of wind loading on your antenna systems. When calculating the
> > strength of support guys needed to resist wind pressure add a safety
factor
> > of six or more.
> >
> > Mike G0ULI
> >

Skippy

The wind loading IS the primary concern with vertical antenna systems involving masts and tower supports. The sideways forces exerted by a long wire antenna are going to be in the order of a few pounds provided you don't try to tighten up the antenna wire so that it is absolutely rigid.

For a 50ft wire a sag in the middle of a couple or three feet should be enough to keep the tension low. Add an extra couple of feet if you are fastening the far end to a tree or something that might move a bit in high winds. You can use a couple of shackles at one end of the wire to insert a weak link. The shackles are fastened to the wire about 2 feet apart. A one foot link or thinner wire is then inserted between the shackles. If the antenna is struck by a branch, the weak link breaks and allows the antenna some extra slack to move out the way. Hopefully this is enough to allow the antenna to remain operational until you can replace the weak link.

A bracket secured into a 2"x4" truss with four 1-1/2" or 2" long wood screws should provide all the anchorage you will need. Use 2-1/2" long screws if going into the 4" thickness of the truss. If you decide to bolt completely through the truss, make sure the diameter of the holes will not weaken the wooden truss. Fit a couple of extra lengths of wood either side of the truss to help spread the load and reinforce the area where the holes have been drilled.

Feed the wire into the house across the top of an old spark plug and earth the body of the spark plug to ground with a thickish cable and an earth rod. Stick the spark plug in a gash plastic box to keep the dirt out of the spark gap. You can use one of the commercial neon tube lightning protectors if you wish. If you have a 1 megohm resistor lying about, connecting this between the antenna and earth will hardly affect receiver (or transmitter) performance but will help to earth static build up from the antenna. Obviously, the antenna should be disconnected from the receiver during storms but the spark plug and resistor method offer some protection from nearby lightning strikes. For a receiver only system, a couple of silicon diodes connected back to back across the antenna input provide a great deal of protection for the receiver front end by effectively shorting out any voltage over 0.6 of a volt or so.

If you are using a rope and pulley method for hauling up either end of the antenna, it is likely that the rope will break before the main antenna wire, so you might want to make sure that the rope can be replaced easily if it breaks. For example, fit a second lightweight parallel cord through the pulley, so it can be used to pull up a new support rope without resorting to getting the ladder out.

The ideal is to arrange the antenna so that easily fixed bits break before the hard to get at pieces. Hence the 'weak' wire link, a backup system to put new bits of rope up in the air and possibly some extra bracing around where the support bracket is fixed to the roof if you are concerned about stuctural integrity in this area.

It really is just common sense and you don't need an engineering degree to erect a really robust antenna system. Now GPS - that really is rocket science :-)

Regards

Mike G0ULI

910. FS-SHORT 75/40M DIPOLE

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 13:45:15 UTC
From: Sonny Hood <wrhood@cox.net>
Message-ID: <hvpd53pu2jrp5arf4jcfj003hkr453j001@4ax.com>
Source record: 40960

75/40 Meter Coil Loaded Dipole, less than 85 ft. In length, similar to the Alpha Delta DX-DD but made with 12 & 14 gauge hard drawn copper wire not soft house wire, Pre-tuned to the voice segments of the 75/40 meter bands. Coax fed and can be hung as a flat top or inverted Vee. 50 KHz or better less than 2:1 SWR on 75 and below 2:1 across the full 150 KHz of the 40 meter voice segment. Will cover all of 75 meters using an antenna tuner. Can use on some higher HF bands using a tuner. Will handle up to 300 watts.
Basic antenna $50.00 plus shipping from 23323. Can supply with a 1:1 balun plus cost of balun. Contact <k4wys@cox.net>

911. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 13:46:54 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <v3qd539ppqnc335r54fa75amvh3dltgq4e@4ax.com>
Source record: 40961

For what it's worth, you might want to check out the ARRL antenna handbook. It isn't exactly a study, but it gives data related to the different number of radials and their respective lengths in relationship to the antenna efficiency.

N4PGW

On 25 May 2007 03:14:27 -0700, 4nec2 <4nec2@gmx.net> wrote:

>When someone asks me what's the optimal radial ground screen, I mostly
>answer: "120 radials with a length of 0.4 lambda".
>
>This answer is somehow fixed in my mind, based on a study and
>experiments undertaken long time ago by ...?
>
>Does anybody have a pointer/link/url to this study or can someone
>deliver me more details ?
>
>I already did some Googling, but could not find the article I once
>red.
>
>Thanks in advance,
>Arie Voors.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

912. Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 15:14:18 UTC
From: junoexpress <MTBrenneman@gmail.com>
Message-ID: <1180106058.719981.192550@p77g2000hsh.googlegroups.com>
Source record: 40962

Hi,

I am not an "antenna person", so I have a simple question that I am hoping someone will be so kind to answer for me.

I have data for the gain pattern of a directional antenna. The data is given as complex numbers for both the phi and theta components. From how I view the concept of antenna gain (as a mathematician), it seems that you can consider the gain as a rank 2 tensor having the form:

```
_ _
| Gqq Gfq |
(i.a) G = | Gqf Gff |
- -
```

where f = phi component, q denotes the theta component

In this case, I can suppose there is no cross-polarization, so this matrix reduces to:

```
_ _
| Gqq 0 |
(i.b) G = | 0 Gff |
- -
```

Now I have an incident E field (which happens to be RHCP), that I can write as a plane wave:
(ii) E(t) = E0(t) [Eq*q^hat , Ef*f^hat]
where E0(t) is the time dependence that factors out and the 2x1 vector remaining gives the q and f components resp.

M questions is as follows:
Obviously, I am interested in the antennas response to the field. If I want to compute the voltage induced on the antenna by the field, do I add the two E field components or do I compute the norm of the vector on the RHS of eqn (ii)? When I think of how a field induces a voltage, I think of the voltage as being proportional to norm of the field. A colleague of mine who does some work with antennas however says that the antenna "doesn't know anything about components" and so it just adds the two components. (also, this question is a bit of an aside perhaps, but in the papers that I look through that deal with polarized EM waves, only the E field and not the H field are considered. Is there a reason why/justification for why it it can be neglected?)

Thank you very much and you can reply to me on the ng or by my e-mail address.

Matt Brenenman

913. Re: HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 16:21:32 UTC
From: garlicman <None>
Message-ID: <TJudnRsd-4mSkMrbnZ2dnUVZ_ternZ2d@comcast.com>
Source record: 40963

"n9mxq" <n9mxq@[noSpaM}aim.com> wrote in message
news:W-SdnbdkqqOPhcvbnZ2dnUVZ_vfinZ2d@insightbb.com...
>I don't think that is it... This one mounts on the end of a mast, the R7000
>mounts beside the mast....
>
> Jim Kelley wrote:
>>
>>
>> n9mxq wrote:
>>
>>> Hello group, I'm hoping you all can help me identify an antenna I
>>> inherited some years ago and just now dug out.
>>>
>>> It appears to be HF in banding, but I don't have an analyzer to check it
>>> out.
>>>
>>> At the bottom is 3 points for radial wires to attach. I'd like to ID
>>> this monster and maybe put it into service...
>>>
>>> Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna
>>>
>>> Email me direct, or reply here.
>>>
>>> Thanks in advance.
>>>
>>> Gene N9MXQ
>>
>> Hi Gene -
>>
>> It looks like an R7000. Cushcraft. Not one of their better designs.
>>
>> 73, ac6xg
>>

I just bought a used Cushcraft R7. This looks very similar, with slight
differences. I suspect it is a somewhat older model or a modified R7.

914. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 16:42:26 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <b84e535k2t4virs32l2s2b6q45ec1q2a4g@4ax.com>
Source record: 40964

On Wed, 23 May 2007 22:08:31 GMT, Owen Duffy <none@no.where> wrote:

>
>I recently saw an article with the following:
>
>"I would like to express my thanks to <xxxxxxxx> for continuing the
>advancement of the transmission line transformer. We have become somewhat
>of co-workers, sharing information back and forth about how these efficient
>devices work in the HF, MF, and VHF parts of spectrum. He has done some
>recent experiments on new ferrite cores and found that by reducing the
>number of turns the actual potential difference on each turn is greater
>which increased the core loss. This means that the losses in these
>transmission line transformers are voltage dependant and not flux related."
>
>I am trying to understand how it is that losses are "voltage dependant and
>not flux related". Aren't flux and voltage related? Is he trying to say
>there are core losses that result from a voltage impressed across the
>winding, but the losses are caused mainly by electric field rather than the
>magnetic field? My understanding was that whilst there are dielectric
>losses in ferrite and iron power materials, the magnetic losses dominate in
>most applications.
>
>Is there a sound basis for the quote, or is it advertising bunk?
>
>Owen

Sounds like nonsense to me Owen. The only losses of any importance for
baluns that I am aware of are IR losses and flux loss and sometimes
dielectric losses may be significant.

Danny, K6MHE

915. Protection Tip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 19:12:39 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <IOSdnXoTxLTwqMrbRVnyvAA@bt.com>
Source record: 40965

I have just dismantled the base connectors from a vertical antenna which has been exposed to the elements for the last eleven years. The PL259 connectors were protected using self amalgamating rubber tape covered with a double layer of good quality black insulating tape.

The connector and all other parts covered with the self amalgamating tape were all like new when the joint was cut open, with no signs of corrosion or moisture penetration.

External nuts and bolts were originally given a light covering of vaseline/petroleum jelly and although slightly corroded, all turned freely.

The system has been repositioned and reassembled using the same methods and works as good as new. I look forward to at least another another eleven years of trouble free operating.

The tape I used was originally purchased from Tandy when they were closing their UK branches (Radio Shack in the USA) but similar quality tape is widely available from Maplin in the UK and other specialist electrical outlets.

Incidently, this antenna has survived a direct lightning strike. Fortunately the earthing and lightning protection arrangements ensured the equipment was undamaged. However all the breakers in the consumer unit (fuse box) tripped with the EMP. Then every battery backed up alarm in the house went off simultaneously, fire/smoke alarms, burglar alarm, mains failure warning, radio alarms - it was bedlam for about 10 minutes.

Just goes to show a few pounds spent on prevention is a lot better than having to buy a new antenna, or a new house.

Mike G0ULI

916. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 22:10:20 UTC
From: richardharrison@webtv.net
Message-ID: <20509-46575ECC-376@storefull-3255.bay.webtv.net>
Source record: 40966

4nec2 wrote:
"When someone asks me what`s the optimal radial ground screen, I mostly answer: 120 radials with a length of 0,4 lambda."

That`s sufficient, but RCA`s Brown, Lewis, and Epstein did extensive research in the mid-1930`s resulting in an FCC requirement of 120 radials with a length of 0.25 wavelengrh, equally spaced around the base of a tower.. It wasn`t exactly what B, L, & E had recommended but it became the minimum for broadcasters.

For amateurs, my 19th edition of the ARRL Antenna Book has a Table 1 on page 3-3 that is more economical.

I seem to remember that Reg J. Edwards had a program for optimising padials and I think it is still available.

Best regards, Richard Harrison, KB5WZI

917. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 22:44:19 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <oFJ5i.1534$Nj2.1180@newsfe12.lga>
Source record: 40967

"4nec2" <4nec2@gmx.net> wrote in message
news:1180088067.768928.159030@k79g2000hse.googlegroups.com...
> When someone asks me what's the optimal radial ground screen, I mostly
> answer: "120 radials with a length of 0.4 lambda".
>
> This answer is somehow fixed in my mind, based on a study and
> experiments undertaken long time ago by ...?
>
> Does anybody have a pointer/link/url to this study or can someone
> deliver me more details ?
>
> I already did some Googling, but could not find the article I once
> red.
>
> Thanks in advance,
> Arie Voors.
>

Hi Arie,
thanks for all the work on 4NEC2!!!!

Let me just bring to attention that just about all the radial studies deal with either 1/4 wave or shortened radiators and current distribution in their radials - typically showing higher current concentration close to the base and reasoning that one needs only shorter radials, so many good enough, etc.

When dealing with longer radiators, say 3/8 to 1/2 wavelength and using longer radials, situation is different. Longer radiator has longer and higher current portion radiator and is "looking" further out than its own base for the radials and good ground. This, combined with good ground or sloping terrain helps significantly with pulling the lobe down and increased gain at low angles.

This works in reality very well, I have observed it when operating from W8LRL, using his 200 ft vertical with 360 radials 200 ft long. When low angle propagation prevails, this is beating "regular" 4 squares, (contrary to W8JI claims of being "impossible"). The same goes for long Beverages of some 3.5 wave long.

Interesting question is how well can modeling capture this effect and the transition from radials to "far field ground" condition or its extension by longer radial field and elevated radiator current distribution.

73 Yuri, K3BU.us

918. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-25 23:34:33 UTC
From: "_._ _.. ..... _.__ .." <groups5not@verizon.net>
Message-ID: <doK5i.2332$3B1.933@trnddc08>
Source record: 40968

"Wes Stewart" <n7ws*@*yahoo.com> wrote in message
news:bu2c53l3svd5qf1o1fbrbqjfjpsvlvemhg@4ax.com...
> On 24 May 2007 14:46:38 -0700, K7ITM <k7itm@msn.com> wrote:
(snip)
> A number of years ago in this group our departed friend, Reg, made a
> comment more or less saying that the fewer (non-ideal) reactances were
> in the matching network, the lower the losses were.
>
> I offered an example that proved this wrong. I'm extremely strapped
> for time but I think the thread has something to do with L-networks if
> anyone cares to search for it.
>
> Wes

http://tinyurl.com/2vn4sa

919. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 02:51:30 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993C82CD7DB3Fnonenowhere@61.9.191.5>
Source record: 40969

Danny Richardson <n_group@k6mhe.com> wrote in
news:b84e535k2t4virs32l2s2b6q45ec1q2a4g@4ax.com:

> On Wed, 23 May 2007 22:08:31 GMT, Owen Duffy <none@no.where> wrote:
>
>>
>>I recently saw an article with the following:
>>
>>"I would like to express my thanks to <xxxxxxxx> for continuing the
>>advancement of the transmission line transformer. We have become
>>somewhat of co-workers, sharing information back and forth about how
>>these efficient devices work in the HF, MF, and VHF parts of spectrum.
>> He has done some recent experiments on new ferrite cores and found
>>that by reducing the number of turns the actual potential difference
>>on each turn is greater which increased the core loss. This means that
>>the losses in these transmission line transformers are voltage
>>dependant and not flux related."
>>
>>I am trying to understand how it is that losses are "voltage dependant
>>and not flux related". Aren't flux and voltage related? Is he trying
>>to say there are core losses that result from a voltage impressed
>>across the winding, but the losses are caused mainly by electric field
>>rather than the magnetic field? My understanding was that whilst there
>>are dielectric losses in ferrite and iron power materials, the
>>magnetic losses dominate in most applications.
>>
>>Is there a sound basis for the quote, or is it advertising bunk?
>>
>>Owen
>
> Sounds like nonsense to me Owen. The only losses of any importance for
> baluns that I am aware of are IR losses and flux loss and sometimes
> dielectric losses may be significant.
>
> Danny, K6MHE
>

Hi Danny,

It doesn't seem to make sense.

I guess I am not encouraged to buy his book to find out more!

Owen

920. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 08:31:14 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1180168274.699396.295050@u30g2000hsc.googlegroups.com>
Source record: 40970

Thanks all, for the input and observational feedback.

I also found my own 'small' reference back again. For others
interested in antenna design it could also be of use:

http://sujan.hallikainen.org/BroadcastHistory/uploads/RadioAntenna1952Handbook.pdf

Greetings from (at the moment) rainy Netherlands,

Arie.

921. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 11:02:29 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <1180177349.276303.202820@h2g2000hsg.googlegroups.com>
Source record: 40971

Andy writes

I did a quick google using " Field strength meter 18 Ghz" and found numerous hits, including companies like L.C., Mayes, and PM just to name three.

Lots of people make them.... you just gotta look. The google search engine works well.

Andy W4OAH

922. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 12:30:05 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <tu9g53968u69do1pjpmvqo8cdbhl6bh56i@4ax.com>
Source record: 40972

On 26 May 2007 01:31:14 -0700, 4nec2 <4nec2@gmx.net> wrote:

>Thanks all, for the input and observational feedback.
>
>I also found my own 'small' reference back again. For others
>interested in antenna design it could also be of use:
>
>http://sujan.hallikainen.org/BroadcastHistory/uploads/RadioAntenna1952Handbook.pdf
>
>Greetings from (at the moment) rainy Netherlands,
>
>Arie.

Hi Arie,

For those interested that book can also be obtained printed and bound
for a very reasonable price from an on demand printer.

http://www.lulu.com/content/159004

Danny, K6MHE

923. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 15:05:49 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180192008_22403@sp12lax.superfeed.net>
Source record: 40973

>
> Hi Danny,
>
> It doesn't seem to make sense.
>
> I guess I am not encouraged to buy his book to find out more!
>
> Owen

Owen, you may find this of interest:

http://standards.ieee.org/reading/ieee/ept/trans.pdf
trans.pdf (application/pdf Object)

Sevick's briefly discusses
voltage-dependency of ferrite losses.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

924. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 15:15:06 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46584ef4$0$19413$4c368faf@roadrunner.com>
Source record: 40974

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:cb7a53tsq3r1lku6fvb8r24i491hmvusj7@4ax.com...
> On Wed, 23 May 2007 23:33:45 -0400, "Jimmie D"
> <GFENDER@carolina.rr.com> wrote:
>
>>Giving W8QUR the benifit of the doubt
> is like saying a 4 cylinder Hummer's efficiency would be improved if
> you removed the chassis.
>
> 73's
> Richard Clark, KB7QHC

You either have to give the benifit of the doubt to W8QUR or the origonal
poster
W8QUR had benifit of editors that reviewed his work and decided it was
correct. Saying that a Pi-net is as inefficent as the OP interpretted W8QUR
as saying is a huge blunder that I doubt anyone who has the credentials to
author a magazine article would make. The OP only assumed he was talking
about Pi-networks and admitted
W8QUR did not directly refer to the network as this even though in 1965 it
was still called a Pi-net. It is also uncommon to call a pi-net a "system".
While you cant be sure unless you have the origonal article in its entirity
I will put my money on W8QUR in this case.

Jimmie

925. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 17:07:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2qpg53pl7fogi31e2j18cf0l4lbp2e8hbf@4ax.com>
Source record: 40975

On Sat, 26 May 2007 11:15:06 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:

>You either have to give the benifit of the doubt to W8QUR or the origonal
>poster

Hi Jimmie,

This is absurd on the face of it. Nearly every poster has performed
nothing more than "tea leaves reading" to massage inferences into
actualities. Look at the subject line heading every post and respond
to THAT. I've see nothing in three days that has diverged from my
initial response.

To mold supposed quotes into a new text that conforms to conventional
thinking does not confer nobility on the source. Using loose
references is, however, the staff of life in this forum.

73's
Richard Clark, KB7QHC

926. Re: Protection Tip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 20:37:35 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <7U06i.2269$YM5.1344@bignews2.bellsouth.net>
Source record: 40976

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:IOSdnXoTxLTwqMrbRVnyvAA@bt.com...
>I have just dismantled the base connectors from a vertical antenna which
>has
> been exposed to the elements for the last eleven years. The PL259
> connectors
> were protected using self amalgamating rubber tape covered with a double
> layer of good quality black insulating tape.
>
> The connector and all other parts covered with the self amalgamating tape
> were all like new when the joint was cut open, with no signs of corrosion
> or
> moisture penetration.
>
> External nuts and bolts were originally given a light covering of
> vaseline/petroleum jelly and although slightly corroded, all turned
> freely.
>
> The system has been repositioned and reassembled using the same methods
> and
> works as good as new. I look forward to at least another another eleven
> years of trouble free operating.
>
> The tape I used was originally purchased from Tandy when they were closing
> their UK branches (Radio Shack in the USA) but similar quality tape is
> widely available from Maplin in the UK and other specialist electrical
> outlets.

I've done the same thing, but with products more available to me. (Picked up
at Lowes or Home Depot).
3m makes a tape called "Scotchfil" which is self-amalgamating and very
waterproof, and is putty-like to conform to any shape,
and a weatherproof black vinyl electrical tape - 3M #88 which is great for
covering the scotchfil.
Then you can go one step farther by using "ScotchKote" which is like an
electrical varnish, to coat the plastic tape.
Vaseline on the bolts is a good idea, I had just squirted them with WD-40 or
CRC's equivalent.
I also use scotchkote to coat loading coils and exposed wire connections to
protect them from the elements..

Qui se'resemble, s'assemble. Dem dat resemble, assemble, Birds of a feather
... etc.

927. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 20:51:24 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46589dc6$0$19486$4c368faf@roadrunner.com>
Source record: 40977

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:2qpg53pl7fogi31e2j18cf0l4lbp2e8hbf@4ax.com...
> On Sat, 26 May 2007 11:15:06 -0400, "Jimmie D"
> <GFENDER@carolina.rr.com> wrote:
>
>>You either have to give the benifit of the doubt to W8QUR or the origonal
>>poster
>
> Hi Jimmie,
>
> This is absurd on the face of it. Nearly every poster has performed
> nothing more than "tea leaves reading" to massage inferences into
> actualities. Look at the subject line heading every post and respond
> to THAT. I've see nothing in three days that has diverged from my
> initial response.

Nor Have I, As a matter of fact I hadnt read your post until just now.

I feel your explanation has credability but we will not know until the OP
further explains his paraphrase.

>
> To mold supposed quotes into a new text that conforms to conventional
> thinking does not confer nobility on the source. Using loose
> references is, however, the staff of life in this forum.

I dont doubt the nobility of the source but I do doubt its accuracy.
Primarily because of the change of language from "Pi-network" paraphrased
part to "system" in the quoted part. I think it would be very unusual to
refer to a pi-net as a system While comparing a balanced system to a
single-ended sytem with 'system' meaning tuner plus transmission line would
be more logical. This assumption would also fit the W8QRU quote. While I
admit this is best guess I expect the OP to let me know if I am wrong, not
you, unless of course you have a copy of the related article. Either the OP
or W8QRU made a mistake. At this time I am slightly in favor of W8QRU.

This is why I was taught many years ago in Mrs. Mary Ruth Smiths English
class that when paraphrasing someone it is a good idea to retain certain key
words.

Sincerely
Jimmie

928. Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 22:45:36 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <78WdncNynraxJcXbnZ2dnUVZ_gednZ2d@comcast.com>
Source record: 40978

Hi,

I have two scanners, which I would like them to share a single (Scantenna) antenna in my attic.

Only one scanner will ever be on at any time.
But, I would like to "permanently" have both scanners attached to the single antenna.

What would you recommend as a reasonably low cost splitter for this ? (is Splitter the right term ?)

What type of losses would I expect ?

Just out of curiosity, would the losses be the same if I was actually to use both scanners at the same time compared to just one of them ?

Thanks,
Bob

929. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-26 23:27:29 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993D60374679Cnonenowhere@61.9.191.5>
Source record: 40979

Chuck <no.spam@no.spam.at.all> wrote in
news:1180192008_22403@sp12lax.superfeed.net:

> Owen, you may find this of interest:
>
> http://standards.ieee.org/reading/ieee/ept/trans.pdf
> trans.pdf (application/pdf Object)
>
> Sevick's briefly discusses
> voltage-dependency of ferrite losses.
>
> Chuck

Thanks Chuck,

My original quote was from Sevick, and the following paragraph from your reference illustrates the predominantly dielectric loss theme:

"Probably the most difficult (and controversial) specification to establish for these devices is the power rating. The loss mechanism is completely different from that of the conventional transformer, which is current-dependent (hysteresis, wire, and eddy-current losses). With these broadband devices, which mainly use ferrite cores or beads, the losses are voltage-dependent (a dielectric-type loss). Therefore, higher-impedance devices or devices subjected to mismatched loads of higher-impedances, have larger voltage gradients along their transmission lines, and hence, more loss."

Other works that I have read describe the loss mechanisms as quite complex; magnetic loss described by a complex mu value that is temperature, frequency and flux dependent, resistive loss in the core material, dielectric loss in the core material, and resistive loss in the conductors. Sevick seems to say that only one of these is relevant, or that loss can be simplfied to a single equivalent loss, the dielectric loss.

I guess it is appealing to equate loss that increases with frequency to an equivalent dielectric effect, but the loss is flux dependent and in a non-linear way, so it doesn't seem to fit well with a simple dielectric equivalence.

Owen

930. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 00:05:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rcih5319s0ur1b3v0mtrhsrntqhf09s8v3@4ax.com>
Source record: 40980

On Sat, 26 May 2007 18:45:36 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hi,
>
>I have two scanners, which I would like them to share a single (Scantenna)
>antenna in my attic.
>
>Only one scanner will ever be on at any time.
>But, I would like to "permanently" have both scanners attached to the single
>antenna.
>
>What would you recommend as a reasonably low cost splitter for this ? (is
>Splitter the right term ?)

Hi Bob,

A coax T connector comes to mind.

>What type of losses would I expect ?

3dB

>Just out of curiosity, would the losses be the same if I was actually to use
>both scanners at the same time compared to just one of them ?

Through considerable effort you could recover that 3 dB, but I presume
your scanners will operate over a considerable expanse of spectrum.
This diminishes that effort.

Now, if your scanners operate: one is high bands, the other low bands;
then you can get more ingenious by building two filters. One would be
high pass, and the other low pass, both with roll-offs at the
frequency that separates high from low. The antenna feeds them both,
and each feeds the appropriate scanner. In essence, this is your
splitter (or you can buy one for $50). This would also bring back the
3dB otherwise lost.

The T connector could cause one scanner to inject noise into the other
one. There is very little isolation of the Local Oscillator from the
front end, and you could hear one cycling through the bands on the
other scanner (and, of course, vice-versa). Turn one off and that
goes away. It's cheap enough to test first before going further.

73's
Richard Clark, KB7QHC

931. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 00:51:37 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180227155_24469@sp12lax.superfeed.net>
Source record: 40981

Owen Duffy wrote:
> Chuck <no.spam@no.spam.at.all> wrote in
> news:1180192008_22403@sp12lax.superfeed.net:
>
>
>> Owen, you may find this of interest:
>>
>> http://standards.ieee.org/reading/ieee/ept/trans.pdf
>> trans.pdf (application/pdf Object)
>>
>> Sevick's briefly discusses
>> voltage-dependency of ferrite losses.
>>
>> Chuck
>
> Thanks Chuck,
>
> My original quote was from Sevick, and the following paragraph from your
> reference illustrates the predominantly dielectric loss theme:
>
> "Probably the most difficult (and controversial) specification to
> establish for these devices is the power rating. The loss mechanism is
> completely different from that of the conventional transformer, which is
> current-dependent (hysteresis, wire, and eddy-current losses). With these
> broadband devices, which mainly use ferrite cores or beads, the losses
> are voltage-dependent (a dielectric-type loss). Therefore, higher-
> impedance devices or devices subjected to mismatched loads of higher-
> impedances, have larger voltage gradients along their transmission lines,
> and hence, more loss."
>
> Other works that I have read describe the loss mechanisms as quite
> complex; magnetic loss described by a complex mu value that is
> temperature, frequency and flux dependent, resistive loss in the core
> material, dielectric loss in the core material, and resistive loss in the
> conductors. Sevick seems to say that only one of these is relevant, or
> that loss can be simplfied to a single equivalent loss, the dielectric
> loss.
>
> I guess it is appealing to equate loss that increases with frequency to
> an equivalent dielectric effect, but the loss is flux dependent and in a
> non-linear way, so it doesn't seem to fit well with a simple dielectric
> equivalence.
>
> Owen

Owen, I didn't see any reference in
Sevick's fourth edition to the
voltage-dependency of core losses.

Instead, the following quote seems to
characterize his philosophy in the book:

"With transmission lines, the flux is
effectively canceled out in the core and
extremely high efficiencies are possible
over large portions of the
passband--losses of only 0.02 to 0.04 dB
with certain core materials.

Therefore, the power ratings of
transmission line transformers are
determined more by the ability of the
transmission lines to handle the
voltages and currents than by the size
and conventional properties of the core."

He is unambiguous in arguing that there
is a significant lack of understanding
of the differences between conventional
transformers and transmission line
transformers.

This edition has a copyright date of
2001 whereas the IEEE paper is dated 1993.

Hope that helps.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

932. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 07:10:41 UTC
From: Lee <lo012a4519@blueyonder.co.uk>
Message-ID: <R9a6i.67679$Ch.43293@fe2.news.blueyonder.co.uk>
Source record: 40982

"Robert11" <rgsros@notme.com> wrote in message
news:78WdncNynraxJcXbnZ2dnUVZ_gednZ2d@comcast.com...
> Hi,
>
> I have two scanners, which I would like them to share a single (Scantenna)
> antenna in my attic.
>
> Only one scanner will ever be on at any time.
> But, I would like to "permanently" have both scanners attached to the
single
> antenna.
>
> What would you recommend as a reasonably low cost splitter for this ? (is
> Splitter the right term ?)
>
> What type of losses would I expect ?
>
> Just out of curiosity, would the losses be the same if I was actually to
use
> both scanners at the same time compared to just one of them ?
>
> Thanks,
> Bob
>
>

A cheap CB switcher box would do the job.....lossless...
you just switch the feed from one radio to the other !!!

Regards...

Lee....

933. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 07:47:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kaai5395uuu1adtccped1ohitses9oh9nr@4ax.com>
Source record: 40983

On Sat, 26 May 2007 20:51:37 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>Owen Duffy wrote:
>> Other works that I have read describe the loss mechanisms as quite
>> complex; magnetic loss described by a complex mu value that is
>> temperature, frequency and flux dependent, resistive loss in the core
>> material, dielectric loss in the core material, and resistive loss in the
>> conductors. Sevick seems to say that only one of these is relevant, or
>> that loss can be simplfied to a single equivalent loss, the dielectric
>> loss.

He is actually distinguishing between transformer type losses (as
Chuck notes later in material I have not quoted). In the conventional
transformer, loss is Ohmic due to the circulating eddy currents. This
explanation does not serve Ferrite, which is principally an insulator,
a dielectric with magnetic properties. Further, the operation of
transformation for conventional transformers is through magnetic
coupling, that is not so for tranmission line transformers (that no
doubt all parties here are already aware of, and which Sevick is
distinguishing to the naive readers of his paper). Hence, he is
responding to loss issues that are found in conventional designs, but
missing (or rather optimized for the Common Mode) in our chokes or
BalUns.

>> I guess it is appealing to equate loss that increases with frequency to
>> an equivalent dielectric effect, but the loss is flux dependent and in a
>> non-linear way, so it doesn't seem to fit well with a simple dielectric
>> equivalence.

Ferrites are not simple dielectrics, not even linear as a class (but
seemingly so for our limited applications as chokes).

>Owen, I didn't see any reference in
>Sevick's fourth edition to the
>voltage-dependency of core losses.

I can observe it in the reference offered. However, Sevick couches
this dependency parenthetically to the dielectric property. As this
is specifically true, and he distinguishes other losses in
conventional transformers as Ohmic, his statement in its full context
is valid if perhaps too sparse. It is quite obvious that voltage and
current (and thus flux) are irrevocably inseparable and yet the loss
does not specifically arrive due to conduction in the Ferrite
material.

On the other hand, discussion of Ferromagnetics is couched in magnetic fields and electron spin, not in voltaics.

>Instead, the following quote seems to
>characterize his philosophy in the book:
>
>"With transmission lines, the flux is
>effectively canceled out in the core and
>extremely high efficiencies are possible
>over large portions of the
>passband--losses of only 0.02 to 0.04 dB
>with certain core materials.

The flux of Owen's contention is not the flux of the differential currents, but of the Common Mode current. [or so I read his query - at least insofar as the application of the choke serves]

For student of the microwaves, Ferrites offer far more unique properties than are made use as I've suggested above. The nonlinearity is that Ferrite can be remarkably transparent to flux of a given polarization, and with a shift in that polarization it becomes quite opaque. In this service, it is also characterized as a non-reciprocal attenuator. This attribute can be modulated, literally, with an external DC (actually low frequency AC) field to impart modulation to what would otherwise be a CW signal.

Ferrites employing this polarization characteristic are used in what are called Faraday Isolators (another one of those devices that could be used to separate forward and reverse waves; however, having only two ports so as to not be confused with the rat-race, and to my knowledge wholly unknown in this group).

73's
Richard Clark, KB7QHC

934. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 08:02:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bdei53d4gbev220derr4oapno456a8tvc0@4ax.com>
Source record: 40984

On Sun, 27 May 2007 00:47:15 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>the loss
>does not specifically arrive due to conduction in the Ferrite
>material.
>
>On the other hand, discussion of Ferromagnetics is couched in magnetic
>fields and electron spin, not in voltaics.

As a side-bar, much the same could be said of distilled water, and the
ice made from it. At the point of freezing, the dielectric constant
AND losses undergo a considerable change - and this is attributable to
flux and polarization issues in much the same way.

73's
Richard Clark, KB7QHC

935. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 08:17:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135ifk3p5800qf9@corp.supernews.com>
Source record: 40985

I'd use a splitter designed for television use. You can find one at almost any store selling TV accessories including discount stores like K-Mart or Wal-Mart. They're very inexpensive. However, they will have type F connectors which you'll have to adapt to BNC or whatever your scanner and antenna use. The adapters will probably cost more than the splitter. If you can't find the adapters where you get the splitter, you can find them at stores like Radio Shack or Fry's.

The loss is around 3 dB. This is unavoidable. It won't make a noticeable difference except for weak signals.

One of the properties of the splitter, as opposed to just a tee connector, is that the two receivers are isolated from each other. So turning one on or off or disconnecting it should have no effect on the other.

Roy Lewallen, W7EL

Robert11 wrote:
> Hi,
>
> I have two scanners, which I would like them to share a single (Scantenna)
> antenna in my attic.
>
> Only one scanner will ever be on at any time.
> But, I would like to "permanently" have both scanners attached to the single
> antenna.
>
> What would you recommend as a reasonably low cost splitter for this ? (is
> Splitter the right term ?)
>
> What type of losses would I expect ?
>
> Just out of curiosity, would the losses be the same if I was actually to use
> both scanners at the same time compared to just one of them ?
>
> Thanks,
> Bob
>
>

936. Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 12:40:06 UTC
From: Andre C <nospam@sky.com>
Message-ID: <46597af2$0$3830$c3e8da3@news.astraweb.com>
Source record: 40986

I am very new at ham radio and find myself confused over an installation of a Carolina windom 80 special.

I attatched a 20m run of coax to the line isolator. When I switch on the rig I get nothing, even on strong BC stations. I assumed it was a coax prob and striped my plugs down etc. I then discovered that if the shielding was not touching the socket on the rig I got a very good signal. So I assumed there was a short in the coax. I checked the plugs and they seem fine but I note that even when I have just the co-ax plugged in (ie no windom) I get a good signal unless the shielding is connected. (I guess that would make sense though I thought the shielding stopped the centre core picking up a signal.

So where is my problem? Is it the antenna? Is it the ine isolator. (There is no indicator which way round it goes so I presume it is universal.) I have no tset equipment as yet so an easy solution would be valuable.

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937. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 13:26:24 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <vh1j535t5fafeovco0k4jpq101e1qnptep@4ax.com>
Source record: 40987

On Sun, 27 May 2007 13:40:06 +0100, "Andre C" <nospam@sky.com> wrote:

>I am very new at ham radio and find myself confused over an installation of a Carolina windom 80 special.
>
>I attatched a 20m run of coax to the line isolator. When I switch on the rig I get nothing, even on strong BC stations. I assumed it was a coax prob and striped my plugs down etc. I then discovered that if the shielding was not touching the socket on the rig I got a very good signal. So I assumed there was a short in the coax. I checked the plugs and they seem fine but I note that even when I have just the co-ax plugged in (ie no windom) I get a good signal unless the shielding is connected. (I guess that would make sense though I thought the shielding stopped the centre core picking up a signal.
>
>So where is my problem? Is it the antenna? Is it the ine isolator. (There is no indicator which way round it goes so I presume it is universal.) I have no tset equipment as yet so an easy solution would be valuable.
>
>
>---------------= Posted using GrabIt =-----------------
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An inexpensive volt-ohm meter, $10-20 American, would allow you to
test for shorts or continuity.

(Or maybe you could rig a flashlight to test for shorts.)

bob
k5qwg

938. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 13:59:48 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <uf3j53tlak8rocb2k3qa0t3r1gui5v5n23@4ax.com>
Source record: 40988

On Sun, 27 May 2007 08:26:24 -0500, Bob Miller <NOSPAM@neosoft.com>
wrote:

>On Sun, 27 May 2007 13:40:06 +0100, "Andre C" <nospam@sky.com> wrote:
>
>>I am very new at ham radio and find myself confused over an installation of a Carolina windom 80 special.
>>
>>I attatched a 20m run of coax to the line isolator. When I switch on the rig I get nothing, even on strong BC stations. I assumed it was a coax prob and striped my plugs down etc. I then discovered that if the shielding was not touching the socket on the rig I got a very good signal. So I assumed there was a short in the coax. I checked the plugs and they seem fine but I note that even when I have just the co-ax plugged in (ie no windom) I get a good signal unless the shielding is connected. (I guess that would make sense though I thought the shielding stopped the centre core picking up a signal.
>>
>>So where is my problem? Is it the antenna? Is it the ine isolator. (There is no indicator which way round it goes so I presume it is universal.) I have no tset equipment as yet so an easy solution would be valuable.
>>
>>
>>--------------= Posted using GrabIt =----------------
>>------= Binary Usenet downloading made easy =---------
>>-= Get GrabIt for free from http://www.shemes.com/ =-
>
>An inexpensive volt-ohm meter, $10-20 American, would allow you to
>test for shorts or continuity.
>
>(Or maybe you could rig a flashlight to test for shorts.)
>
>bob
>k5qwg

Most, if not all, Carolina windoms use a voltage balun and therfore
will show continuity between the coax's center conductor and shield.

Danny, K6MHE

939. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 14:35:36 UTC
From: andre02@andre02.plus.com
Message-ID: <1180276536.074901.206500@q75g2000hsh.googlegroups.com>
Source record: 40989

On 27 May, 14:59, Danny Richardson <n_gr...@k6mhe.com> wrote:
> On Sun, 27 May 2007 08:26:24 -0500, Bob Miller <NOS...@neosoft.com>
> wrote:
>
>
>
> >On Sun, 27 May 2007 13:40:06 +0100, "Andre C" <nos...@sky.com> wrote:
>
> >>I am very new at ham radio and find myself confused over an installation of a Carolina windom 80 special.
>
> >>I attatched a 20m run of coax to the line isolator. When I switch on the rig I get nothing, even on strong BC stations. I assumed it was a coax prob and striped my plugs down etc. I then discovered that if the shielding was not touching the socket on the rig I got a very good signal. So I assumed there was a short in the coax. I checked the plugs and they seem fine but I note that even when I have just the co-ax plugged in (ie no windom) I get a good signal unless the shielding is connected. (I guess that would make sense though I thought the shielding stopped the centre core picking up a signal.
>
> >>So where is my problem? Is it the antenna? Is it the ine isolator. (There is no indicator which way round it goes so I presume it is universal.) I have no tset equipment as yet so an easy solution would be valuable.
>
> >>--------------= Posted using GrabIt =----------------
> >>------= Binary Usenet downloading made easy =---------
> >>-= Get GrabIt for free fromhttp://www.shemes.com/ =-
>
> >An inexpensive volt-ohm meter, $10-20 American, would allow you to
> >test for shorts or continuity.
>
> >(Or maybe you could rig a flashlight to test for shorts.)
>
> >bob
> >k5qwg
>
> Most, if not all, Carolina windoms use a voltage balun and therfore
> will show continuity between the coax's center conductor and shield.
>
> Danny, K6MHE

I have done some tests and am happy with coax. So I am left with the
antenna.

I am sorry but the quoted comment means very little to me in my newbie
status.

940. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 14:43:17 UTC
From: Wes Stewart <*n7ws*@yahoo.com>
Message-ID: <766j53hab981v85tbkpce7fi9bm4fbrfcj@4ax.com>
Source record: 40990

On Sun, 27 May 2007 00:47:15 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:
[snip]

|Ferrites employing this polarization characteristic are used in what
|are called Faraday Isolators (another one of those devices that could
|be used to separate forward and reverse waves; however, having only
|two ports so as to not be confused with the rat-race, and to my
|knowledge wholly unknown in this group).
|

Hmmm.

941. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 16:41:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d0dj53dc6ej6mh1dc2ssjlprm3981aa412@4ax.com>
Source record: 40991

On Sun, 27 May 2007 14:43:17 +0000, Wes Stewart <*n7ws*@ yahoo.com>
wrote:

>On Sun, 27 May 2007 00:47:15 -0700, Richard Clark <kb7qhc@comcast.net>
>wrote:
>[snip]
>
>|Ferrites employing this polarization characteristic are used in what
>|are called Faraday Isolators (another one of those devices that could
>|be used to separate forward and reverse waves; however, having only
>|two ports so as to not be confused with the rat-race, and to my
>|knowledge wholly unknown in this group).
>|
>
>Hmmm.

OK, perhaps known to you and Jim (yet and all, neither of you have
made the arguments that would have stoked that bonfire).

73's
Richard Clark, KB7QHC

942. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 17:14:36 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3ce9pus1@nnrp.linuxfan.it>
Source record: 40992

helmsman wrote:

> PLEASE set you character count, so it fits on a line in the window.
> Like 90 characters per line.
> Thank You
>
>
Or, you could use a newsreader which does proper line wrapping,
regardless of the format proposed by the sender ...

Thunderbird is excellent, even OE can do it ...

JS

943. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 17:18:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3cehgus2@nnrp.linuxfan.it>
Source record: 40993

Richard Clark wrote:
> > ...
> are called Faraday Isolators (another one of those devices that could
> > ...
>
> 73's
> Richard Clark, KB7QHC
>

Since my faraday isolators are already in use upon my sunglasses, I am
forced to seek a substitute. :-(

Regards,
JS

944. Re: Losses in balun cores

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 17:23:08 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3cepqus5@nnrp.linuxfan.it>
Source record: 40994

John Smith I wrote:

> ...

Even worse, I find my "Faraday Rotation Isolator" only effective at
Microwave freqs. :-(

Regards,
JS

945. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 17:29:15 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <lpKdnTjkDs0rXcTbnZ2dnUVZ_q6vnZ2d@giganews.com>
Source record: 40995

Robert,

Another thing the splitter does (as opposed to a tee adapter) is maintain the system impedance at all ports. Even though I don't have a brain as big as Roy's, I believe the signal loss in a slight impedance mismatch w/ a 75 ohm splitter would be much less than w/ a tee adapter. Most TV splitters are good up to about 1 GHz; some are rated to 2 GHz. It's good practice to terminate unused port(s) of a splitter (at the splitter or cable end) with a resistor, to maintain the electrical characteristics of the splitter. Also, if you use RG-6 cable instead of RG-58, you can minimize loss in the cable runs, and use adapters only at the antenna and radios.

Bryan WA7PRC

Roy Lewallen wrote:
> I'd use a splitter designed for television use. You can find one at
> almost any store selling TV accessories including discount stores like
> K-Mart or Wal-Mart. They're very inexpensive. However, they will have
> type F connectors which you'll have to adapt to BNC or whatever your
> scanner and antenna use. The adapters will probably cost more than the
> splitter. If you can't find the adapters where you get the splitter, you
> can find them at stores like Radio Shack or Fry's.
>
> The loss is around 3 dB. This is unavoidable. It won't make a noticeable
> difference except for weak signals.
>
> One of the properties of the splitter, as opposed to just a tee
> connector, is that the two receivers are isolated from each other. So
> turning one on or off or disconnecting it should have no effect on the
> other.
>
> Roy Lewallen, W7EL
>
> Robert11 wrote:
> > Hi,
> >
> > I have two scanners, which I would like them to share a single
(Scantenna)
> > antenna in my attic.
> >
> > Only one scanner will ever be on at any time.
> > But, I would like to "permanently" have both scanners attached to the
single
> > antenna.
> >

> > What would you recommend as a reasonably low cost splitter for this ?
(is
> > Splitter the right term ?)
> >
> > What type of losses would I expect ?
> >
> > Just out of curiosity, would the losses be the same if I was actually to
use
> > both scanners at the same time compared to just one of them ?
> >
> > Thanks,
> > Bob
> >
> >

946. Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 18:33:24 UTC
From: Virgil Smith <vsmith26@comcast.net>
Message-ID: <UoGdnUOiSeFvU8TbnZ2dnUVZ_gGdnZ2d@comcast.com>
Source record: 40996

Does anybody have a recommendation for a good book or journal article on very short antennas? I'm trying to design the front end for a LF/VLF receiver and would really like to know the equivalent circuit for antennas (both E-probe and loop) a tenth of a wavelength or less.

I've Googled around and looked at a couple of lowfer web sites. Lots of cookbook stuff and some approximate formulas for radiation resistance, etc. but I haven't seen a real definitive treatment of this subject.

What about the oldie-but-goodie book by Kraus? Is that worth investing in, or is there anything newer or better?

Thanks for any info.

-vs-

947. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 18:54:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jlkj53hbaffjdu35mcqccbpbthg92nsqan@4ax.com>
Source record: 40997

On Sun, 27 May 2007 14:33:24 -0400, "Virgil Smith"
<vsmith26@comcast.net> wrote:

>What about the oldie-but-goodie book by Kraus? Is that worth investing
>in, or is there anything newer or better?

Hi Virgil,

Newer? Frequently, and accompanied by some astonishing claims.
Better? They can't even explain it themselves (although that doesn't
lower them on the Beaufort scale of gusting on).

As you are familiar with Kraus and have done some detective work, it
is unlikely you will find any surprises that diverge from the classic
discussion (it consumes all of a page or two in most books).

73's
Richard Clark, KB7QHC

948. Ground mounted Butternut HF6v

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 21:05:54 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <Som6i.34952$G23.34213@newsreading01.news.tds.net>
Source record: 40998

I have just finished the installation of a Butternut HF6V vertical antenna. The link below contains several close-up pictures of the ground radial plate and the coil/capacitor assemblies, which are part of the HF6V. I use the antenna mainly on 40 meters, but it does work on 80-10 meters and 30 meters.

http://tinyurl.com/26odvm

Constructive comments are welcome.

John, N9JG

949. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 21:32:47 UTC
From: David <nospam@nospam>
Message-ID: <S56dndmzMOtiZcTbRVnyuQA@bt.com>
Source record: 40999

"Antennas for all applications" by John Kraus and Ronald Marhefka has a good reputation.

Also look at "Small Antenna Design" by Douglas Miron. This book looks at the limits of small antennas and contains a lot of info about modelling antennas using NEC.

950. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 21:51:05 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3cuan$72m$1@nnrp.linuxfan.it>
Source record: 41000

Virgil Smith wrote:

> ...

Sometimes, all you need is one page ...

http://www.untenna.com/tech.html

Especially interesting is:
Building the helix from tubing instead of fine wire reduces conductor resistance, increases its bandwidth and gives it a rigidity that makes a plastic support unnecessary. Figure 4 shows a helix design. With the use of a big diameter winding and a shunt feed, the top hat and matching networks are not needed. The use of tubing, a large diameter and a shunt feed reduces conductor losses to a point where the short helix's efficiency exceeds that of loaded whips. The helix's rigidity eliminates signal strength variations that may be caused when whips flex.

The above taken from the page ...

Regards,
JS

951. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 22:18:55 UTC
From: andre02@andre02.plus.com
Message-ID: <1180304335.531120.228390@g4g2000hsf.googlegroups.com>
Source record: 41001

On 27 May, 18:14, John Smith I <assemblywiz...@gmail.com> wrote:
> helmsman wrote:
> > PLEASE set you character count, so it fits on a line in the window.
> > Like 90 characters per line.
> > Thank You
>
> Or, you could use a newsreader which does proper line wrapping,
> regardless of the format proposed by the sender ...
>
> Thunderbird is excellent, even OE can do it ...
>
> JS

Thanks for the lessons. I use forte Agent but just happened to be on
another computer and needed to post in a hurry.

Any chance my problem could be explored further? I have now also ruled
out the line isolator as a problem.

952. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 22:24:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135k19tf1l6827@corp.supernews.com>
Source record: 41002

If by any chance you can read German, I recommend _Kurze Antennen_ by Gerd Janzen (DF6SJ). Even if you can't, you can get a lot from the many equations, diagrams, and graphs.

It's a shame that Gerd has never been able to find a publisher that would give him a fair deal for publishing this or his other excellent books in English.

Roy Lewallen, W7EL

Virgil Smith wrote:
> Does anybody have a recommendation for a good book or journal article on
> very short antennas? I'm trying to design the front end for a LF/VLF
> receiver and would really like to know the equivalent circuit for
> antennas (both E-probe and loop) a tenth of a wavelength or less.
>
> I've Googled around and looked at a couple of lowfer web sites. Lots of
> cookbook stuff and some approximate formulas for radiation resistance,
> etc. but I haven't seen a real definitive treatment of this subject.
>
> What about the oldie-but-goodie book by Kraus? Is that worth investing
> in, or is there anything newer or better?
>
> Thanks for any info.
>
> -vs-
>
>

953. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 22:34:53 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f3d12hhhl1@aioe.org>
Source record: 41003

"Virgil Smith" wrote
> Does anybody have a recommendation for a good book or journal article
> on very short antennas? I'm trying to design the front end for a LF/VLF
> receiver and would really like to know the equivalent circuit for
> antennas (both E-probe and loop) a tenth of a wavelength or less.

Lately I've been working on an Excel spreadsheet to calculate the parameters associated with electrically short, MW/LF/VLF, v-pol antennas -- including their inverse distance groundwave fields at 1 km and somewhat beyond, subject to their specific groundwave propagation loss. The equations are those found in an I.R.E. publication of the pioneer broadcast consultant Carl E. Smith, and in REFERENCE DATA FOR RADIO ENGINEERS, published by IT&T.

Here is a sample screen clip:
http://i62.photobucket.com/albums/h85/rfry-100/ShortAntennaParameters.gif

Please let me know if you'd like to try it out. My e-mail address and website are shown in the upper right corner of the clip linked above.

RF

954. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-27 23:49:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3d5dk$jg9$1@nnrp.linuxfan.it>
Source record: 41004

andre02@andre02.plus.com wrote:
> Thanks for the lessons. I use forte Agent but just happened to be on
> another computer and needed to post in a hurry.
>
> Any chance my problem could be explored further? I have now also ruled
> out the line isolator as a problem.
>
>
Actually, my response was to helmsman--your post wraps fine in my
thunderbird ... I was pointing that out to him.

I would strongly suspect the "line isolator", yes. But, first would
have some questions--I would think other here too would similar questions.

1) What are you calling a "line isolator", a 1:1 current balun?

2) Is the balun of ferrite design?

3) Toroid or bar material?

4) Is this "line isolator" a commercial product, or did you construct it
yourself?

5) What is the power handling capability of "the device?" Did you ever
run a KW or more into it?

6) The device IS constructed for xmitting, right?

7) ... probably more stuff not right on the tip of my tongue ...

Regards,
JS

955. Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 01:14:18 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3dad7$uh1$1@nnrp.linuxfan.it>
Source record: 41005

[No readable article body recovered]

956. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 01:20:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3dao9$uh1$2@nnrp.linuxfan.it>
Source record: 41006
Body handling: HTML body converted to readable text

John Smith I wrote:

Power Received by a Hertz Antenna

P = (PtGtGrλ2) /
(16π2d2)

Power Received by a Hertz Antenna

P =
(PtGtGrλ2)
/ (16π2d2)

where:
P = received power (W)
Pt = transmitted power (W)
Gt = gain ratio of transmitting antenna relative to an isotropic radiator
Gr = gain ratio of receiving antenna relative to an isotropic radiator
? = wavelength (m)
d = distance between antennas (m)

957. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 01:23:33 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3daui$uh1$3@nnrp.linuxfan.it>
Source record: 41007
Body handling: HTML body converted to readable text

John Smith I wrote:

Power Received by a Hertz Antenna

P =

(PtGtGrλ2)
/ (16π2d2)

where:
P = received power (W)
Pt = transmitted power (W)
Gt = gain ratio of transmitting antenna relative to an isotropic radiator
Gr = gain ratio of receiving antenna relative to an isotropic radiator
? = wavelength (m)
d = distance between antennas (m)

958. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 02:41:27 UTC
From: jawod <jawod@fuse.net>
Message-ID: <465A4157.9000207@fuse.net>
Source record: 41008

>
> PLEASE set you character count, so it fits on a line in the window.
> Like 90 characters per line.
> Thank You
>

GEE, That was helpful. Please set your character count to zero and ...

Thank YOU

959. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 02:56:30 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3dgcrdth2@nnrp.linuxfan.it>
Source record: 41009

John Smith I wrote:

960. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 03:34:20 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <f3dijs$3nh$1@theodyn.ncf.ca>
Source record: 41010

John Smith I (assemblywizard@gmail.com) writes:

Well bozo, this isn't a test newsgroup. And realistically,
non-text does not belong in discussion newsgroups.

And no, this isn't a "free speech" issue, it merely means
you are too lazy to find a test newsgroup, or don't care
one bit about an existing newsgroup.

Michael VE2BVW

961. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 03:37:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3diqe$om9$3@nnrp.linuxfan.it>
Source record: 41011

Michael Black wrote:
> John Smith I (assemblywizard@gmail.com) writes:
>
> Well bozo, this isn't a test newsgroup. And realistically,
> non-text does not belong in discussion newsgroups.
>
> And no, this isn't a "free speech" issue, it merely means
> you are too lazy to find a test newsgroup, or don't care
> one bit about an existing newsgroup.
>
> Michael VE2BVW
>
Well idiot, I could just start subscripting stuff and if it works here,
it works ...

Further idiot, html is NOT binary is ONLY TEXT ...

But then, an idiot like you should not bother his head with such ...

PLONKERS!!!

JS

962. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 05:00:14 UTC
From: rb <rbig@bellsouth.net>
Message-ID: <lkt6i.10922$JQ3.5109@bignews5.bellsouth.net>
Source record: 41012

Take your coax loose from the isolator. Get some kind of continuity device (VOM / battery and bulb / etc) and check to see if your coax is shorted.

If so, there's your problem. Then you can work on finding the short. Each time you do something, check continuity again to see if what you did clears the fault.

If your coax is OK, then call the folks who made the antenna. If it's Radio Works, they're very helpful. They can talk you through some simple things to try to further troubleshoot.

963. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 05:17:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns993E9B86BD212nonenowhere@61.9.191.5>
Source record: 41013

John Smith I <assemblywizard@gmail.com> wrote in news:f3diqe$om9$3
@nnrp.linuxfan.it:

...
> Well idiot, I could just start subscripting stuff and if it works here,
> it works ...
>
> Further idiot, html is NOT binary is ONLY TEXT ...

With that interpretation, you probably take the view that a UUENCODED file is ONLY TEXT.

Most of us respect the convention of plain text only in newsgroups other than declared binary groups.

No doubt there is some reader that interprets your HTML tagged text, but many if not most readers do not. There is a simple solution to seeing this stuff...

Owen

964. Re: Field strength meters

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 05:19:23 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <wDt6i.392319$115.247792@newsfe10.phx>
Source record: 41014

"Owen Duffy" <none@no.where> wrote in message
news:Xns9939BC55C9A3Bnonenowhere@61.9.191.5...
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in
> news:A2P4i.17936$3G3.15704@newsfe06.phx:
>
> > I've never had a spectrum analyzer measure field strength directly,
> > although maybe the Test & Measurement science is getting close. The
> > missing link is "antenna factor" (AF) which accounts for the db gain,
> > usually negative, for the antenna you're using. In my experience,
>
> There are both EMC receivers and Spectrum Analysers intended for field
> strength measurement, and modern digital system allow the antenna
> response to be stored in the instrument and field strength automatically
> calculated for different freqencies.

Thanks, Owen,

I read online that there were EMC receivers that would store the AF curves, but I happened not to read that there were spec-ans that would, too. I haven't done that work in over ten years and we rarely had state-of-the-art gear. (Can you say, "Singer NM-25"?)

Glad to know it's all getting easier.

Now, if we just could hook an X-Y plotter up to it ... Relax, I'm just kidding!

965. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 05:40:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3dq19$d9a$1@nnrp.linuxfan.it>
Source record: 41015

Andre C wrote:
> I am very new at ham radio and find myself confused over an installation of a Carolina windom 80 special.
>
> I attatched a 20m run of coax to the line isolator. When I switch on the rig I get nothing, even on strong BC stations. I assumed it was a coax prob and striped my plugs down etc. I then discovered that if the shielding was not touching the socket on the rig I got a very good signal. So I assumed there was a short in the coax. I checked the plugs and they seem fine but I note that even when I have just the co-ax plugged in (ie no windom) I get a good signal unless the shielding is connected. (I guess that would make sense though I thought the shielding stopped the centre core picking up a signal.
>
> So where is my problem? Is it the antenna? Is it the ine isolator. (There is no indicator which way round it goes so I presume it is universal.) I have no tset equipment as yet so an easy solution would be valuable.
>
>
> --------------= Posted using GrabIt =----------------
> ------= Binary Usenet downloading made easy =---------
> -= Get GrabIt for free from http://www.shemes.com/ =-
>
>
OK. Let's apply logic here ...

1) If you have used a VOM and there is continuity between the center conductor of one end of the coax, with the center conductor of the opposite end of the coax, the center conductor is ok.

2) If you have continuity between the outer conductor of one end of the coax (shield) with the outer conductor of the opposite end of the coax (shield), the outer shield of the coax is ok.

3) If there is NO continuity between the center conductor of the coax and the outer conductor of the coax, the coax has checked out completely.

Without knowing the construction details of the "line isolator" (probably a ~6:1 balun or rf transformer of some sort) it is impossible to know whether a short in this unit is normal (ok) or not. However, if the center conductor of the coax connector on the "line isolator" shows continuity with at least one leg of the windom, it shows there is continuity through the "line isolator" from the coax center conductor to the antenna proper. And, if there is continuity to at least one leg of the windom to the outer conductor of the coax connector on the coax connector on the "line isolator", it demonstrates there is continuity from the outer conductor of the coax to the antenna proper.

At this point, I would assume the "line isolator" to be defective in some unknown way (most likely improper hookup at the factory, solder short, open winding, etc.)

I am afraid that is the best I can come up with.

I am taking it for granted the antenna is the "Carolina Windom 80 Special" made by Radio Works and is 66 feet long (well, short actually!) 80 - 10 meters and can be found on this page: http://radioworks.com/ccwcover.html

Warmest regards,
JS

966. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 05:55:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3dqrk$9bc$1@nnrp.linuxfan.it>
Source record: 41016

Owen Duffy wrote:

> [...]

Owen:

If you have no interest in discussing sub/super scripted math equations which involve those lovely greek characters, viewing them, stating them, using them, or participating in the future high math discussions I see coming on the horizon, you may wish to avoid my future posts.

Frankly, I wonder how anyone can get by without proper tools to display equations properly--it has hampered me greatly! However, if you are of that mind, DON'T bother getting a proper newsreader and remain back in the 1980's ...

Mainly, I am just preparing for Cecil, when he gets back from where ever he has gone ... his embarking down paths most avoid causes me to "step up to the plate" and get prepared! I imagine most here are either unwilling or unable, for them I suggest just downloading EZNEC (or another appliance application) and letting it do it for you ...

And, you are correct, uuencoding results in all text printable ascii characters. Worse yet, you are correct again, html uses all printable ascii characters! Now, how your newsreader is set to interpret them (if it can) is up to you! If you came to play with the big boys, I hope you brought the right tools.

Yanno, I should have asked, everyone here DOES own a scientific programmable calculator, don't they? :-)

Regards,
JS

967. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 06:03:31 UTC
From: Barnard Peters <one@two.com>
Message-ID: <pan.2007.05.28.06.03.31.216678@blueplanet>
Source record: 41017
Body handling: HTML body converted to readable text

On Sun, 27 May 2007 18:20:11 -0700, John Smith I wrote:

>
Getting garbage...
Turning off HTML

968. End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 11:10:04 UTC
From: Nick <a@b.com>
Message-ID: <gMy6i.2205$sM1.988@newsfe4-win.ntli.net>
Source record: 41018

I am wanting to build 1/2 wave end fed ground plane independent aerials for 2M and 70cms for use on
touring motorcycles for bike to bike comms.

At the moment we are using 5W hand helds with the helicals, but I was wanting to experiment with half waves
better sited, to increase the max range possible between the bikes - groundplanes are not practical. On 70cms
the aerials will be physically smaller but not sure how the range might be affected / reduced

Has anyone suggestions on band to use and/or designs for suitable aerials, or a link to a site with details ?

Thanks,

Nick

969. RoomCap antenna with 2.5 Watt

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 11:12:25 UTC
From: hb9abx <hb9abx@freesurf.ch>
Message-ID: <1180350745.649853.42420@p77g2000hsh.googlegroups.com>
Source record: 41019

I received the message below from a builder of the new HF antenna.
Remember, that the length of the radiator of the RoomCap anteanna is
just 1.5m (= 5 feet) long.

Hi dr OM Felix,

I was using the Room-Cap antenna (40m band) first time on May 19th,
2007.

First, I tried it with 100 watt. There was a pile up for SL9MRO/8. He
was using a
4 ele mono band beam. Many stations were calling, I called just once,
hi, and was
asking him to give me a REAL report. I was very surprised to obtain 30
db over S9,
and then it continued with EA, OK, PA, I, DL, HA, 9A and so on, and
received
throughout 58 to 59 Plus reports. Just wanted to see how it works with
100 w,
..... very good.

As I am a QRP fan (2857 stations from 173 countries, with 2.5 watt) I
started a
new test on the 20th May 2007. Unpacking the FT-817, 2.5 w and on-the-
air.

Was phantastic, even so the conditions were not so good, I was working
more than
40 stations with 2.5 w in USB and digital mode, and again received
throughout 57 to
59 plus reports. The following QRP stations worked:
SP,DL,OK,EA,I,S57,ON,PA,SM OZ,F,HA...and ... and ...HI.

Conclusion:
Finally I have an antenna that works without tuner. Have built many,
but most with
very bad results.

Felix, I send you a picture enclosed, wishing you all the best, and
maybe we meet
at the HAM radio fair at Friedrichshafen.

VY 73 de DL5GBP Peter

970. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 12:26:39 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <0duqi4-445.ln1@p400bob.personal.cox.net>
Source record: 41020

Hi Nick

Generally speaking a 1/2 wave on 70cm will have 1/9 odd the capture area on 2m and thus less range for the same RX input levels. This is of course for an LOS situation. I'll admit I have never compared 2m/70cm in a mountainous vehicle to vehicle situation. I expect reflection would be the primary mode. How well it works then depends on the size of the reflectors! You have probably heard that some pine tree needles are the exact length to attenuate 70cm signals!

I did some experiments years ago comparing horizontal polarization mobile to base on 70cm. Quite an interesting outcome. The general figure of merit was that horiz was better than vert by about 9-12dB once you went past LOS. The signal also didn't chop around as much ("Picket fencing") eg a vertical signal may swing 30-40dB but the horizontal only 5-10dB. Horiz antennas are "interesting" on 2/70 though. Mine was a three leaf clover design about 400mm dia on 70cm.

Most important is height, Get the device out of clutter. I think if I was doing it I'd get one of those long fiberglass whips and put my halfwave at the top. Probably go for a simple slim-jim or jpole design. Dual band designs will of course be a compromise so it may be smart to just go and buy something. A vertical one and a half wave vertical radiates really badly exactly where you don't want it! (ie the 2m antenna on 70)

Also consider using SSB rather than FM. Don't know the figure of merit there but 12-15dB sounds about right!

Apologies for not being specific to your request.

Cheers BOb VK2YQA

Nick wrote:
> I am wanting to build 1/2 wave end fed ground plane independent aerials for
> 2M and 70cms for use on
> touring motorcycles for bike to bike comms.
>

971. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 13:44:08 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <3uml53huv4lldd39kji50fmj16g2e6k2el@4ax.com>
Source record: 41021

On Sun, 27 May 2007 18:14:18 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

http://www.gotfusion.com/tutsTD/groupetiquette.cfm

972. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 13:51:36 UTC
From: Nick <a@b.com>
Message-ID: <I7B6i.2877$qD.1219@newsfe6-win.ntli.net>
Source record: 41022

Hi Bob,

Thanks a lot for your long and detailed reply...

I have actually tried a J-Stick on 70cms attached to the top of the windscreen and it does seem
to work better than the standard helical on the rig mounted "in the clutter" at the centre of the handlebars.
However, it was a home-brew lash up and I am not sure if it was optimised, although seemed to SWR well.

Naturally 2M would seem the obvious choice, but we get a lot of QRM amongst towns especially, and
have defaulted to the quieter 70cms band. That said we seem to manage 2 or 3 miles OK, but we tour
and sometimes get separated by several miles, or deliberately part for some reason, and it's this that
we would like to cater for.

Repeaters are not really an option as frequently we are in foreign parts and don't have the data / coverage maps to decide which would be the best repeater or the time to stop and
work it all out and program it all in to the rig - Simplex with memories programmed to low or high power
is the desired way forward. It doesn't need to be dual band - perhaps an elevated 2M commercial
halfwave aerial, and use CTCSS or DCS to cut out the QRM, is the way forward.
SSB is not an option with the kit we have and probably too fiddly to use when mobile.

Thanks again for the tips and info,

Nick

973. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:24:56 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <f5pl53tds4ttur9hul4rt3fmmsj57ejaa3@4ax.com>
Source record: 41023

On Sun, 27 May 2007 22:40:57 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>OK. Let's apply logic here ...
>
>1) If you have used a VOM and there is continuity between the center
>conductor of one end of the coax, with the center conductor of the
>opposite end of the coax, the center conductor is ok.
>
>
>2) If you have continuity between the outer conductor of one end of the
>coax (shield) with the outer conductor of the opposite end of the coax
>(shield), the outer shield of the coax is ok.
>
snip
>Warmest regards,
>JS

In view of your logic, let me tell you about my situation recently
when I tested a piece of coax on which I installed on connector.

There were already two connectors on the coax and I removed one that
was crimped and had slipped. I put on my connector and tested it with
my radio, no signal. Hmm, I needed to check the wire.

1) I tested the center conductor and the shield on the connector I
just installed... Short. OOPS!

I cut off the connector and replaced it.

2) Tested the center conductor and shield on the connector I just
installed... Short. OOPS again.

3) after cutting off my connector again, I tested the other connector.
between the coax and shield. Open. Great! :)

I soldered on the connector for the third time.
4) tested the center lead and shield of my connector... SHORT! Hmmmm

5) I cut off my connector and tested again. Open ?????

I tested the other connector again. Open.

ahhhh. I tested the center conductor from end to end.... OPEN!!!

I tested the center conductor to the shield on the end where I was
installing my connector.... SHORT!!!!

Time for a new piece of coax....

73 for now
Buck
N4PGW

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

974. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:33:24 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <knol53pokcndd4hh59ea3oehfnj2tghdeg@4ax.com>
Source record: 41024

On Sun, 27 May 2007 22:55:03 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>
>If you have no interest in discussing sub/super scripted math equations
>which involve those lovely greek characters, viewing them, stating them,
>using them, or participating in the future high math discussions I see
>coming on the horizon, you may wish to avoid my future posts.

That can be arranged.

>
>Frankly, I wonder how anyone can get by without proper tools to display
>equations properly--it has hampered me greatly! However, if you are of
>that mind, DON'T bother getting a proper newsreader and remain back in
>the 1980's ...

Frankly, I wonder about the arrogance of someone who decides: "MY
posts are REALLY IMPORTANT and I want to post equations, photos, or
whatever and YOU should equip yourself with whatever tools are
necessary to read MY IMPORTANT POSTS!

[snip]
>
>Yanno, I should have asked, everyone here DOES own a scientific
>programmable calculator, don't they? :-)

I happen to have several, but if someone else does not, why does it
matter?

News(group) flash. A lot of folks read groups via slow-speed
connections, cell phones, etc. They want only plain TEXT because it
sometimes costs them money or more important, time, to download all of
the bloat that seems to pollutes the Internet these days.

If you have some REALLY REALLY IMPORTANT html to post I suggest you
put it on a web page and provide a plain-text link to it.

I'm off to 20-meter CW now to do some communicating.

975. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:49:52 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3eq6cqjp1@nnrp.linuxfan.it>
Source record: 41025

Danny Richardson wrote:
> On Sun, 27 May 2007 18:14:18 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>
> http://www.gotfusion.com/tutsTD/groupetiquette.cfm
>
>
>
>
>
Yep, time to rewrite that ...

JS

976. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:50:46 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3eq83qjp2@nnrp.linuxfan.it>
Source record: 41026
Body handling: HTML body converted to readable text

Barnard Peters wrote:
> On Sun, 27 May 2007 18:20:11 -0700, John Smith I wrote:
>
>
>>
>>
> Getting garbage...
> Turning off HTML
>
>
Freedom of speech, freedom of choice ... ain't it GREAT!

JS

977. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:52:23 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3eqb4qjp3@nnrp.linuxfan.it>
Source record: 40877

Wes Stewart wrote:

> [...]

Only posts which are NOT important and those from the stone age, those
which are obscene/perverted ...

Of course, I don't know which "post rating system" you run by ...

JS

978. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 14:55:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3eqhmqjp4@nnrp.linuxfan.it>
Source record: 40878

Buck wrote:

You were either working with one EXPENSIVE piece of coax (and attempting to save the pocket book)--else you demonstrate your super human perseverance!

JS

979. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 15:33:06 UTC
From: Ham Radio <jim@rstengineering.com>
Message-ID: <135lti7g3jcsk1f@news.supernews.com>
Source record: 40879

Ground planes are eminently practical. You have a built-in groundplane called a bike frame/engine/fenders/wheels that are all electrically interconnected. Mount a small aluminum bracket with a BNC(f) connector as high and as close to the mechanical center of the bike that you can (the handlebars sound like the optimum location) and then into a BNC(m) connector solder a quarter wave 19" whip made out of brass brazing rod for 2m and another BNC(m) connector with a 6" long brazing rod whip for 440.

You will be amazed at the performance gain over the rubber duckie lashup you are using now.

Jim

"Nick" <a@b.com> wrote in message
news:gMy6i.2205$sM1.988@newsfe4-win.ntli.net...

> groundplanes are not practical. On 70cms
> the aerials will be physically smaller but not sure how the range might be
> affected / reduced

980. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 15:33:43 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <p8tl53hd4gdah6k7f68pehu8m3s7snvab4@4ax.com>
Source record: 40880

On Mon, 28 May 2007 07:49:52 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Danny Richardson wrote:
>> On Sun, 27 May 2007 18:14:18 -0700, John Smith I
>> <assemblywizard@gmail.com> wrote:
>>
>> http://www.gotfusion.com/tutsTD/groupetiquette.cfm
>>
>>
>>
>>
>>
>Yep, time to rewrite that ...
>
>JS
Well, it appears you didn't bother to read the portion on HTML
postings or would understand the reasoning behind that rule.

At this juncture, you have some choices: you could abide by the rules,
start a rec.binaries.radio.amateur.antenna group or continue to make
an ass of yourself by posting HTML text.

Danny, K6MHE

981. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 15:51:49 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <ldari4-sl5.ln1@p400bob.personal.cox.net>
Source record: 40881

Nick

Something I forgot to mention - don't laugh.

How about a high speed/small wing kite to get the j pole up 20ft or so?
If you get out of range just let the thing stream out behind and above
you for greater range.

No doubt real dangerous but there may be a way to reduce the risks some..

I remember doing some propagation tests for a pager service some years
ago. The difference between a low vehicle mounted 1/2 wave and the same
antenna on a 12ft pole was about 10dB. I think this was about 15 miles
from the TX site. 10dB isn't a huge help once you get over the horizon
or obstructed, but every bit helps. Height is might!

Keep in mind that if you use omni gain antennas on 70cm you will reduce
the sky radiation and thus lose the ability to get high angle
reflections from mountains etc. You also get significant pattern lift if
the antenna goes off vertical. I realize you are talking 1/2 waves but
thought it worth mentioning.

It isn't worth using mobile directive antennas BTW (like a quad or
yagi). Your signal reflects from all places around you. The end effect
seems to be higher peaks but lower average signal level.

I am surprised by your only 2-3 miles range. I use to run mobile to
mobile 10W on 2M FM driving around Sydney. It certainly got flaky in
places but 5-10 miles was more the usable range. Perhaps it was a higher
route I was driving on. Never thought about it much before. Might be
worth doing some modeling.

Enough ranting from me!

Bob

Nick wrote:
> Hi Bob,
>
> Thanks a lot for your long and detailed reply...

982. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:24:37 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf5m0i5.1r2n.bit-bucket@shell.config.com>
Source record: 40882

On Mon, 28 May 2007 07:33:24 -0700, Wes Stewart wrote:
> On Sun, 27 May 2007 22:55:03 -0700, John Smith I
><assemblywizard@gmail.com> wrote:
>
>>If you have no interest in discussing sub/super scripted math equations
>>which involve those lovely greek characters, viewing them, stating them,
>>using them, or participating in the future high math discussions I see
>>coming on the horizon, you may wish to avoid my future posts.
>
> That can be arranged.

It has been arranged here.

Jonesy

983. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:33:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3f08u$92a$1@nnrp.linuxfan.it>
Source record: 40883

Danny Richardson wrote:
>
> Well, it appears you didn't bother to read the portion on HTML
> postings or would understand the reasoning behind that rule.
>
> At this juncture, you have some choices: you could abide by the rules,
> start a rec.binaries.radio.amateur.antenna group or continue to make
> an ass of yourself by posting HTML text.
>
> Danny, K6MHE
>
>
>

I don't believe you bothered to read it ...

It cites not making "attachments" (paraphrased here) unless absolutely necessary. Demonstrate a method to sub/super script in plain text and I will concede that anything other than plain text is un-necessary.

Html files ARE VERY SMALL!

... get real ...

JS

984. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:38:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3f0ig$92a$2@nnrp.linuxfan.it>
Source record: 40884

Bob Bob wrote:
> Nick
>
> Something I forgot to mention - don't laugh.
>
> How about a high speed/small wing kite to get the j pole up 20ft or so?
> If you get out of range just let the thing stream out behind and above
> you for greater range.
>
The greatest height a car/truck can be on the highways is 13'6". Mount
the ant on a lightweight fiberglass pole with the tip of ant at this max
height?

Regards,
JS

985. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:39:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <491m535jue39uhfkhsqa0josftqhg6begj@4ax.com>
Source record: 40885

On Mon, 28 May 2007 09:33:37 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Html files ARE VERY SMALL!
>
>... get real ...

And you chose to tell us that in plain text.

There's reality for you Brett (ironyï¿½ intended).

986. Re: Subscript test in html

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:44:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3f0sf$92a$3@nnrp.linuxfan.it>
Source record: 40886

Richard Clark wrote:
> And you chose to tell us that in plain text.
>
> There's reality for you Brett (irony³ intended).
>

Friends call me "Plan John" too ... <grin>

But, as usual, you are correct ... HTML was unnecessary in the preceding message--as well as this one. ;-)

Warm regards,
JS

987. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 16:44:15 UTC
From: Nick <a@b.com>
Message-ID: <zFD6i.1970$VS.44@newsfe3-win.ntli.net>
Source record: 40887

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f3f0ig$92a$2@nnrp.linuxfan.it...
> Bob Bob wrote:
>> Nick
>>
>> Something I forgot to mention - don't laugh.
>>
>> How about a high speed/small wing kite to get the j pole up 20ft or so?
>> If you get out of range just let the thing stream out behind and above
>> you for greater range.
>>
> The greatest height a car/truck can be on the highways is 13'6". Mount
> the ant on a lightweight fiberglass pole with the tip of ant at this max
> height?
>
> Regards,
> JS

Thanks for all the responses and tips .... It has to be practical as well
for use when moving at speeds up
to 100 to 120 mph (not operating at this time) without breaking off (
German Autobahns) as it won't be
possible to stop, remove and stow it safely when motorway/autobahns are
encountered.. and also not
attract unwanted attention from the authorities who may think it is an
unsafe attachment if too big.

Nick

988. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 17:02:53 UTC
From: Virgil Smith <vsmith26@comcast.net>
Message-ID: <uvOdnQwVk_uilsbbnZ2dnUVZ_sapnZ2d@comcast.com>
Source record: 40888

Thanks to all who replied to my query. I now have several good leads which
I'll be following up. Cheers,

-vs-

"Richard Fry" <rfry@adams.net> wrote in message
news:f3d12hhhl1@aioe.org...
> "Virgil Smith" wrote
>> Does anybody have a recommendation for a good book or journal article
>> on very short antennas? I'm trying to design the front end for a LF/VLF
>> receiver and would really like to know the equivalent circuit for
>> antennas (both E-probe and loop) a tenth of a wavelength or less.
> --------
>
> Lately I've been working on an Excel spreadsheet to calculate the
> parameters associated with electrically short, MW/LF/VLF, v-pol
> antennas -- including their inverse distance groundwave fields at 1 km and
> somewhat beyond, subject to their specific groundwave propagation loss.
> The equations are those found in an I.R.E. publication of the pioneer
> broadcast consultant Carl E. Smith, and in REFERENCE DATA FOR RADIO
> ENGINEERS, published by IT&T.
>
> Here is a sample screen clip:
> http://i62.photobucket.com/albums/h85/rfry-100/ShortAntennaParameters.gif
>
> Please let me know if you'd like to try it out. My e-mail address and
> website are shown in the upper right corner of the clip linked above.
>
> RF

989. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 19:22:10 UTC
From: nm5k@wt.net
Message-ID: <1180380130.461332.290140@w5g2000hsg.googlegroups.com>
Source record: 40889

On May 28, 8:24 am, Buck <usene...@lumpuckeroo.com> wrote:

> In view of your logic, let me tell you about my situation recently
> when I tested a piece of coax on which I installed on connector.
>
> There were already two connectors on the coax and I removed one that
> was crimped and had slipped. I put on my connector and tested it with
> my radio, no signal. Hmm, I needed to check the wire.
>
> 1) I tested the center conductor and the shield on the connector I
> just installed... Short. OOPS!
>
> I cut off the connector and replaced it.
>
> 2) Tested the center conductor and shield on the connector I just
> installed... Short. OOPS again.
>
> 3) after cutting off my connector again, I tested the other connector.
> between the coax and shield. Open. Great! :)
>
> I soldered on the connector for the third time.
> 4) tested the center lead and shield of my connector... SHORT! Hmmmm
>
> 5) I cut off my connector and tested again. Open ?????
>
> I tested the other connector again. Open.
>
> ahhhh. I tested the center conductor from end to end.... OPEN!!!
>
> I tested the center conductor to the shield on the end where I was
> installing my connector.... SHORT!!!!
>
> Time for a new piece of coax....

Sounds like too much heat.. You may be melting the clear jacket
and shorting the pin to shield. Be careful using too much heat when
soldering the shield. Sounds like you have a manly soldering gun..
MK

990. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 19:56:10 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180382224_31359@sp12lax.superfeed.net>
Source record: 40890

nm5k@wt.net wrote:
Sounds like you have a manly soldering
gun..
> MK
>

Or an underpowered one which produces
too great an area under the temp vs.
time curve.

An old-fashioned iron with a high
thermal mass tip is less likely to
damage the coax.

Chuck

----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

991. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 20:57:14 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <aasri4-kf6.ln1@p400bob.personal.cox.net>
Source record: 40891

Sorry for barging in again Nick! This isn't directly related to your Q.

I guess that you are using the system for general comms as well a safety. One of the features I think is available using DCS on some radios is the ability to poll for the other station. The equivalent of "are you there?" without actually speaking into the microphone.

This feature would be very helpful for safety issues as you at least know if the other station is in range or not. Cresting a hill at the same time for example may give you range you wouldn't normally consider as viable.

This may even be able to be automated to the extent where you can poll for the other station every minute or so.

I have never done this myself so don't know the full details. There was a nearby station though that used it regularly to poll his local interest group. My horrible old VHF/UHF gear is nowhere near as new fangled as that! <grin>

Bob

Nick wrote:
> "John Smith I

992. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 21:01:34 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <fisri4-bg6.ln1@p400bob.personal.cox.net>
Source record: 40892

FMI interest John which country? (Although I guess it would be similar worldwide)

I use to guy a mobile fiberglass pole for that purpose. Was ecstatic over the performance until I smashed some low service station lights..

Bob

John Smith I wrote:

> The greatest height a car/truck can be on the highways is 13'6". Mount
> the ant on a lightweight fiberglass pole with the tip of ant at this max
> height?

993. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 22:32:48 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3fl4s$r1k$1@nnrp.linuxfan.it>
Source record: 40893

Bob Bob wrote:
> FMI interest John which country? (Although I guess it would be similar
> worldwide)
>
> I use to guy a mobile fiberglass pole for that purpose. Was ecstatic
> over the performance until I smashed some low service station lights..
>
> Bob
>
> John Smith I wrote:
>
>> The greatest height a car/truck can be on the highways is 13'6". Mount
>> the ant on a lightweight fiberglass pole with the tip of ant at this max
>> height?

Bob:

USA here. Yes, I have gotten used to watching for low overhangs when
using the fiberglass pole. I have one I got off ebay, it is hollow and
about 1-1/8 od and telescopes. This is handy for having the vhf/uhf/shf
at any height one wishes ...

You are quite right though, 13'6" may only apply in USA. That height is
established by big trucks, they can't put overpasses lower than that or
the trucks can't get past--and everyone needs the privy paper, now don't
they? ;-)

Warmest regards,
JS

994. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-28 23:41:20 UTC
From: Nick <a@b.com>
Message-ID: <AMJ6i.12975$RP4.2281@newsfe2-win.ntli.net>
Source record: 40894

"Bob Bob" <bob3bob3@suddenlink.net> wrote in message
news:aasri4-kf6.ln1@p400bob.personal.cox.net...
> Sorry for barging in again Nick! This isn't directly related to your Q.
>
> I guess that you are using the system for general comms as well a
> safety. One of the features I think is available using DCS on some
> radios is the ability to poll for the other station. The equivalent of
> "are you there?" without actually speaking into the microphone.
>
> This feature would be very helpful for safety issues as you at least
> know if the other station is in range or not. Cresting a hill at the
> same time for example may give you range you wouldn't normally consider
> as viable.
>
> This may even be able to be automated to the extent where you can poll
> for the other station every minute or so.
>
> I have never done this myself so don't know the full details. There was
> a nearby station though that used it regularly to poll his local
> interest group. My horrible old VHF/UHF gear is nowhere near as new
> fangled as that! <grin>
>
> Bob
>

Yes, we have that feature - using FT-60s at the moment but if we lose range,
we immediately go to high power and
if that doesn't work, stop at the first opportunity and use the cellphones
to report where we are (each has GPS)
Never had to use it yet though but that's the back-up plan
Nick

995. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 01:31:59 UTC
From: funkbastler <nobody@nowhere.somewhere.us>
Message-ID: <bi0n53t2m5vnk69gh711va8be5omc6bgfa@4ax.com>
Source record: 40895

On Fri, 25 May 2007 17:10:20 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>4nec2 wrote:
>"When someone asks me what`s the optimal radial ground screen, I mostly
>answer: 120 radials with a length of 0,4 lambda."
>
>That`s sufficient, but RCA`s Brown, Lewis, and Epstein did extensive
>research in the mid-1930`s resulting in an FCC requirement of 120
>radials with a length of 0.25 wavelengrh, equally spaced around the base
>of a tower.. It wasn`t exactly what B, L, & E had recommended but it
>became the minimum for broadcasters.
>
<snip>
>

http://www.fcc.gov/mb/audio/amgnd.html

--
-fb-

996. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 02:55:04 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <mf5n53d708ajba29ak5fjb3q1o88gsj960@4ax.com>
Source record: 40896

On Mon, 28 May 2007 07:55:53 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Buck wrote:
>
>You were either working with one EXPENSIVE piece of coax (and attempting
>to save the pocket book)--else you demonstrate your super human
>perseverance!
>
>JS

actually, I was thinking I was just that sloppy.... lol

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

997. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 02:57:41 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <lg5n53h1uei9i874l1ogvbkbtl3dv21aij@4ax.com>
Source record: 40897

On Mon, 28 May 2007 15:56:10 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>nm5k@wt.net wrote:
> Sounds like you have a manly soldering
>gun..
>> MK
>>
>
>Or an underpowered one which produces
>too great an area under the temp vs.
>time curve.
>
>An old-fashioned iron with a high
>thermal mass tip is less likely to
>damage the coax.
>
>Chuck
>
>----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
>http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
>----= East and West-Coast Server Farms - Total Privacy via Encryption =----

Inside the coax near the other connector, the wire had broken and one
of the broken ends shorted the coax, the other broken end touched
nothing. I had to look long and hard. It was apparently just a
defect. It also happened to be the only accessible piece of coax
handy at the time. As stated above, I was just thinking I was
shorting out the coax connector, but when I cut it loose and it wasn't
shorted, i knew it had to be at the other end. However, the other end
appeared to be non-shorted. It wasn't till I took time to test the
length of center conductor that I discovered the open.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

998. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 03:19:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3g5un$6t6$1@nnrp.linuxfan.it>
Source record: 40898

Buck wrote:

> ...

Buck:

I have fought things like you describe only to fail and go to bed angry
... then get up in the morning and see the problem immediately! :-)

Regards,
JS

999. Help Setting Up Unidentified Cushcraft Multiband Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 03:27:39 UTC
From: Kevin Hastings <myfamilydotcom@hotmail.com>
Message-ID: <465b9db7$0$4058$9a566e8b@news.aliant.net>
Source record: 40900

I am a fairly new amateur operator (VE9XYZ) and have just purchased a second-hand Cushcraft multiband vertical antenna from an older ham operator who had it in storage for quite some time. He told me that it was a Cushcraft AV-5, but last weekend I started assembling and testing it (using the AV-5 instruction manual found on Cushcraft's website) and I've concluded that it cannot be an AV-5 since:

1) This antenna has a 10" circular capacitance hat, not the criss-cross type shown in the AV-5 manual

2) The dimensions for this antenna (marked on the antenna before disassembly by the previous owner are nowhere near what the "Nominal Dimensions" shown in the AV-5 manual.

Dimension A: My Antenna = 98.125", AV-5 Manual says 80.5"

Dimension B: My Antenna = 17", AV-5 Manual says 5.75"
Dimension C: My Antenna = 27.5", AV-5 Manual says 19.75"

Dimension D: My Antenna = 66.75", AV-5 Manual says 43.75"
Dimension E: My Antenna = 74", AV-5 Manual says 82.5"

The base assembly is identical to that shown in the AV-5 instruction manual.

I have no idea where the 10" ring goes, and since I don't have a manual that I really trust, I don't know what the details are for the radials I must use. Can anyone experienced with this subject help me identify this antenna si I can locate the instruction manual and assemble this antenna properly. I looked through many antenna manuals online, but didn't find one that looked exactly like mine.

I'm looking forward to testing his thing now that the summer weather is here.

Help !

Thank-you very much in advance for any help you can provide me.

73

Kevin

VE9-XYZ

myfamilydotcom@hotmail.com

1000. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 04:23:39 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <d4-dnWjTWYjyAcbbnZ2dnUVZ_hudnZ2d@bright.net>
Source record: 40899

OK. The devil makes me do it.

Enhanced earthing systems are very old. Take note of this US patent filed in 1903: 767974. For even more education about earthing, do note US patent 782181.

These patents popped up when looking for something entirely different.

Enjoy. 73 Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net

1001. Re: Ground mounted Butternut HF6v

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 06:21:01 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f3ggod$n0o$1@news.netins.net>
Source record: 40901

On Sun, 27 May 2007 21:05:54 +0000, John, N9JG wrote:

> I have just finished the installation of a Butternut HF6V vertical
> antenna. The link below contains several close-up pictures of the ground
> radial plate and the coil/capacitor assemblies, which are part of the
> HF6V. I use the antenna mainly on 40 meters, but it does work on 80-10
> meters and 30 meters.
>
> http://tinyurl.com/26odvm
>
> Constructive comments are welcome.
>
> John, N9JG

I envy your radial plate. Makes mine seem very cheap indeed.
http://teh.3leggedcat.com/ham/radial-plate.jpg

Could you get a close-up of the 30m capacitor?

I have an original HF6V which had the cap at the bottom of the 30m coil,
thus placing all the stress across the doorknob cap. Ive had two of them
break in the 10 years the antenna has been up.

I know the HF6VX has a couple revisions made to it since mine was built,
mainly to allow the 12m and 17m kits. But I believe the other is the 30m
cap assembly. I would like a detailed picture so I might modify mine in
a similar manner.

--Teh

1002. Re: End fed aerial designs for 2M and 70cms ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 09:13:44 UTC
From: "Mike M." <notme@invalid.email.net>
Message-ID: <deqn5394ig40838g8bpu6ctr40p1nf9ed8@4ax.com>
Source record: 40902

On Mon, 28 May 2007 11:10:04 GMT, "Nick" <a@b.com> wrotF:

>I am wanting to build 1/2 wave end fed ground plane independent aerials for
>2M and 70cms for use on
>touring motorcycles for bike to bike comms.
>
>At the moment we are using 5W hand helds with the helicals, but I was
>wanting to experiment with half waves
>better sited, to increase the max range possible between the bikes -
>groundplanes are not practical. On 70cms
>the aerials will be physically smaller but not sure how the range might be
>affected / reduced
>
>Has anyone suggestions on band to use and/or designs for suitable aerials,
>or a link to a site with details ?
>
>Thanks,
>
>Nick
>
There are a number of commercial dual band ground plane independent
antennas available. Many of the Comet antennas are supposed to be
ground plane independent.
<http://www.cometantenna.com/FAQs.php?ID=1>

If you want to build your own, a J-Pole design could probably be
adapted. One of the guys I know uses a home build copy of the Arrow
dual band J-pole on his Jeep wagon.
<http://www.arrowantennas.com/inst/ijpole.html>

Mike kc9doa

1003. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 12:03:59 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <4l5o53l2gslr58gege8b54p0rhrek0iad9@4ax.com>
Source record: 40903

On Mon, 28 May 2007 20:19:40 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Buck wrote:
>
> > ...
>
>Buck:
>
>I have fought things like you describe only to fail and go to bed angry
>... then get up in the morning and see the problem immediately! :-)
>
>Regards,
>JS

I know the feeling

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

1004. Rotors and RF isolation?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 15:54:38 UTC
From: TF3KX <kristinn1@gmail.com>
Message-ID: <1180454078.167128.115540@q66g2000hsg.googlegroups.com>
Source record: 40904

Hi, all:

I am planning to use my rotor (Alliance HD73) to hold the base of a quarter-wave aluminum-tube vertical for 40m. I have two scenarios for this:

a) Have the vertical element base sitting without insulation in the rotor enclosure, electrically connected to the rotor;
b) Have the vertical element base isolated in the rotor enclosure, not connected to the rotor but to the groundplane below.

Do you have comments on having the rotor as a part of the vertical antenna system in this way, (a) or (b)? My measurements on this rotor indicate that the rotor enclosure is actually isolated from the control and motor wires of the rotor, so perhaps the rotor shell will not have no effect either way?

Are other rotors generally RF-isolated from the control and motor wires?

73 - Kristinn, TF3KX

1005. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 16:28:13 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3hkanofi1@nnrp.linuxfan.it>
Source record: 40905

art wrote:
> > ...
> ART
>
>

Art:

What kind of data/text/diagrams/etc. on vertical monopoles/unipoles
omnis' do you have?

Regards,
JS

1006. Re: Rotors and RF isolation? >> correction...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 16:30:38 UTC
From: TF3KX <kristinn1@gmail.com>
Message-ID: <1180456238.066031.12900@q75g2000hsh.googlegroups.com>
Source record: 40906

Ooops... scenario (b) should read:

b) Have the vertical element base isolated in the rotor enclosure,
not connected to the rotor, but the rotor is connected to the
groundplane below.

TF3KX wrote:
> Hi, all:
>
> I am planning to use my rotor (Alliance HD73) to hold the base of a
> quarter-wave aluminum-tube vertical for 40m. I have two scenarios for
> this:
>
> a) Have the vertical element base sitting without insulation in the
> rotor enclosure, electrically connected to the rotor;
> b) Have the vertical element base isolated in the rotor enclosure,
> not connected to the rotor but to the groundplane below.
>
> Do you have comments on having the rotor as a part of the vertical
> antenna system in this way, (a) or (b)? My measurements on this rotor
> indicate that the rotor enclosure is actually isolated from the
> control and motor wires of the rotor, so perhaps the rotor shell will
> not have no effect either way?
>
> Are other rotors generally RF-isolated from the control and motor
> wires?
>
> 73 - Kristinn, TF3KX

1007. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 16:39:56 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f3hl0t$i9a$1@nntp1.jpl.nasa.gov>
Source record: 40908

Jimmie D wrote:
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:cb7a53tsq3r1lku6fvb8r24i491hmvusj7@4ax.com...
>
>>On Wed, 23 May 2007 23:33:45 -0400, "Jimmie D"
>><GFENDER@carolina.rr.com> wrote:
>>
>>
>>>Giving W8QUR the benifit of the doubt
>>
>>is like saying a 4 cylinder Hummer's efficiency would be improved if
>>you removed the chassis.
>>
>>73's
>>Richard Clark, KB7QHC
>
>
> You either have to give the benifit of the doubt to W8QUR or the origonal
> poster
> W8QUR had benifit of editors that reviewed his work and decided it was
> correct.

Hmmm.. but the editors at QST and similar magazines actually don't do that much technical review. Sometimes there are typos that don't get caught, as well. There are several instances of incorrect or misleading data in a QST article in the last few years (and, I suspect, if one took the time to go back and look in decades gone by, you'd find errors there as well). Sometimes it gets corrected in a subsequent issue, sometimes not.

QST isn't a peer reviewed technical journal. Lots of good ideas, but it's always wise to look at some background info too.

Jim, W6RMK

1008. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 16:41:28 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <YIY6i.63655$Xh3.5177@edtnps90>
Source record: 40907

"art" <aunwin@insightbb.com> wrote in message
news:1180455664.838090.161380@q69g2000hsb.googlegroups.com...
>I was reading up on the above antenna which is a take off
> of an antenna I patented ,(Constant Impedance
> Matching System) and written up in QST March, 1998
> I also described this system in earlier postings on this
> newsgroup.-------------
> --------- antenna)
> ART

What page? Can't seem to find the reference in March '98 QST.
--
Frank

1009. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 17:26:38 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180459598.366601.33050@w5g2000hsg.googlegroups.com>
Source record: 40909

On 29 May, 09:28, John Smith I <assemblywiz...@gmail.com> wrote:
> art wrote:
> > > ...
> > ART
>
> Art:
>
> What kind of data/text/diagrams/etc. on vertical monopoles/unipoles
> omnis' do you have?
>
> Regards,
> JS

A previous patent dealt with that when I placed a resonator very close
to the center of a vertical. This resonator has a variable capacitor
in it and the feed went up the center of the pole. This gave a 20 thru
10
multiband antenna. Again the resonator was only about a mm from the
antenna. The group didn't like that either which is not a surprise.
ART

1010. Re: Ground mounted Butternut HF6v

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 18:27:34 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <qg_6i.35025$G23.12637@newsreading01.news.tds.net>
Source record: 40910

See the bottom photo of the web page pointed to by the link below
http://tinyurl.com/9cpcf

John, N9JG

"Tehrasha Darkon" <darkon@netins.net> wrote in message
news:f3ggod$n0o$1@news.netins.net...
> I envy your radial plate. Makes mine seem very cheap indeed.
> http://teh.3leggedcat.com/ham/radial-plate.jpg
>
> Could you get a close-up of the 30m capacitor?
>
> I have an original HF6V which had the cap at the bottom of the 30m coil,
> thus placing all the stress across the doorknob cap. Ive had two of them
> break in the 10 years the antenna has been up.
>
> I know the HF6VX has a couple revisions made to it since mine was built,
> mainly to allow the 12m and 17m kits. But I believe the other is the 30m
> cap assembly. I would like a detailed picture so I might modify mine in
> a similar manner.
>
> --Teh
>

1011. Re: Ground mounted Butternut HF6v

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 18:29:32 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <gi_6i.35026$G23.21704@newsreading01.news.tds.net>
Source record: 40911

Correction!! I gave the wrong link. Please use the following link
http://tinyurl.com/26odvm

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:qg_6i.35025$G23.12637@newsreading01.news.tds.net...
> See the bottom photo of the web page pointed to by the link below
> http://tinyurl.com/9cpcf
>
> John, N9JG
>
> "Tehrasha Darkon" <darkon@netins.net> wrote in message
> news:f3ggod$n0o$1@news.netins.net...
>> I envy your radial plate. Makes mine seem very cheap indeed.
>> http://teh.3leggedcat.com/ham/radial-plate.jpg
>>
>> Could you get a close-up of the 30m capacitor?
>>
>> I have an original HF6V which had the cap at the bottom of the 30m coil,
>> thus placing all the stress across the doorknob cap. Ive had two of them
>> break in the 10 years the antenna has been up.
>>
>> I know the HF6VX has a couple revisions made to it since mine was built,
>> mainly to allow the 12m and 17m kits. But I believe the other is the 30m
>> cap assembly. I would like a detailed picture so I might modify mine in
>> a similar manner.
>>
>> --Teh
>>
>
>

1012. Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 18:36:27 UTC
From: Ken C <cprstn54@nospam.att.net>
Message-ID: <48so531jl5gbavv7b00b100u7bnn8ojk19@4ax.com>
Source record: 40912

I am using screw-on telescopic antennas for my doppler rig.

These have four dimples at the base securing the tube to the base.

After a while, the tube comes loose from the base and the antenna will no longer screw off or on because the tube turns freely about the base.

I have tried using a pointed punch to increase the dimples, to no avail.

They are $5 apiece from Mouser, so if possible, I would like to salvage them. I seem to get around eight on-off cycles per antenna. I am tightenting them only by hand.

It is possible that some of the loosening is cause by the bending force of the 55 mph wind on a 19" whip.

Any suggestions?

Ken KC2JDY

1013. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 23:13:26 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <9oadnfpfnvcFLsHbnZ2dnUVZ_qiqnZ2d@comcast.com>
Source record: 40913

On 28-May-2007, nm5k@wt.net wrote:

> On May 28, 8:24 am, Buck <usene...@lumpuckeroo.com> wrote:
>
> > > In view of your logic, let me tell you about my situation recently
> > > when I tested a piece of coax on which I installed on connector.
> > >
> > > There were already two connectors on the coax and I removed one that
> > > was crimped and had slipped. I put on my connector and tested it with
> > > my radio, no signal. Hmm, I needed to check the wire.
> > >
> > > 1) I tested the center conductor and the shield on the connector I
> > > just installed... Short. OOPS!
> > >
> > > I cut off the connector and replaced it.
> > >
> > > 2) Tested the center conductor and shield on the connector I just
> > > installed... Short. OOPS again.
> > >
> > > 3) after cutting off my connector again, I tested the other connector.
> > > between the coax and shield. Open. Great! :)
> > >
> > > I soldered on the connector for the third time.
> > > 4) tested the center lead and shield of my connector... SHORT! Hmmmm
> > >
> > > 5) I cut off my connector and tested again. Open ?????
> > >
> > > I tested the other connector again. Open.
> > >
> > > ahhhh. I tested the center conductor from end to end.... OPEN!!!
> > >
> > > I tested the center conductor to the shield on the end where I was
> > > installing my connector.... SHORT!!!!
> > >
> > > Time for a new piece of coax....
>
> Sounds like too much heat.. You may be melting the clear jacket
> and shorting the pin to shield. Be careful using too much heat when
> soldering the shield. Sounds like you have a manly soldering gun..
> MK

Sounds to me like the connector he didn't replace had an open center pin and a shorted braid.
Remember to make both short and open checks at both ends.

Ken

1014. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-29 23:52:31 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180482751.033792.319620@m36g2000hse.googlegroups.com>
Source record: 40914

On 28 May, 10:02, "Virgil Smith" <vsmit...@comcast.net> wrote:
> Thanks to all who replied to my query. I now have several good leads which
> I'll be following up. Cheers,
>
> -vs-
>
> "Richard Fry" <r...@adams.net> wrote in message
>
> news:f3d12hhhl1@aioe.org...
>
>
>
> > "Virgil Smith" wrote
> >> Does anybody have a recommendation for a good book or journal article
> >> on very short antennas? I'm trying to design the front end for a LF/VLF
> >> receiver and would really like to know the equivalent circuit for
> >> antennas (both E-probe and loop) a tenth of a wavelength or less.
> > ________
>
> > Lately I've been working on an Excel spreadsheet to calculate the
> > parameters associated with electrically short, MW/LF/VLF, v-pol
> > antennas -- including their inverse distance groundwave fields at 1 km and
> > somewhat beyond, subject to their specific groundwave propagation loss.
> > The equations are those found in an I.R.E. publication of the pioneer
> > broadcast consultant Carl E. Smith, and in REFERENCE DATA FOR RADIO
> > ENGINEERS, published by IT&T.
>
> > Here is a sample screen clip:
> >http://i62.photobucket.com/albums/h85/rfry-100/ShortAntennaParameters...
>
> > Please let me know if you'd like to try it out. My e-mail address and
> > website are shown in the upper right corner of the clip linked above.
>
> > RF- Hide quoted text -
>
> - Show quoted text -

Virgil,
You wasn't quite clear as to what short antennas means!
For instance it could refer either to element length as well as boom
length. You will not lose much gain on elements that are shortened
such that the current curve changes to a triangle shape. With respect
to boom length
booms can be shortened quite a bit over yagis by using the

Gaussian design where the elements are placed close to planar. Normal Gaussians of this style go upto 13 dbi for much less than a 20 foot boom length when using just three elements tho you could go upto 6 elements on such a boom length. I think that there should be a spec for "turning radius that would meet your quest as there is so much confusion with respect to gain versus boomlength or number of elements which is based solely on the yagi design to the ommission of other designs.
Art

1015. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 00:12:27 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180483947.486756.79480@k79g2000hse.googlegroups.com>
Source record: 40915

On 25 May, 08:14, junoexpress <MTBrenne...@gmail.com> wrote:
> Hi,
>
> I am not an "antenna person", so I have a simple question that I am
> hoping someone will be so kind to answer for me.
>
> I have data for the gain pattern of a directional antenna. The data is
> given as complex numbers for both the phi and theta components. From
> how I view the concept of antenna gain (as a mathematician), it seems
> that you can consider the gain as a rank 2 tensor having the form:
> _ _
> | Gqq Gfq |
> (i.a) G = | Gqf Gff |
> - -
>
> where f = phi component, q denotes the theta component
>
> In this case, I can suppose there is no cross-polarization, so this
> matrix reduces to:
>
> _ _
> | Gqq 0 |
> (i.b) G = | 0 Gff |
> - -
>
> Now I have an incident E field (which happens to be RHCP), that I can
> write as a plane wave:
> (ii) E(t) = E0(t) [Eq*q^hat , Ef*f^hat]
> where E0(t) is the time dependence that factors out and the 2x1 vector
> remaining gives the q and f components resp.
>
> M questions is as follows:
> Obviously, I am interested in the antennas response to the field. If I
> want to compute the voltage induced on the antenna by the field, do I
> add the two E field components or do I compute the norm of the vector
> on the RHS of eqn (ii)? When I think of how a field induces a voltage,
> I think of the voltage as being proportional to norm of the field. A
> colleague of mine who does some work with antennas however says that
> the antenna "doesn't know anything about components" and so it just
> adds the two components. (also, this question is a bit of an aside
> perhaps, but in the papers that I look through that deal with
> polarized EM waves, only the E field and not the H field are
> considered. Is there a reason why/justification for why it it can be
> neglected?)

>
> Thank you very much and you can reply to me on the ng or by my e-mail
> address.
>
> Matt Brenenman

Matt,
Gain can mean many things. If you can back up on your vector aproach a look at Poyntings theorem would be a good start. You could then look up past threads on Gaussian antennas as far as vectors are concerned for radiation.
If you are looking towards a yagi design then that is a completely different animal for radiation where the elements couple with each other to transfer current and thus radiation which also creats a focussing effect on the radiated lobe, where its gain is measured but at the expense of beam width.Thus when looking at different arrangements for radiation the Gaussian style ceases radiation when applied energy stops where as in a coupled antenna such as a yagi coupling and radiation occures outside the energy applied time. When pursuing vector analysis it is a must to pursue Poyntings vector aproach or Gaussian aproach because of the time varing factor.
That is about the limit that I can help you
Regards
Art

1016. Re: Confused over coax and windom - newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 01:39:26 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465cd5c7$0$9920$4c368faf@roadrunner.com>
Source record: 40916

"Ken Fowler" <ko6no@yahoo.com> wrote in message
news:9oadnfpfnvcFLsHbnZ2dnUVZ_qiqnZ2d@comcast.com...
>
> On 28-May-2007, nm5k@wt.net wrote:
>
>> On May 28, 8:24 am, Buck <usene...@lumpuckeroo.com> wrote:
>>
>> >
>> > In view of your logic, let me tell you about my situation recently
>> > when I tested a piece of coax on which I installed on connector.
>> >
>> > There were already two connectors on the coax and I removed one that
>> > was crimped and had slipped. I put on my connector and tested it with
>> > my radio, no signal. Hmm, I needed to check the wire.
>> >
>> > 1) I tested the center conductor and the shield on the connector I
>> > just installed... Short. OOPS!
>> >
>> > I cut off the connector and replaced it.
>> >
>> > 2) Tested the center conductor and shield on the connector I just
>> > installed... Short. OOPS again.
>> >
>> > 3) after cutting off my connector again, I tested the other connector.
>> > between the coax and shield. Open. Great! :)
>> >
>> > I soldered on the connector for the third time.
>> > 4) tested the center lead and shield of my connector... SHORT! Hmmmm
>> >
>> > 5) I cut off my connector and tested again. Open ?????
>> >
>> > I tested the other connector again. Open.
>> >
>> > ahhhh. I tested the center conductor from end to end.... OPEN!!!
>> >
>> > I tested the center conductor to the shield on the end where I was
>> > installing my connector.... SHORT!!!!
>> >
>> > Time for a new piece of coax....
>>
>> Sounds like too much heat.. You may be melting the clear jacket
>> and shorting the pin to shield. Be careful using too much heat when
>> soldering the shield. Sounds like you have a manly soldering gun..
>> MK

>
> Sounds to me like the connector he didn't replace had an open center pin
> and a shorted braid.
> Remember to make both short and open checks at both ends.
>
> Ken

A meter that will read capacitance can be real handy. The end that has the lowest capacitance is the OPEN end.

1017. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 02:12:34 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465cdd8b$0$4913$4c368faf@roadrunner.com>
Source record: 40917

"art" <aunwin@insightbb.com> wrote in message
news:1180459238.845395.249920@m36g2000hse.googlegroups.com...
> On 29 May, 09:41, "Frank's" <frank...@nojunkmailplease.telus.net>
> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1180455664.838090.161380@q69g2000hsb.googlegroups.com...
>>
>> >I was reading up on the above antenna which is a take off
>> > of an antenna I patented ,(Constant Impedance
>> > Matching System) and written up in QST March, 1998
>> > I also described this system in earlier postings on this
>> > newsgroup.-------------
>> > --------- antenna)
>> > ART
>>
>> What page? Can't seem to find the reference in March '98 QST.
>> --
>> Frank
> Thought about past times so I looked up
> comments on the OWA antenna on the net
> and got the reference to QST from there.
> By the way this newsgroup laughed at this
> and ridiculed me when I explained it a
> few years before the article was written,
> the same way they ridiculed with the
> Gaussian antenna. A lot of people were
> pointed to this patent by the patent
> office with respect to their claims.
> Note Cebik did some follow up writing
> on that antenna.I applied for another
> patent along the same lines at the same
> time but let it go when my health went
> down hill!
> Art
>

Googled OWA and checked out he design of the antenna, Isnt this is pretty much what you get when you let a program likeYagi Optimiser tweak the antenna for max bandwidth vs SWR? Seems like back in the 70s I remember some truck stop special CB antennas built like this that made great claims for their SWR. No doubt the claim is correct but what is the tradeoff in gain, cost, ruggedness.....

Jimmie

Jimmie

1018. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 02:24:58 UTC
From: nm5k@wt.net
Message-ID: <1180491898.280154.70050@o5g2000hsb.googlegroups.com>
Source record: 40918

On May 29, 8:12 pm, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
Seems like back in the 70s I remember some
> truck stop special CB antennas built like this that made great claims for
> their SWR. No doubt the claim is correct but what is the tradeoff in gain,
> cost, ruggedness.....
>
> Jimmie

LOL...A dummy load does great in the SWR dept.. Doesn't mean
I want to use one as a radiator of my precious RF... :/
As far as Art's matching design proposal, I can't see the '98 article
in question, so as usual, my cat has mittens.
MK

1019. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 02:47:07 UTC
From: richardharrison@webtv.net
Message-ID: <20509-465CE5AB-1207@storefull-3255.bay.webtv.net>
Source record: 40920

Matt Brenenman wrote:
"When I think of how a field induces a voltage, I think of voltage as being proportional to norm of the field."

OK. Terman wrote on page 2 of his 1955 opus:
"The strength of the wave measures in terms of microvolts per meter of stress in space is also exactly the same voltage that the magnetic flux of the wave induces in a conductor 1 m long when sweeping across this conductor with the velocity of light."

Since Matt mentions circular polarization, one of the problems on page 50 in Kraus` 3rd edition of "Antennas" is notable. It states:
"1-16-2 More power in C.P. Show that the average Poynting vector of a circularly polarized wave is twice that of a linearly polarized wave if the maximum electric field E is the same for both waves. This means that the medium can handle twice as much power before breakdown with circular polarization (CP) than with linear polarization (LP)."

Best regards, Richard Harrison, KB5WZI

1020. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 02:49:22 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <SC57i.63738$Xh3.54636@edtnps90>
Source record: 40919

> LOL...A dummy load does great in the SWR dept.. Doesn't mean
> I want to use one as a radiator of my precious RF... :/
> As far as Art's matching design proposal, I can't see the '98 article
> in question, so as usual, my cat has mittens.
> MK

All I can find on the web is the following.

http://www.cebik.com/qex/owa.pdf
http://www.antennex.com/shack/Nov00/dan_edit.htm
http://www.cebik.com/vhf/owa.html

Some mention is made of QST here, but they did not seem to
actually publish the article:

http://www.naic.edu/~angel/kp4ao/ham/owa.html

By the same author '98 QST, pp 38 - 40.

--
Frank

1021. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 02:57:04 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180493824.516536.221420@q66g2000hsg.googlegroups.com>
Source record: 40921

On 29 May, 19:12, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1180459238.845395.249920@m36g2000hse.googlegroups.com...
>
>
>
>
>
> > On 29 May, 09:41, "Frank's" <frank...@nojunkmailplease.telus.net>
> > wrote:
> >> "art" <aun...@insightbb.com> wrote in message
> >
> >>news:1180455664.838090.161380@q69g2000hsb.googlegroups.com...
> >
> >> >I was reading up on the above antenna which is a take off
> >> > of an antenna I patented ,(Constant Impedance
> >> > Matching System) and written up in QST March, 1998
> >> > I also described this system in earlier postings on this
> >> > newsgroup.-------------
> >> > --------- antenna)
> >> > ART
> >
> >> What page? Can't seem to find the reference in March '98 QST.
> >> --
> >> Frank
> > Thought about past times so I looked up
> > comments on the OWA antenna on the net
> > and got the reference to QST from there.
> > By the way this newsgroup laughed at this
> > and ridiculed me when I explained it a
> > few years before the article was written,
> > the same way they ridiculed with the
> > Gaussian antenna. A lot of people were
> > pointed to this patent by the patent
> > office with respect to their claims.
> > Note Cebik did some follow up writing
> > on that antenna.I applied for another
> > patent along the same lines at the same
> > time but let it go when my health went
> > down hill!
> > Art
>
> Googled OWA and checked out he design of the antenna, Isnt this is pretty

> much what you get when you let a program likeYagi Optimiser tweak the
> antenna for max bandwidth vs SWR? Seems like back in the 70s I remember some
> truck stop special CB antennas built like this that made great claims for
> their SWR. No doubt the claim is correct but what is the tradeoff in gain,
> cost, ruggedness.....
>
> Jimmie
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

Jimmie, If the cb antenna is the same as what I disclosed in my patent
I should not have obtained the patent! I do know that a few patent
requests
were referred to my patent after I disclosed it on this newsgroup so
it seems odd that I and others were not referred to the CB antenna as
being the prior art. As far as gain trade off there is none. The
constant impedance allows for continuation of gain at band edges when
the gain striven for is to high for the bandwidth in question. But
then this is just a patent, and I have always found that people would
always say I already knew that or it has already been invented. Odd
how some people react to the new or change. It will be the same for
the Gaussian antenna
as already one has stated it has already been invented but does not
give particulars. On the impedance antenna I had numourous requests to
go to San Francisco with all expences paid just to discus the basics
and future
but health problems of the heart told me to forget about the whole
thing as well as the sarcastic comments from the resident experts of
this group
which continues to this day. I don't need money so I am glad the idea
is still alive ala Cebik who has written extensively about it. Really
you should refer your questions to him rather than entrap me into
another augument.
Art

1022. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 03:22:30 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180495350.283477.219430@u30g2000hsc.googlegroups.com>
Source record: 40922

On 29 May, 19:49, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > LOL...A dummy load does great in the SWR dept.. Doesn't mean
> > I want to use one as a radiator of my precious RF... :/
> > As far as Art's matching design proposal, I can't see the '98 article
> > in question, so as usual, my cat has mittens.
> > MK
>
> All I can find on the web is the following.
>
> http://www.cebik.com/qex/owa.pdfhttp://www.antennex.com/shack/Nov00/dan_edit.htmhttp://w
ww.cebik.com/vhf/owa.html
>
> Some mention is made of QST here, but they did not seem to
> actually publish the article:
>
> http://www.naic.edu/~angel/kp4ao/ham/owa.html
>
> By the same author '98 QST, pp 38 - 40.
>
> --
> Frank

Frank, I saw that those same people were featured speakers
at Dayton last week on the subject of OWA antenna progresions.
Also Cebik is selling computor disks on the subject.
Shame Jimmie and others didn't attend Dayton to point
out to the amateur world the shortcommings of such blather
and nonsense with respect to antennas. If they did that
they could have placed themselves in a position to be high
lighted in next months QST. I am sure all at Dayton would
have been all ears to their antenna expertese with respect to
various antennas. You also could have asked them why
their patent request was rejected !
If you look back at the archives around 1995 Jimmie may
find it interesting. By the way Frank a short time ago
I was blasted for something inmy past based on more
than a single reflector. I find it interesting the FM
antenna on the net that described the reason for three
reflecters by the author of AO *(Brian Beasely) so you
can easily determine who knows what he is talking
about on this group despite the impressions they try to create.
Regards
Art

1023. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 03:37:59 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <sk67i.314155$ZA5.267313@newsfe15.phx>
Source record: 40923

"Ken C" <cprstn54@nospam.att.net> wrote in message
news:48so531jl5gbavv7b00b100u7bnn8ojk19@4ax.com...
> I am using screw-on telescopic antennas for my doppler rig.
>
> These have four dimples at the base securing the tube to the base.
>
> After a while, the tube comes loose from the base and the antenna will
> no longer screw off or on because the tube turns freely about the
> base.

< snip >
>
> Any suggestions?
>
> Ken KC2JDY

Hi, Ken,

Maybe you could try a product called "Gorilla Glue." I have been using it successfully for bonding metal-to-metal (among other combinations) for about six months. It is unique among my various adhesives in that it expands about 50 percent while curing. Thus you get a dual effect -- some adhesion and some physical jamming.

The excess can be trimmed with a very sharp knife or maybe a pick. Good luck.

"Sal"
(KD6VKW)

1024. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 04:52:53 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465d031d$0$2386$4c368faf@roadrunner.com>
Source record: 40924

"art" <aunwin@insightbb.com> wrote in message
news:1180493824.516536.221420@q66g2000hsg.googlegroups.com...
> On 29 May, 19:12, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1180459238.845395.249920@m36g2000hse.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 29 May, 09:41, "Frank's" <frank...@nojunkmailplease.telus.net>
>> > wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>>
>> >>news:1180455664.838090.161380@q69g2000hsb.googlegroups.com...
>>
>> >> >I was reading up on the above antenna which is a take off
>> >> > of an antenna I patented ,(Constant Impedance
>> >> > Matching System) and written up in QST March, 1998
>> >> > I also described this system in earlier postings on this
>> >> > newsgroup.-------------
>> >> > --------- antenna)
>> >> > ART
>>
>> >> What page? Can't seem to find the reference in March '98 QST.
>> >> --
>> >> Frank
>> > Thought about past times so I looked up
>> > comments on the OWA antenna on the net
>> > and got the reference to QST from there.
>> > By the way this newsgroup laughed at this
>> > and ridiculed me when I explained it a
>> > few years before the article was written,
>> > the same way they ridiculed with the
>> > Gaussian antenna. A lot of people were
>> > pointed to this patent by the patent
>> > office with respect to their claims.
>> > Note Cebik did some follow up writing
>> > on that antenna.I applied for another
>> > patent along the same lines at the same
>> > time but let it go when my health went
>> > down hill!
>> > Art

>>
>> Googled OWA and checked out he design of the antenna, Isnt this is pretty
>> much what you get when you let a program likeYagi Optimiser tweak the
>> antenna for max bandwidth vs SWR? Seems like back in the 70s I remember
>> some
>> truck stop special CB antennas built like this that made great claims for
>> their SWR. No doubt the claim is correct but what is the tradeoff in
>> gain,
>> cost, ruggedness.....
>>
>> Jimmie
>>
>> Jimmie- Hide quoted text -
>>
>> - Show quoted text -
>
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> I should not have obtained the patent! I do know that a few patent
> requests
> were referred to my patent after I disclosed it on this newsgroup so
> it seems odd that I and others were not referred to the CB antenna as
> being the prior art. As far as gain trade off there is none. The
> constant impedance allows for continuation of gain at band edges when
> the gain striven for is to high for the bandwidth in question. But
> then this is just a patent, and I have always found that people would
> always say I already knew that or it has already been invented. Odd
> how some people react to the new or change. It will be the same for
> the Gaussian antenna
> as already one has stated it has already been invented but does not
> give particulars. On the impedance antenna I had numourous requests to
> go to San Francisco with all expences paid just to discus the basics
> and future
> but health problems of the heart told me to forget about the whole
> thing as well as the sarcastic comments from the resident experts of
> this group
> which continues to this day. I don't need money so I am glad the idea
> is still alive ala Cebik who has written extensively about it. Really
> you should refer your questions to him rather than entrap me into
> another augument.
> Art
>

Wasnt talking about your patent, I found about OWA has no similarity to your patented design, They were just normal run of the mill yagis optimized to have a realtively flat SWR over there design range. Nothing new.

Jimmie

1025. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 04:56:39 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <5I-dnWCBV5aRmcDbnZ2dnUVZ_silnZ2d@giganews.com>
Source record: 40925

Sal M. Onella wrote:
>
> Ken C wrote:
> > I am using screw-on telescopic antennas for my doppler rig.
> >
> > These have four dimples at the base securing the tube to the base.
> >
> > After a while, the tube comes loose from the base and the antenna will
> > no longer screw off or on because the tube turns freely about the
> > base.
>
> < snip >
> >
> > Any suggestions?
> >
> > Ken KC2JDY
>
> Hi, Ken,
>
> Maybe you could try a product called "Gorilla Glue." I have been
using
> it successfully for bonding metal-to-metal (among other combinations) for
> about six months. It is unique among my various adhesives in that it
> expands about 50 percent while curing. Thus you get a dual effect -- some
> adhesion and some physical jamming.
>
> The excess can be trimmed with a very sharp knife or maybe a pick. Good
> luck.
>
> "Sal"
> (KD6VKW)
>

Gorilla Glue is a brand name -- Borden has their version. The generic name
is polyurethane adhesive. It reacts with moisture to cure. Hardware stores
& home improvement stores carry it.
73,
Bryan WA7PRC

1026. Re: Are pi networks THAT INefficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 05:09:05 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465d06ec$0$3260$4c368faf@roadrunner.com>
Source record: 40926

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f3hl0t$i9a$1@nntp1.jpl.nasa.gov...
> Jimmie D wrote:
>> "Richard Clark" <kb7qhc@comcast.net> wrote in message
>> news:cb7a53tsq3r1lku6fvb8r24i491hmvusj7@4ax.com...
>>
>>>On Wed, 23 May 2007 23:33:45 -0400, "Jimmie D"
>>><GFENDER@carolina.rr.com> wrote:
>>>
>>>
>>>>Giving W8QUR the benifit of the doubt
>>>
>>>is like saying a 4 cylinder Hummer's efficiency would be improved if
>>>you removed the chassis.
>>>
>>>73's
>>>Richard Clark, KB7QHC
>>
>>
>> You either have to give the benifit of the doubt to W8QUR or the origonal
>> poster
>> W8QUR had benifit of editors that reviewed his work and decided it was
>> correct.
>
> Hmmm.. but the editors at QST and similar magazines actually don't do that
> much technical review. Sometimes there are typos that don't get caught,
> as well. There are several instances of incorrect or misleading data in a
> QST article in the last few years (and, I suspect, if one took the time to
> go back and look in decades gone by, you'd find errors there as well).
> Sometimes it gets corrected in a subsequent issue, sometimes not.
>
> QST isn't a peer reviewed technical journal. Lots of good ideas, but it's
> always wise to look at some background info too.
>
> Jim, W6RMK

True enough, all it would take to settle this is for someone to have a copy
of the article in question and to post it. I have trouble with the OPs
equating pi-net with system. Just doesnt sound right to me. I welcome anyone
sending me a copy of the article in question.

Jimmie

1027. Re: Short antennas - info

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 11:52:14 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465d6566$0$4843$4c368faf@roadrunner.com>
Source record: 40827

"Virgil Smith" <vsmith26@comcast.net> wrote in message
news:UoGdnUOiSeFvU8TbnZ2dnUVZ_gGdnZ2d@comcast.com...
> Does anybody have a recommendation for a good book or journal article on
> very short antennas? I'm trying to design the front end for a LF/VLF
> receiver and would really like to know the equivalent circuit for
> antennas (both E-probe and loop) a tenth of a wavelength or less.
>
> I've Googled around and looked at a couple of lowfer web sites. Lots of
> cookbook stuff and some approximate formulas for radiation resistance,
> etc. but I haven't seen a real definitive treatment of this subject.
>
> What about the oldie-but-goodie book by Kraus? Is that worth investing
> in, or is there anything newer or better?
>
> Thanks for any info.
>
> -vs-
>
>

It seems to me the parameters you consider important would be very site specific and a rx front-end optimised for a particular antenna may have to be designed after taking empirical measurements for a specific antenna. Otherwise IMO the cookbook information would probably be sufficent.

I am curious as to what you would consider a definitive treatment of the subject as it pertains to rx front-end design.

Jimmie

1028. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 14:42:13 UTC
From: Ken C <cprstn54@nospam.att.net>
Message-ID: <n33r53p5vd37l4adv90mcal4k3mpu10gdv@4ax.com>
Source record: 40828

On Tue, 29 May 2007 20:37:59 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:
> Maybe you could try a product called "Gorilla Glue."

The RF current flows into the base and from there into the tube. I
don't think putting an insulator between them is a viable solution.

I have thought about some conducting epoxy, thinned a bit so it seeps
in, but I am not even confident about that.

Ken KC2JDY

1029. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 14:47:12 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180536432.412548.79220@h2g2000hsg.googlegroups.com>
Source record: 40829

On 29 May, 19:47, richardharri...@webtv.net (Richard Harrison) wrote:
> Matt Brenenman wrote:
>
> "When I think of how a field induces a voltage, I think of voltage as
> being proportional to norm of the field."
>
> OK. Terman wrote on page 2 of his 1955 opus:
> "The strength of the wave measures in terms of microvolts per meter of
> stress in space is also exactly the same voltage that the magnetic flux
> of the wave induces in a conductor 1 m long when sweeping across this
> conductor with the velocity of light."
>
> Since Matt mentions circular polarization, one of the problems on page
> 50 in Kraus` 3rd edition of "Antennas" is notable. It states:
> "1-16-2 More power in C.P. Show that the average Poynting vector of a
> circularly polarized wave is twice that of a linearly polarized wave if
> the maximum electric field E is the same for both waves. This means that
> the medium can handle twice as much power before breakdown with circular
> polarization (CP) than with linear polarization (LP)."
>
> Best regards, Richard Harrison, KB5WZI
Richard,
I am trying to decipher the above so my comments may well not be
relavent to what you are actually saying.
It is a given that far field circular polarisation
results in a 3 db loss with respect to radiation compared to other
polarisations. But one cannot from this assume that radiation
from a radiator changes with respect to the designed polarization.
When current is applied to a radiator in a time varient condition
the vectors involved cannot change.
The three phases of radiation are current application and electron
emmission,formation of the near field and finally formation of the
far field.
I fail to see how vectors formed in the initial stage which can
be seen as a Poyntings explanation changes or depends upon
future formations of the ensueing radiation waves.
Since the poster is interested in mathematicalanalysis of radiation
he must obviously realise that the Laws of Conservation must be held
and it woulkd appear that some confusion has been injected into his
problem.
Art

1030. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 16:27:35 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465da5ef$0$3261$4c368faf@roadrunner.com>
Source record: 40830

"art" <aunwin@insightbb.com> wrote in message
news:1180540970.999378.279390@p47g2000hsd.googlegroups.com...
>I read a comment attributed to Cebik where he stated that any
> antenna that is not 1/4, 5/8, 1/2 or 1 wave length is not much of an
> antenna !
> This is a false statement especially when one considers an antenna

Art, why is it that you make statement like this and never give a reference
to where you got it?

1031. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 16:36:40 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465da821$0$8928$4c368faf@roadrunner.com>
Source record: 40831

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:135ifk3p5800qf9@corp.supernews.com...
> I'd use a splitter designed for television use. You can find one at almost
> any store selling TV accessories including discount stores like K-Mart or
> Wal-Mart. They're very inexpensive. However, they will have type F
> connectors which you'll have to adapt to BNC or whatever your scanner and
> antenna use. The adapters will probably cost more than the splitter. If
> you can't find the adapters where you get the splitter, you can find them
> at stores like Radio Shack or Fry's.
>
> The loss is around 3 dB. This is unavoidable. It won't make a noticeable
> difference except for weak signals.
>
> One of the properties of the splitter, as opposed to just a tee connector,
> is that the two receivers are isolated from each other. So turning one on
> or off or disconnecting it should have no effect on the other.
>
> Roy Lewallen, W7EL
>
> Robert11 wrote:
>> Hi,
>>
>> I have two scanners, which I would like them to share a single
>> (Scantenna) antenna in my attic.
>>
>> Only one scanner will ever be on at any time.
>> But, I would like to "permanently" have both scanners attached to the
>> single antenna.
>>
>> What would you recommend as a reasonably low cost splitter for this ?
>> (is Splitter the right term ?)
>>
>> What type of losses would I expect ?
>>
>> Just out of curiosity, would the losses be the same if I was actually to
>> use both scanners at the same time compared to just one of them ?
>>
>> Thanks,
>> Bob

I was just in BIG LOTS and splitter and adapters could have all been had for
less than $5.

1032. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 17:09:45 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180544985.573298.313050@w5g2000hsg.googlegroups.com>
Source record: 40832

```
On 29 May, 21:52, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1180493824.516536.221420@q66g2000hsg.googlegroups.com...
>
>
>
>
>
> > On 29 May, 19:12, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> >> "art" <aun...@insightbb.com> wrote in message
>
> >>news:1180459238.845395.249920@m36g2000hse.googlegroups.com...
>
> >> > On 29 May, 09:41, "Frank's" <frank...@nojunkmailplease.telus.net>
> >> > wrote:
> >> >> "art" <aun...@insightbb.com> wrote in message
>
> >> >>news:1180455664.838090.161380@q69g2000hsb.googlegroups.com...
>
> >> >> >I was reading up on the above antenna which is a take off
> >> >> > of an antenna I patented ,( Constant Impedance
> >> >> > Matching System) and written up in QST March, 1998
> >> >> > I also described this system in earlier postings on this
> >> >> > newsgroup.-------------
> >> >> > --------- antenna)
> >> >> > ART
>
> >> >> What page? Can't seem to find the reference in March '98 QST.
> >> >> --
> >> >> Frank
> >> > Thought about past times so I looked up
> >> > comments on the OWA antenna on the net
> >> > and got the reference to QST from there.
> >> > By the way this newsgroup laughed at this
> >> > and ridiculed me when I explained it a
> >> > few years before the article was written,
> >> > the same way they ridiculed with the
> >> > Gaussian antenna. A lot of people were
> >> > pointed to this patent by the patent
> >> > office with respect to their claims.
> >> > Note Cebik did some follow up writing
> >> > on that antenna.I applied for another
> >> > patent along the same lines at the same
```

> >> > time but let it go when my health went
> >> > down hill!
> >> > Art
>
> >> Googled OWA and checked out he design of the antenna, Isnt this is pretty
> >> much what you get when you let a program likeYagi Optimiser tweak the
> >> antenna for max bandwidth vs SWR? Seems like back in the 70s I remember
> >> some
> >> truck stop special CB antennas built like this that made great claims for
> >> their SWR. No doubt the claim is correct but what is the tradeoff in
> >> gain,
> >> cost, ruggedness.....
>
> >> Jimmie
>
> >> Jimmie- Hide quoted text -
>
> >> - Show quoted text -
>
> > Jimmie, If the cb antenna is the same as what I disclosed in my patent
> > I should not have obtained the patent! I do know that a few patent
> > requests
> > were referred to my patent after I disclosed it on this newsgroup so
> > it seems odd that I and others were not referred to the CB antenna as
> > being the prior art. As far as gain trade off there is none. The
> > constant impedance allows for continuation of gain at band edges when
> > the gain striven for is to high for the bandwidth in question. But
> > then this is just a patent, and I have always found that people would
> > always say I already knew that or it has already been invented. Odd
> > how some people react to the new or change. It will be the same for
> > the Gaussian antenna
> > as already one has stated it has already been invented but does not
> > give particulars. On the impedance antenna I had numourous requests to
> > go to San Francisco with all expences paid just to discus the basics
> > and future
> > but health problems of the heart told me to forget about the whole
> > thing as well as the sarcastic comments from the resident experts of
> > this group
> > which continues to this day. I don't need money so I am glad the idea
> > is still alive ala Cebik who has written extensively about it. Really
> > you should refer your questions to him rather than entrap me into
> > another augument.
> > Art
>
> Wasnt talking about your patent, I found about OWA has no similarity to your
> patented design, They were just normal run of the mill yagis optimized to
> have a realtively flat SWR over there design range. Nothing new.
>
> Jimmie- Hide quoted text -
>

> - Show quoted text -

Pound to a penny that you never read the patent or comments given on
this newsgroup
in the mid 90s or even OWA descriptions You can always give me a
pointer as to why
it was "run of the mill" matching system or where the OWA was
different, or all
the same. Like all things new comments abound that "I already knew
that" or
"it is nothing special".
What is it that you have against progress with respect to antennas?
Seems like any opposition to " all is known about antennas" is a
signal for attack
Art
in ham radio these days to keep the status quo!
Art

1033. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 17:21:39 UTC
From: richardharrison@webtv.net
Message-ID: <2597-465DB2A3-954@storefull-3257.bay.webtv.net>
Source record: 40833

Art wrote:
"The three phases of radiation are the current application and the electron emission, formation of the near field and finally formation of the far field."

The questioner asked: "If I want to compute the voltage induced on the antenna by the field, do I add the two E field components or do I compute the norm of the vector on the RHS of eqn (II) ?"

Art replied:
"Gain can mean many things."

Terman defines on page 870 of his 1955 opus:
"The extent of such concentration relative to that of some standard antenna, termed the directive gain, is defined quantitatively as the ratio of power that must be radiated by the comparison antenna to develop a particular field strength in the direction of maximum radiation to the power that must be radiated by the directional antenna system to obtain the same field strength in the same direction."

Kraus shows how to handle arrays of point sources. All the math is included.

Kraus wrote on page 12 of the 3rd edition of "Antennas":
"Antennas convert electrons to photons or vice versa."

If the questioner draws his information from Terman and Kraus, he won`t err.

Best regards, Richard Harrison, KB5WZI

1034. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 18:15:30 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6bj7i.6049$y_7.3653@newssvr27.news.prodigy.net>
Source record: 40834

Richard Harrison wrote:
> If the questioner draws his information from Terman and Kraus, he won`t
> err.

Don't forget Balanis who said: "Standing wave antennas,
such as the dipole, can be analyzed as traveling wave
antennas with waves propagating in opposite directions
(forward and backward) ..."

To answer the original questioner: Consider the forward
and backward traveling waves separately and phasor add
the two voltages or two currents to obtain the net
voltage or net current. For an ordinary dipole, the
forward voltage and forward current amplitudes decline
by ~5% during the forward trip from the feedpoint to the
tip of the antenna. There they are reflected and suffer
another ~5% decline on their way back to the feedpoint.
The feedpoint impedance is a result of the superposition
of the forward and reflected waves on the standing-wave
antenna.
--
73, Cecil http://www.w5dxp.com

1035. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 18:17:22 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <Scj7i.238768$6m4.170034@pd7urf1no>
Source record: 40835

art wrote:
> On 30 May, 09:27, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>
>>"art" <aun...@insightbb.com> wrote in message
>>
>>news:1180540970.999378.279390@p47g2000hsd.googlegroups.com...
>>
>>
>>>I read a comment attributed to Cebik where he stated that any
>>>antenna that is not 1/4, 5/8, 1/2 or 1 wave length is not much of an
>>>antenna !
>>>This is a false statement especially when one considers an antenna
>>
>>Art, why is it that you make statement like this and never give a reference
>>to where you got it?
>
>
> Why is it that you also continually do what you do?
> I read it on E ham which is why why I used the word "atributed"
> You can always read up on Cebik's pages but what is important to you,
> the relevant antenna facts or who to point your finger at?
> Art
>
E-ham is a pretty big site. Can you direct us to where you read it please?

Irv VE6BP

1036. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 19:20:52 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465dce9d$0$9000$4c368faf@roadrunner.com>
Source record: 40836

"art" <aunwin@insightbb.com> wrote in message
news:1180544985.573298.313050@w5g2000hsg.googlegroups.com...
> On 29 May, 21:52, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
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>> > On 29 May, 19:12, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
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>>
>> >> >> >I was reading up on the above antenna which is a take off
>> >> >> > of an antenna I patented ,(Constant Impedance
>> >> >> > Matching System) and written up in QST March, 1998
>> >> >> > I also described this system in earlier postings on this
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>> >> >> > --------- antenna)
>> >> >> > ART
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>> >> >> What page? Can't seem to find the reference in March '98 QST.
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>> >> >> Frank
>> >> > Thought about past times so I looked up
>> >> > comments on the OWA antenna on the net
>> >> > and got the reference to QST from there.
>> >> > By the way this newsgroup laughed at this
>> >> > and ridiculed me when I explained it a
>> >> > few years before the article was written,
>> >> > the same way they ridiculed with the
>> >> > Gaussian antenna. A lot of people were
>> >> > pointed to this patent by the patent
>> >> > office with respect to their claims.
>> >> > Note Cebik did some follow up writing

>> >> > on that antenna.I applied for another
>> >> > patent along the same lines at the same
>> >> > time but let it go when my health went
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>> >> > Art
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>> >> Googled OWA and checked out he design of the antenna, Isnt this is
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>> >> much what you get when you let a program likeYagi Optimiser tweak the
>> >> antenna for max bandwidth vs SWR? Seems like back in the 70s I
>> >> remember
>> >> some
>> >> truck stop special CB antennas built like this that made great claims
>> >> for
>> >> their SWR. No doubt the claim is correct but what is the tradeoff in
>> >> gain,
>> >> cost, ruggedness.....
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>> >> Jimmie
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>> > Jimmie, If the cb antenna is the same as what I disclosed in my patent
>> > I should not have obtained the patent! I do know that a few patent
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>> > were referred to my patent after I disclosed it on this newsgroup so
>> > it seems odd that I and others were not referred to the CB antenna as
>> > being the prior art. As far as gain trade off there is none. The
>> > constant impedance allows for continuation of gain at band edges when
>> > the gain striven for is to high for the bandwidth in question. But
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>> > thing as well as the sarcastic comments from the resident experts of
>> > this group
>> > which continues to this day. I don't need money so I am glad the idea
>> > is still alive ala Cebik who has written extensively about it. Really
>> > you should refer your questions to him rather than entrap me into
>> > another augument.
>> > Art
>>
>> Wasnt talking about your patent, I found about OWA has no similarity to

>> your
>> patented design, They were just normal run of the mill yagis optimized
>> to
>> have a realtively flat SWR over there design range. Nothing new.
>>
>> Jimmie- Hide quoted text -
>>
>> - Show quoted text -
>
> Pound to a penny that you never read the patent or comments given on
> this newsgroup
> in the mid 90s or even OWA descriptions You can always give me a
> pointer as to why
> it was "run of the mill" matching system or where the OWA was
> different, or all
> the same. Like all things new comments abound that "I already knew
> that" or
> "it is nothing special".
> What is it that you have against progress with respect to antennas?
> Seems like any opposition to " all is known about antennas" is a
> signal for attack
> Art
> in ham radio these days to keep the status quo!
> Art
>

You lose, give me the pound..

1037. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 19:42:51 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180554171.447560.131130@q69g2000hsb.googlegroups.com>
Source record: 40837

On 30 May, 10:21, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "The three phases of radiation are the current application and the
> electron emission, formation of the near field and finally formation of
> the far field."
>
> The questioner asked: "If I want to compute the voltage induced on the
> antenna by the field, do I add the two E field components or do I
> compute the norm of the vector on the RHS of eqn (II) ?"
>
> Art replied:
> "Gain can mean many things."
>
> Terman defines on page 870 of his 1955 opus:
> "The extent of such concentration relative to that of some standard
> antenna, termed the directive gain, is defined quantitatively as the
> ratio of power that must be radiated by the comparison antenna to
> develop a particular field strength in the direction of maximum
> radiation to the power that must be radiated by the directional antenna
> system to obtain the same field strength in the same direction."
>
> Kraus shows how to handle arrays of point sources. All the math is
> included.
>
> Kraus wrote on page 12 of the 3rd edition of "Antennas":
> "Antennas convert electrons to photons or vice versa."
>
> If the questioner draws his information from Terman and Kraus, he won`t
> err.
>
> Best regards, Richard Harrison, KB5WZI

Richard, you evoked the phrase Poyntings vector which is an excellent
point to start
with respect to the formation of radiation especially with respect to
mathematical analysis
I iknow that you mentioned a couple of books to add weight to your
response
but a circular polarised wave has no place what so ever in a
mathematical analysis
of Poyntings vector. Yes we all know that there is a 3db difference
when looking
at the gain of a circular polarised antenna as well as many other

facts with
respect to antennas but you invoked "poyntings vector" where flux
movement
is used as a mathematical beginning. I am not disputing anything that
is
in the books that you often refer to but only how you interprete the
written word
to add authority to your analysis where it has no place.
I say again, since you evoked the term Poyntings vector in response to
mathematical
question that is no place to insert polarisation differences that may
take place
not in the Poynting areana but at a much later stage in radiation.
However, since you muddled things up by introducing Pointings vector
and coupled it
to circular polarisation maybe you can enlarge how this vector changes
with respect
to the choice of polarisation. Don't waffle by reciting books and
facts written
in books that don't relate to the subject at hand but give an
explanation to
the poster who acknoweledges that he is new to antennas but not to the
mathematical
aspects of same.
He is asking for assistance and not a measure of your personal
knoweledge or the books that you have or what you believe the
intent of the author is in what he states.
Regards
Art

1038. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 20:22:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f3kmhpqvo1@news.service.uci.edu>
Source record: 40838

art wrote:

> Cecil,
> I am questioning the bundling of radiation with respect to
> Poyntings vector and the polarization of the far fields.
> Ofcourse any mathematical analysis must start with the
> application of current and resulting movement of flux ala
> Pointings vector. However I have yet to see an explanation
> how this mathematical function is impacted upon by the
> polarisation desired. Even if this is a misinterpretation
> of what is in the books the poster is at least entitled
> to a explanation of the effect of circular polarization
> and how this impinges on Poyntings vector in a mathematical
> sense. How else can we attract newbies to the hobby?

I wouldn't worry about it, Art. The poster wanted to know how to properly combine e-fields in order to calculate the induced voltage on an antenna. I'm sure by now he's figured out that asking a mathematics question on a ham radio newsgroup is a waste of time. I expect the answer would be found in Jackson.

73, ac6xg

1039. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 20:46:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3knqgatn1@nnrp.linuxfan.it>
Source record: 40839

art wrote:
> > ...
> Cecil,
> I am questioning the bundling of radiation with respect to
> Poyntings vector and the polarization of the far fields.
> Ofcourse any mathematical analysis must start with the
> application of current and resulting movement of flux ala
> Pointings vector. However I have yet to see an explanation
> how this mathematical function is impacted upon by the
> polarisation desired. Even if this is a misinterpretation
> of what is in the books the poster is at least entitled
> to a explanation of the effect of circular polarization
> and how this impinges on Poyntings vector in a mathematical
> sense. How else can we attract newbies to the hobby?
> Ofcourse Cecil you also have muddled up things by introducing
> your favorite subject but I suspect you did that because of
> that rebel approach as opposed to confusing the poster(grin)
> Regards
> Art
Translation: "Holy Polarized Photons!" <grin>

Regards,
JS

1040. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 21:26:59 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465dec1b$0$9964$4c368faf@roadrunner.com>
Source record: 40840

"art" <aunwin@insightbb.com> wrote in message
news:1180558441.375240.152700@g4g2000hsf.googlegroups.com...
> On 30 May, 12:20, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
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>> news:1180544985.573298.313050@w5g2000hsg.googlegroups.com...
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>> >> >> >> >> >> Frank
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>> >> >> >> >> > By the way this newsgroup laughed at this
>> >> >> >> >> > and ridiculed me when I explained it a
>> >> >> >> >> > few years before the article was written,

>> >> >> > the same way they ridiculed with the
>> >> >> > Gaussian antenna. A lot of people were
>> >> >> > pointed to this patent by the patent
>> >> >> > office with respect to their claims.
>> >> >> > Note Cebik did some follow up writing
>> >> >> > on that antenna.I applied for another
>> >> >> > patent along the same lines at the same
>> >> >> > time but let it go when my health went
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>> >> >> Googled OWA and checked out he design of the antenna, Isnt this is
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>> >> >> much what you get when you let a program likeYagi Optimiser tweak
>> >> >> the
>> >> >> antenna for max bandwidth vs SWR? Seems like back in the 70s I
>> >> >> remember
>> >> >> some
>> >> >> truck stop special CB antennas built like this that made great
>> >> >> claims
>> >> >> for
>> >> >> their SWR. No doubt the claim is correct but what is the tradeoff
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>> >> >> gain,
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>> >> >> Jimmie
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>> >> > constant impedance allows for continuation of gain at band edges
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>> >> > then this is just a patent, and I have always found that people
>> >> > would
>> >> > always say I already knew that or it has already been invented. Odd
>> >> > how some people react to the new or change. It will be the same for
>> >> > the Gaussian antenna
>> >> > as already one has stated it has already been invented but does not
>> >> > give particulars. On the impedance antenna I had numourous requests

>> >> > to
>> >> > go to San Francisco with all expences paid just to discus the basics
>> >> > and future
>> >> > but health problems of the heart told me to forget about the whole
>> >> > thing as well as the sarcastic comments from the resident experts of
>> >> > this group
>> >> > which continues to this day. I don't need money so I am glad the
>> >> > idea
>> >> > is still alive ala Cebik who has written extensively about it.
>> >> > Really
>> >> > you should refer your questions to him rather than entrap me into
>> >> > another augument.
>> >> > Art
>>
>> >> Wasnt talking about your patent, I found about OWA has no similarity
>> >> to
>> >> your
>> >> patented design, They were just normal run of the mill yagis optimized
>> >> to
>> >> have a realtively flat SWR over there design range. Nothing new.
>>
>> >> Jimmie- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > Pound to a penny that you never read the patent or comments given on
>> > this newsgroup
>> > in the mid 90s or even OWA descriptions You can always give me a
>> > pointer as to why
>> > it was "run of the mill" matching system or where the OWA was
>> > different, or all
>> > the same. Like all things new comments abound that "I already knew
>> > that" or
>> > "it is nothing special".
>> > What is it that you have against progress with respect to antennas?
>> > Seems like any opposition to " all is known about antennas" is a
>> > signal for attack
>> > Art
>> > in ham radio these days to keep the status quo!
>> > Art
>>
>> You lose, give me the pound..- Hide quoted text -
>>
>> - Show quoted text -
>
> Your past shows that you are not the type to
> look up archives but demand it of others to
> do it for you. bSorry but your answer has no
> credability. Run of the mill indeed
>

Whenever I reference an archive I always leave a path to it. Can you say the same.

1041. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 21:38:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3kqssiff1@nnrp.linuxfan.it>
Source record: 40841

Jimmie D wrote:
> ...
> Whenever I reference an archive I always leave a path to it. Can you say the
> same.
>
>
Translation: "HOLY BREADCRUMBS, BATMAN!"

JS

1042. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-30 21:52:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <emm7i.23556$YL5.10337@newssvr29.news.prodigy.net>
Source record: 40842

art wrote:
> Ofcourse Cecil you also have muddled up things by introducing
> your favorite subject but I suspect you did that because of
> that rebel approach as opposed to confusing the poster(grin)

Actually I have been moving and haven't been keeping
up with a lot of threads. I was responding only to
the content of Richard H.'s posting. But it seems
obvious to me that the way to add voltage vectors
is to use vector addition. The way to add voltage
phasors is to use phasor addition.
--
73, Cecil http://www.w5dxp.com

1043. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 01:20:07 UTC
From: richardharrison@webtv.net
Message-ID: <2597-465E22C7-1005@storefull-3257.bay.webtv.net>
Source record: 40844

Art wrote:
"Richard you evoked the phrase Poynting`s vector which is an excellent place to start---etc,"

I appreciate being credited by Art with evoking the Poynting vector, but I wasn`t first.

The priginal poster wrote:
"Now I have an incident E field(which happens to be a RHCP, that I can write as a plane wave: etc."

Art then responded:
"Matt, Gain can mean many things. If you can back up on your vector approach, a look at Poynting`s theorem would be a good start."

I posted next, recommending Terman and Kraus to the self-proclaimed "Newbie" I suggested he look at one of Kraus` assigned problems, no. 1-16-2 which asks the student to:
"Show that the average Poynting vector of a circularly polarized wave is twice that of a linearly polarized wave if the maximum electric field E is the same in both waves."

Everyone will say that`s obvious as the polarized constituent waves in CP are at right angles and thus are independent. But, Kraus goes through all the steps and supplies all the math to enable the student to make the proof. It`s like a geometry proof of the obvious but it is still informative to work the problens.

I am lazy and rhought that these great professors do a great job of explaining everything accurately and succinctly. I could never hope to do it so well. It is a job for the student himself to follow the explanation and I merely pointed to those I think are the best.

Best regards, Richard Harrison, KB5WZI

1044. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 01:30:26 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <Syp7i.66182$g63.39019@edtnps82>
Source record: 40843

```
>>> You lose, give me the pound..- Hide quoted text -
>>>
>>> - Show quoted text -
>>
>> Your past shows that you are not the type to
>> look up archives but demand it of others to
>> do it for you. bSorry but your answer has no
>> credability. Run of the mill indeed
>>
> Whenever I reference an archive I always leave a path to it. Can you say
> the same.

5,790,081
5,625,367
?
--
Frank
```

1045. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 02:00:34 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465e2c4b$0$8974$4c368faf@roadrunner.com>
Source record: 40845

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2597-465E22C7-1005@storefull-3257.bay.webtv.net...
> Art wrote:
> "Richard you evoked the phrase Poynting`s vector which is an excellent
> place to start---etc,"
>
> I appreciate being credited by Art with evoking the Poynting vector, but
> I wasn`t first.
>
> The priginal poster wrote:
> "Now I have an incident E field(which happens to be a RHCP, that I can
> write as a plane wave: etc."
>
> Art then responded:
> "Matt, Gain can mean many things. If you can back up on your vector
> approach, a look at Poynting`s theorem would be a good start."
>
> I posted next, recommending Terman and Kraus to the self-proclaimed
> "Newbie" I suggested he look at one of Kraus` assigned problems, no.
> 1-16-2 which asks the student to:
> "Show that the average Poynting vector of a circularly polarized wave is
> twice that of a linearly polarized wave if the maximum electric field E
> is the same in both waves."
>
> Everyone will say that`s obvious as the polarized constituent waves in
> CP are at right angles and thus are independent. But, Kraus goes through
> all the steps and supplies all the math to enable the student to make
> the proof. It`s like a geometry proof of the obvious but it is still
> informative to work the problens.
>
> I am lazy and rhought that these great professors do a great job of
> explaining everything accurately and succinctly. I could never hope to
> do it so well. It is a job for the student himself to follow the
> explanation and I merely pointed to those I think are the best.
>
> Best regards, Richard Harrison, KB5WZI
>

Great idea Richard, I never understood AM until I had to go through the
math. I probably still couldnt explain it to someone but I can dig out my
old notebook and take them through the math. That is if I can still find it.
They say 3 moves is the same as a fireand Ive been through 5.

Jimmie

1046. Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 02:13:34 UTC
From: Tony Jaa <tonyjaa@muay_thai_boxing.org>
Message-ID: <vaWdnTbrqvIAs8PbnZ2dnUVZ_j-dnZ2d@hawaiiantel.net>
Source record: 40846

Water burns!
Man looking for cancer cure hopes to solve energy crisis
Posted: May 30, 2007
5:00 p.m. Eastern

http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934

By Joe Kovacs
© 2007 WorldNetDaily.com

Is the solution to America's energy needs as simple as a trip to the beach?

The idea is a fascinating one as a Florida man searching for a cancer cure may have stumbled onto a virtually limitless source of energy: salt water.

John Kanzius of Sanibel Island, Fla., demonstrates how salt water burns after bombarded with radio waves from a machine he invented. (courtesy WPBF-TV)

John Kanzius, 63, is a broadcast engineer who formerly owned several TV and radio stations, before retiring in Sanibel Island, Fla.

Five years ago, he was diagnosed with a severe form of leukemia, and began a quest to find a kinder, gentler way to treat the disease compared to harsh chemotherapy.

In October 2003, he had an epiphany: kill cancer with radio waves. He then devised a machine that emits radio waves in an attempt to slay cancerous cells, while leaving healthy cells unharmed.

His experiments in fighting cancer have become so successful, one physician was quoted as saying, "We could be getting close to grabbing the Holy Grail."

But in the midst of his experiments as he was trying to take salt out of water, Kanzius discovered his machine could do what some may have thought was impossible: making water burn.

"On our way to try to do desalinization, we came up with something that burns, and it looks in this case that salt water perhaps could be used as a fuel to replace the carbon footsteps that we've been using all these years, i.e., fossil fuels," Kanzius said.

The possible ramifications of the discovery are almost mind-boggling, as cars could be fueled by salt water instead of gasoline, hydroelectric plants could be built along the shore, and homes could be heated without worrying about supplies of oil.

"It doesn't have to be ocean salt water," Kanzius said. "It burns just as well when we add salt to tap water."

Kanzius has partnered with Charles Rutkowski, general manager of Industrial Sales and Manufacturing, a Millcreek, Pa., company that builds the radio-wave generators.

"I've done this [burning experiment] countless times and it still amazes me," Rutkowski told the Erie Times-News. "Here we are paying $3 a gallon for gas, and this is a device that seems to turn salt water into an alternative fuel."

Kanzius has been told it's actually hydrogen that's burning, as his machine generates enough heat to break down the chemical bond between hydrogen and oxygen that makes up water.

"I have never heard of such a thing," Alice Deckert, Ph.D., chairwoman of Allegheny College's chemistry department, told the Times-News. "There doesn't seem to be enough energy in radio waves to break the chemical bonds and cause that kind of reaction."

Thus far, Kanzius' discovery has not received extensive national publicity, but has been featured on several local television news programs, including WPBF-TV in West Palm Beach, Fla., WSEE-TV in Erie, Pa., and WKYC-TV in Cleveland.

"We discovered that if you use a piece of paper towel as a wick, it lights every single time and you can start it and stop it at will by turning the radio waves on and off," Kanzius told the Times-News as he watched a test tube of salt water burn.

"And look, the paper itself doesn't burn," he added. "Well, it burns but the paper is not consumed."

Kanzius said he hasn't decided whether to share his fuel discovery with government or private business, though he'd prefer a federal grant to develop it.

"I'm afraid that if I join up with some big energy company, they will say it doesn't work and shelve it, even if it does work," Kanzius told the paper.

Video of TV news reports of water burning can be seen from these affiliates:

WPBF-TV in West Palm Beach, Fla.

WSEE-TV in Erie, Pa.

WKYC-TV in Cleveland

1047. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 02:41:03 UTC
From: richardharrison@webtv.net
Message-ID: <20509-465E35BF-1364@storefull-3255.bay.webtv.net>
Source record: 40847

Art wrote:
"I have modelled a similar arrangement in Gaussian form where the elements are bent into a Vee shaped like Yagi with elements extremely close together where it provides exceptional gain and pattern and can be related visually to a bent long boom but without elements."

There is a TV antenna something like that on a rooftop within 2 blocks from here. IIt must have some exceptional characteristic. Someone built it. The elements are short compared to several wavelengths at 200 MHz.

Does the model result in a low deivepoint impedance?

Does the Vee result in high response off the tips of the elements?

Does close coupling between elements result in great bandwidrh for the antenna?

Best regards, Richard Harrison, KB5WZI

1048. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 03:48:47 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <zAr7i.241177$DE1.145963@pd7urf2no>
Source record: 40848

art wrote:
> On 30 May, 11:17, Irv Finkleman <fink...@shaw.ca> wrote:
>
>>art wrote:
>>
>>>On 30 May, 09:27, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>>
>>>>"art" <aun...@insightbb.com> wrote in message
>>
>>>>news:1180540970.999378.279390@p47g2000hsd.googlegroups.com...
>>
>>>>>I read a comment attributed to Cebik where he stated that any
>>>>>antenna that is not 1/4, 5/8, 1/2 or 1 wave length is not much of an
>>>>>antenna !
>>>>>This is a false statement especially when one considers an antenna
>>
>>>>Art, why is it that you make statement like this and never give a reference
>>>>to where you got it?
>>
>>>Why is it that you also continually do what you do?
>>>I read it on E ham which is why why I used the word "atributed"
>>>You can always read up on Cebik's pages but what is important to you,
>>>the relevant antenna facts or who to point your finger at?
>>>Art
>>
>>E-ham is a pretty big site. Can you direct us to where you read it please?
>>
>>Irv VE6BP- Hide quoted text -
>>
>>- Show quoted text -
>
>
> Irv, you are correct when you stated it was a big site!
> I spent a lot of time reading readers comments until my eyes glazed
> over.
> It was like reading every quabble from our own archives for the last
> twenty years.
> I think I will have to read the Cebik articles for myself and trace it
> down that way
> which will be much more educating. I am glad however that I used the
> word "atributed"
> rather than stating it as a fact. I will continue with this progect
> Regards
> Art

>
OK Art - Thanks for taking the trouble. Hopefully you'll find it, and next time rememer to note the source -- even if you are just attributing a statement. To those reading it, or at least myself, an attribution is as good as a fact when you are trying to learn. When we find out who attributed that statement to Cebik (who I hold in high regard), we can perhaps learn where he got the information, or how he got misinformed if such is the case.

Irv VE6BP

1049. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 05:41:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135snvphfa9rb90@corp.supernews.com>
Source record: 40849

Yet another sad commentary on the sorry state of science education in this country. Not so much the "inventor" as the dupes who have such a poor understanding of basic fundamental principles that they believe it and report it as news.

Roy Lewallen, W7EL

Tony Jaa wrote:
> Water burns!
> Man looking for cancer cure hopes to solve energy crisis
> Posted: May 30, 2007
> 5:00 p.m. Eastern
>
> http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934
>
> By Joe Kovacs
> ï¿½ 2007 WorldNetDaily.com
>
> Is the solution to America's energy needs as simple as a trip to the beach?
>
> The idea is a fascinating one as a Florida man searching for a cancer cure
> may have stumbled onto a virtually limitless source of energy: salt water.
>
>
> John Kanzius of Sanibel Island, Fla., demonstrates how salt water burns
> after bombarded with radio waves from a machine he invented. (courtesy
> WPBF-TV)
>
> John Kanzius, 63, is a broadcast engineer who formerly owned several TV and
> radio stations, before retiring in Sanibel Island, Fla.
>
> Five years ago, he was diagnosed with a severe form of leukemia, and began a
> quest to find a kinder, gentler way to treat the disease compared to harsh
> chemotherapy.
>
> In October 2003, he had an epiphany: kill cancer with radio waves. He then
> devised a machine that emits radio waves in an attempt to slay cancerous
> cells, while leaving healthy cells unharmed.
>
> His experiments in fighting cancer have become so successful, one physician
> was quoted as saying, "We could be getting close to grabbing the Holy
> Grail."
>
> But in the midst of his experiments as he was trying to take salt out of
> water, Kanzius discovered his machine could do what some may have thought

> was impossible: making water burn.
>
> "On our way to try to do desalinization, we came up with something that
> burns, and it looks in this case that salt water perhaps could be used as a
> fuel to replace the carbon footsteps that we've been using all these years,
> i.e., fossil fuels," Kanzius said.
>
> The possible ramifications of the discovery are almost mind-boggling, as
> cars could be fueled by salt water instead of gasoline, hydroelectric
> plants could be built along the shore, and homes could be heated without
> worrying about supplies of oil.
>
> "It doesn't have to be ocean salt water," Kanzius said. "It burns just as
> well when we add salt to tap water."
>
> Kanzius has partnered with Charles Rutkowski, general manager of Industrial
> Sales and Manufacturing, a Millcreek, Pa., company that builds the
> radio-wave generators.
>
> "I've done this [burning experiment] countless times and it still amazes
> me," Rutkowski told the Erie Times-News. "Here we are paying $3 a gallon
> for gas, and this is a device that seems to turn salt water into an
> alternative fuel."
>
> Kanzius has been told it's actually hydrogen that's burning, as his machine
> generates enough heat to break down the chemical bond between hydrogen and
> oxygen that makes up water.
>
> "I have never heard of such a thing," Alice Deckert, Ph.D., chairwoman of
> Allegheny College's chemistry department, told the Times-News. "There
> doesn't seem to be enough energy in radio waves to break the chemical bonds
> and cause that kind of reaction."
>
> Thus far, Kanzius' discovery has not received extensive national publicity,
> but has been featured on several local television news programs, including
> WPBF-TV in West Palm Beach, Fla., WSEE-TV in Erie, Pa., and WKYC-TV in
> Cleveland.
>
> "We discovered that if you use a piece of paper towel as a wick, it lights
> every single time and you can start it and stop it at will by turning the
> radio waves on and off," Kanzius told the Times-News as he watched a test
> tube of salt water burn.
>
> "And look, the paper itself doesn't burn," he added. "Well, it burns but the
> paper is not consumed."
>
> Kanzius said he hasn't decided whether to share his fuel discovery with
> government or private business, though he'd prefer a federal grant to
> develop it.
>

> "I'm afraid that if I join up with some big energy company, they will say it
> doesn't work and shelve it, even if it does work," Kanzius told the paper.
>
> Video of TV news reports of water burning can be seen from these affiliates:
>
> WPBF-TV in West Palm Beach, Fla.
>
> WSEE-TV in Erie, Pa.
>
> WKYC-TV in Cleveland

1050. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 06:12:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3lp4m$tv1$1@nnrp.linuxfan.it>
Source record: 40850

Roy Lewallen wrote:
> Yet another sad commentary on the sorry state of science education in
> this country. Not so much the "inventor" as the dupes who have such a
> poor understanding of basic fundamental principles that they believe it
> and report it as news.
>
> Roy Lewallen, W7EL

I'd say it is pretty obvious Roy did not view the video!

Yes, hard to believe and I would refrain from final judgment on if it is absolutely real. However, the video certainly makes it worth looking into.

My only real skepticism is if the output in heat from the hydrogen+oxygen burning is more than the input of RF to generate the breakdown of the hydrogen/oxygen bond ... that I GREATLY doubt.

Regards,
JS

1051. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 06:27:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u1qs53hkn9c761m9msokq5h8lq2866f2eo@4ax.com>
Source record: 40851

On Wed, 30 May 2007 21:41:03 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Does the model result in a low deivepoint impedance?

Hi Richard,

No more nor less than by the consideration of classical designs.

>Does the Vee result in high response off the tips of the elements?

This and the next draw the answer together:

>Does close coupling between elements result in great bandwidrh for the
>antenna?

Coupling? No, but the bandwidth is in gain, not match (which can be taken care of by other means). The V shape takes the higher frequency's tendency to become endfire and aligns it with the boom (meaning the forward gain at higher frequency is still towards the front instead of being off the ends of a standard, orthogonal design). Think how the V shape of the Rhombic brings the lobe towards the major axis. At the lower frequency, the V angle doesn't matter much and so the forward gain is still aligned with the boom.

Something of a parasitic half Rhombic (or parasitic V).

73's
Richard Clark, KB7QHC

1052. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 06:40:59 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <135srgf954tpba1@corp.supernews.com>
Source record: 40852

You can't get more energy out of anything than what you put in. You can't create energy. You can only transform it from one form to another.

1053. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 07:00:48 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3lruh$4kn$1@nnrp.linuxfan.it>
Source record: 40853

Alfred Lorona wrote:
> You can't get more energy out of anything than what you put in. You
> can't create energy. You can only transform it from one form to another.

And, just what did you think I said?

You repeat me ...

Regards,
JS

1054. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 10:31:23 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-3105070631230001@jbw-mac.itd.nrl.navy.mil>
Source record: 40854

In article <135ifk3p5800qf9@corp.supernews.com>, Roy Lewallen
<w7el@eznec.com> wrote:

> One of the properties of the splitter, as opposed to just a tee
> connector, is that the two receivers are isolated from each other. So
> turning one on or off or disconnecting it should have no effect on the
> other.
>
> Roy Lewallen, W7EL
>

Hello, Roy, and all. I would also add that the degree of isolation achieved in an n-way splitter is predicated on how well the port being split n-ways is terminated in the splitter's design characteristic impedance (e.g. 50 or 75 ohms). Sincerely,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1055. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 11:55:18 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180612518.400453.198350@k79g2000hse.googlegroups.com>
Source record: 40855

Kanzius said he hasn't decided whether to share his fuel discovery
with
government or private business, though he'd prefer a federal grant to
develop it.

****
In my nearly 7 decades of wandering about the surface of the earth,
statements like this have always been my indicator that the "inventor"
knows he is on shaky ground... And the epiphany that a big energy
company will just 'kill it' puts him firmly in the company of the 100
mpg carburetor inventors, that all those nasty corporations
suppress...
The Moeller Skycar, Ionized Water, Magnetic Fuel Conditioner, and
countless other 'inventions', fall into this catagory of interesting
ideas but not useable in the real world because they are:
Economically a loser
Mechanically unstable
Just plain dangerous
Simply don't work
etc....

In this case he has come up with an interesting way to perform
electrolysis of water - I approve of anyone who likes RF!
The problem will be (as pointed out by others) is that it takes more
energy input than you get back as the hydrogen and oxygen
recombine... Another problem is that the H,O, Na, Cl are co-mingled
gasous products of the reaction which is not desireable when you want
separation for chemical or physical reasons... You can see by the
color of the flame that sodium is being heated..
Perhaps a use for this method of cracking hydrogen loose will be
found, but I have my doubts at the moment...

denny / k8do - cynic, critic, ham, old lab rat

1056. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 12:27:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9bz7i.12004$rO7.6700@newssvr25.news.prodigy.net>
Source record: 40856

Roy Lewallen wrote:
> Yet another sad commentary on the sorry state of science education in
> this country. Not so much the "inventor" as the dupes who have such a
> poor understanding of basic fundamental principles that they believe it
> and report it as news.

Like reporting a 3 nS delay through a ten inch long,
100 turn, two inch diameter, 75m loading coil? :-)
--
73, Cecil http://www.w5dxp.com

1057. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 13:01:11 UTC
From: Alan WA4SCA <APBIDDLE@UNITED.NET>
Message-ID: <1eht535ra2cqnnaaassqhd0e728d1okg35@4ax.com>
Source record: 40857

Sounds like another perpetual motion machine. We have one locally,
purely hydraulic. Of course, it does have a plug to the power grid,
which drives an "inconsequential" circulating pump. No question that
the inventor is firmly convinced it is real, and that it is just a
matter of time before he can get it to power that circulating pump.
His primary endorser is a retired Navy SEAL.

--
Alan
WA4SCA

1058. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 13:02:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135thqcs63sl89f@corp.supernews.com>
Source record: 40859

J. B. Wood wrote:
> In article <135ifk3p5800qf9@corp.supernews.com>, Roy Lewallen
> <w7el@eznec.com> wrote:
>
>> One of the properties of the splitter, as opposed to just a tee
>> connector, is that the two receivers are isolated from each other. So
>> turning one on or off or disconnecting it should have no effect on the
>> other.
>>
>> Roy Lewallen, W7EL
>>
> Hello, Roy, and all. I would also add that the degree of isolation
> achieved in an n-way splitter is predicated on how well the port being
> split n-ways is terminated in the splitter's design characteristic
> impedance (e.g. 50 or 75 ohms). Sincerely,
>
> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

A good point, and one I hadn't considered. The chances of the antenna impedance being 50 ohms over the band of frequencies likely to be used by a scanner is about the same as its being 75 ohms, which is to say about zero. (This is almost certainly true for most TV antennas over the whole TV frequency range also.) Whether the isolation is good enough will have to be determined by experiment. If it isn't, the only solution would be to put a pad at the splitter input to stabilize the impedance. It probably wouldn't take much attenuation to make an appreciable improvement in the isolation. But this application might not require a great deal of isolation anyway.

Roy Lewallen, W7EL

1059. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 13:02:30 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465ec76e$0$8951$4c368faf@roadrunner.com>
Source record: 40858

Roy . its worse than that, the media didnt report on it because they believed there may be some credability to what the guy did. They did because it is news, becuse there are so many thousands of other people out there that dont have a clue about basic scientific fundamentals. They did it because the world is in such a panic about energy reserves that people want to hear this junk. The media takes no responsibility for filtering out the garbage.

Jimmie

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:135snvphfa9rb90@corp.supernews.com...
> Yet another sad commentary on the sorry state of science education in this
> country. Not so much the "inventor" as the dupes who have such a poor
> understanding of basic fundamental principles that they believe it and
> report it as news.
>
> Roy Lewallen, W7EL
>
> Tony Jaa wrote:
>> Water burns!
>> Man looking for cancer cure hopes to solve energy crisis
>> Posted: May 30, 2007
>> 5:00 p.m. Eastern
>>
>> http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934
>>
>> By Joe Kovacs
>> © 2007 WorldNetDaily.com
>>
>> Is the solution to America's energy needs as simple as a trip to the
>> beach?
>>
>> The idea is a fascinating one as a Florida man searching for a cancer
>> cure
>> may have stumbled onto a virtually limitless source of energy: salt
>> water.
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>> John Kanzius of Sanibel Island, Fla., demonstrates how salt water burns
>> after bombarded with radio waves from a machine he invented. (courtesy
>> WPBF-TV)
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>> John Kanzius, 63, is a broadcast engineer who formerly owned several TV

>> and
>> radio stations, before retiring in Sanibel Island, Fla.
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>> Five years ago, he was diagnosed with a severe form of leukemia, and
>> began a
>> quest to find a kinder, gentler way to treat the disease compared to
>> harsh
>> chemotherapy.
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>> In October 2003, he had an epiphany: kill cancer with radio waves. He
>> then
>> devised a machine that emits radio waves in an attempt to slay cancerous
>> cells, while leaving healthy cells unharmed.
>>
>> His experiments in fighting cancer have become so successful, one
>> physician
>> was quoted as saying, "We could be getting close to grabbing the Holy
>> Grail."
>>
>> But in the midst of his experiments as he was trying to take salt out of
>> water, Kanzius discovered his machine could do what some may have thought
>> was impossible: making water burn.
>>
>> "On our way to try to do desalinization, we came up with something that
>> burns, and it looks in this case that salt water perhaps could be used as
>> a
>> fuel to replace the carbon footsteps that we've been using all these
>> years,
>> i.e., fossil fuels," Kanzius said.
>>
>> The possible ramifications of the discovery are almost mind-boggling, as
>> cars could be fueled by salt water instead of gasoline, hydroelectric
>> plants could be built along the shore, and homes could be heated without
>> worrying about supplies of oil.
>>
>> "It doesn't have to be ocean salt water," Kanzius said. "It burns just as
>> well when we add salt to tap water."
>>
>> Kanzius has partnered with Charles Rutkowski, general manager of
>> Industrial
>> Sales and Manufacturing, a Millcreek, Pa., company that builds the
>> radio-wave generators.
>>
>> "I've done this [burning experiment] countless times and it still amazes
>> me," Rutkowski told the Erie Times-News. "Here we are paying $3 a gallon
>> for gas, and this is a device that seems to turn salt water into an
>> alternative fuel."
>>
>> Kanzius has been told it's actually hydrogen that's burning, as his

>> machine
>> generates enough heat to break down the chemical bond between hydrogen
>> and
>> oxygen that makes up water.
>>
>> "I have never heard of such a thing," Alice Deckert, Ph.D., chairwoman of
>> Allegheny College's chemistry department, told the Times-News. "There
>> doesn't seem to be enough energy in radio waves to break the chemical
>> bonds
>> and cause that kind of reaction."
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>> Thus far, Kanzius' discovery has not received extensive national
>> publicity,
>> but has been featured on several local television news programs,
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>> WPBF-TV in West Palm Beach, Fla., WSEE-TV in Erie, Pa., and WKYC-TV in
>> Cleveland.
>>
>> "We discovered that if you use a piece of paper towel as a wick, it
>> lights
>> every single time and you can start it and stop it at will by turning the
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>> tube of salt water burn.
>>
>> "And look, the paper itself doesn't burn," he added. "Well, it burns but
>> the
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>> government or private business, though he'd prefer a federal grant to
>> develop it.
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>> "I'm afraid that if I join up with some big energy company, they will say
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>> doesn't work and shelve it, even if it does work," Kanzius told the
>> paper.
>>
>> Video of TV news reports of water burning can be seen from these
>> affiliates:
>>
>> WPBF-TV in West Palm Beach, Fla.
>>
>> WSEE-TV in Erie, Pa.
>>
>> WKYC-TV in Cleveland

1060. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 13:35:38 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3mj30sue1@nnrp.linuxfan.it>
Source record: 40860

Denny wrote:
> Kanzius said he hasn't decided whether to share his fuel discovery
> with
> government or private business, though he'd prefer a federal grant to
> develop it.
> ...

The problem is a simple one: Create an imbalanced system, such as
where, an uncorrected condition exists where the system is unstable,
leading it on to continuous "oscillations."

This idea is seen experimented with where people are doing research with
"magnetic motors." When the person said, "A picture is worth a thousand
words." This is most likely what he/she had in mind:

http://www.youtube.com/watch?v=PFGiWiXMHn0

Is that video real? Well, I am like you, and my mind says, "Probably NOT!"

Now, as to whether it is possible to set up such an imbalance to the
point where it is possible to extract excess energy from such a machines
operation? I just don't know, but it is something mankind could sure use!

Regards,
JS

1061. Cushcraft R3 matching network part detail

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 14:24:17 UTC
From: N4VBH <qns1@hotmail.com>
Message-ID: <1180621457.682552.325420@m36g2000hse.googlegroups.com>
Source record: 40861

Does anyone know what is exactly in the "matching network assembly"
part for the Cushcraft R3 vertical? I'm sure it's a couple of small
capacitors, but I need the values in order to build a replacement for
my antenna. Everything else on the antenna is operational (the tuning
capacitor, elements, remote control, etc.).

Thanks,
Prentice
N4VBH

1062. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 14:37:21 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <f9nt53d9j4cgr5j7bf2cbkffpbssk6od0o@4ax.com>
Source record: 40862

On Thu, 31 May 2007 06:31:23 -0400, wood@itd.nrl.navy.mil (J. B. Wood)
wrote:

>In article <135ifk3p5800qf9@corp.supernews.com>, Roy Lewallen
><w7el@eznec.com> wrote:
>
>> One of the properties of the splitter, as opposed to just a tee
>> connector, is that the two receivers are isolated from each other. So
>> turning one on or off or disconnecting it should have no effect on the
>> other.
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>> Roy Lewallen, W7EL
>>
>Hello, Roy, and all. I would also add that the degree of isolation
>achieved in an n-way splitter is predicated on how well the port being
>split n-ways is terminated in the splitter's design characteristic
>impedance (e.g. 50 or 75 ohms). Sincerely,

Unless it's a quadrature hybrid.

www.microlab.fxr.com/pdf/divrapps.pdf

1063. Re: Splitter For Two Scanners And One Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 15:54:32 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <veXtjnF4+uXGFw+Q@g3ohx.demon.co.uk>
Source record: 40863

In message <135thqcs63sl89f@corp.supernews.com>, Roy Lewallen
<w7el@eznec.com> writes
>J. B. Wood wrote:
>> In article <135ifk3p5800qf9@corp.supernews.com>, Roy Lewallen
>> <w7el@eznec.com> wrote:
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>> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil Naval
>>Research Laboratory
>> 4555 Overlook Avenue, SW
>> Washington, DC 20375-5337
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>A good point, and one I hadn't considered. The chances of the antenna
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>by a scanner is about the same as its being 75 ohms, which is to say
>about zero. (This is almost certainly true for most TV antennas over
>the whole TV frequency range also.) Whether the isolation is good
>enough will have to be determined by experiment. If it isn't, the only
>solution would be to put a pad at the splitter input to stabilize the
>impedance. It probably wouldn't take much attenuation to make an
>appreciable improvement in the isolation. But this application might
>not require a great deal of isolation anyway.
>
>Roy Lewallen, W7EL

Just buy it and try it (a TV splitter will only cost a couple of
dollars). It will probably work more than well enough, even if the
isolation is well short of the (say) 25 to 30dB you might get under
'ideal' conditions. I wouldn't add any extra attenuation just to ensure
that the input port is matched better. You're already going to lose 3dB
+ just because you are splitting.
Ian.
--

1064. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 15:58:09 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180627089.708214.11980@q75g2000hsh.googlegroups.com>
Source record: 40864

On 31 May, 06:02, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> Roy . its worse than that, the media didnt report on it because they
> believed there may be some credability to what the guy did. They did because
> it is news, becuse there are so many thousands of other people out there
> that dont have a clue about basic scientific fundamentals. They did it
> because the world is in such a panic about energy reserves that people want
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> garbage.
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> "Roy Lewallen" <w...@eznec.com> wrote in message
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> > country. Not so much the "inventor" as the dupes who have such a poor
> > understanding of basic fundamental principles that they believe it and
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> >> Man looking for cancer cure hopes to solve energy crisis
> >> Posted: May 30, 2007
> >> 5:00 p.m. Eastern
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> >>http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934
>
> >> By Joe Kovacs
> >> © 2007 WorldNetDaily.com
>
> >> Is the solution to America's energy needs as simple as a trip to the
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> >> The idea is a fascinating one as a Florida man searching for a cancer
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> >> may have stumbled onto a virtually limitless source of energy: salt
> >> water.
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> >> John Kanzius of Sanibel Island, Fla., demonstrates how salt water burns

> >> after bombarded with radio waves from a machine he invented. (courtesy
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> >> John Kanzius, 63, is a broadcast engineer who formerly owned several TV
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> >> for gas, and this is a device that seems to turn salt water into an

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> >> Video of TV news reports of water burning can be seen from these
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>
> >> WPBF-TV in West Palm Beach, Fla.
>
> >> WSEE-TV in Erie, Pa.
>
> >> WKYC-TV in Cleveland- Hide quoted text -
>
> - Show quoted text -

I cringe at the idea of the news media filtering out the garbage!
It is for the viewer to determine what is garbage and what is not.
Many a multimillionaire owes his fortune to what others have
considered garbage where others have deemed themselves as
educated enough to detrmine what is garbage and what is treasure.
Look at the good side of this picture instead of piling on ridicule.
Here we have is a human being who is fighting for something new
and beneficial to all with all the energy and education that he
has within him so that he can hold on to life. The life he has
is enjoyable because he believes he is on the brink of success,
where his life is still usefull instead of lying on a hospital bed.
For a human to be brought from sadness into happiness is a
wonderfull thing that typifies the human race and encouragement
is what a human needs instead of derision to enjoy a life that
has been given him. It is not sad to see a life ending in enjoyment
but it is sad to pile on derision on how a human carries on the
fight for life even in the light of a meagre education.
If he was my grandpa I would encourage him until the end and be
very proud of him and not use my education to discourage him.
Actually the news media should use that story for those people
who are interested in what is good in life as well as those
who only have derision for the efforts of others.
Regards
Art

1065. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 17:24:10 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <_wD7i.1509$WZ6.1337@trnddc03>
Source record: 40865

I cringe at the idea of the news media filtering out the garbage!
It is for the viewer to determine what is garbage and what is not.
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Actually the news media should use that story for those people
who are interested in what is good in life as well as those
who only have derision for the efforts of others.
Regards
Art

Here will be the proof that this is more folly. I am going to note this date
in my organizer.
Next year on this date- we'll see where this has gone.
Another individual with a poor foundation in science wasting his time and
money- but that's his choice I suppose. I prefer to be more productive.
Maybe I can hook him up with a guy that cornered me yesterday to discuss
crop circles.

Dale W4OP

1066. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 17:24:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3n0g0ttp1@nnrp.linuxfan.it>
Source record: 40866

art wrote:
> ...
> I cringe at the idea of the news media filtering out the garbage!
> ...

Art:

Could not agree with you more. If someone wants the news media to
filter for them, I should wonder if someone should not accompany them to
the restroom to wipe for them also?

Give me it all, I will, eventually, toss the garbage ...

Regards,
JS

1067. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 18:08:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180634923.582070.69370@k79g2000hse.googlegroups.com>
Source record: 40867
Body handling: HTML body converted to readable text

On 31 May, 10:24, "Dale Parfitt" wrote:
> I cringe at the idea of the news media filtering out the garbage!
> It is for the viewer to determine what is garbage and what is not.
> Many a multimillionaire owes his fortune to what others have
> considered garbage where others have deemed themselves as
> educated enough to detrmine what is garbage and what is treasure.
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> Actually the news media should use that story for those people
> who are interested in what is good in life as well as those
> who only have derision for the efforts of others.
> Regards
> Art
>
>snip- but that's his choice I suppose. I prefer to be more productive.
If it makes him happy then that is productive and is good reason for
him
to make that choice.

Most people who enrich themselves usually make every mistake in the
book
until they find that one thing that makes them a success and that is
not
reserved for the PhD or more highly educated entrepaneur.
With the higher education you have the ability to get it right first
time
if and only, if you have the drive to succeed. Oddly enough life
doesn't
always work out that way but people can always change their position
after the fact and say that is nothing new, I knew it all the time
but I was just not interested in pursueing and then resume the

position on the couch. There are many highly educated people
on this newsgroup Dale who just like you are millionares because
their education allowed them to be right first time, all the time,
every time where other meagre minds just waste their time and money.
Why do hams get so much enjoyement from a piece of wire hung up
on the gutter where those in the know and educated sneer and
use a cell phone? Think about it, how do you measure happiness?
How do you measure remaining life and how it should be used in
the face of adversity? Productivety you say!
Are you so much better than others that you should decide
what is folly and what is wise to ensure a finding of the
pot of gold? Remember that a producer who cuts out film
as not being valuable can be poorer than the man that
picks up that what has been discarded
Art

>
> Dale W4OP

1068. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 18:50:33 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180637433.443332.30430@p77g2000hsh.googlegroups.com>
Source record: 40868

On 30 May, 22:41, Roy Lewallen <w...@eznec.com> wrote:
> Yet another sad commentary on the sorry state of science education in
> this country. Not so much the "inventor" as the dupes who have such a
> poor understanding of basic fundamental principles that they believe it
> and report it as news.
>
> Roy Lewallen, W7EL

By golly! Just think what have could happened to my Gaussian antenna
when "dupes who had such a poor understanding of basic fundemental
principles" that they did no

>
>
> Tony Jaa wrote:
> > Water burns!
> > Man looking for cancer cure hopes to solve energy crisis
> > Posted: May 30, 2007
> > 5:00 p.m. Eastern
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> >http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934
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> > By Joe Kovacs
> > © 2007 WorldNetDaily.com
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> > worrying about supplies of oil.
>
> > "It doesn't have to be ocean salt water," Kanzius said. "It burns just as
> > well when we add salt to tap water."
>
> > Kanzius has partnered with Charles Rutkowski, general manager of Industrial
> > Sales and Manufacturing, a Millcreek, Pa., company that builds the
> > radio-wave generators.
>
> > "I've done this [burning experiment] countless times and it still amazes
> > me," Rutkowski told the Erie Times-News. "Here we are paying $3 a gallon
> > for gas, and this is a device that seems to turn salt water into an
> > alternative fuel."
>
> > Kanzius has been told it's actually hydrogen that's burning, as his machine
> > generates enough heat to break down the chemical bond between hydrogen and
> > oxygen that makes up water.
>
> > "I have never heard of such a thing," Alice Deckert, Ph.D., chairwoman of
> > Allegheny College's chemistry department, told the Times-News. "There
> > doesn't seem to be enough energy in radio waves to break the chemical bonds
> > and cause that kind of reaction."
>
> > Thus far, Kanzius' discovery has not received extensive national publicity,
> > but has been featured on several local television news programs, including
> > WPBF-TV in West Palm Beach, Fla., WSEE-TV in Erie, Pa., and WKYC-TV in
> > Cleveland.
>
> > "We discovered that if you use a piece of paper towel as a wick, it lights
> > every single time and you can start it and stop it at will by turning the
> > radio waves on and off," Kanzius told the Times-News as he watched a test
> > tube of salt water burn.
>
> > "And look, the paper itself doesn't burn," he added. "Well, it burns but the

> > paper is not consumed."
>
> > Kanzius said he hasn't decided whether to share his fuel discovery with
> > government or private business, though he'd prefer a federal grant to
> > develop it.
>
> > "I'm afraid that if I join up with some big energy company, they will say it
> > doesn't work and shelve it, even if it does work," Kanzius told the paper.
>
> > Video of TV news reports of water burning can be seen from these affiliates:
>
> > WPBF-TV in West Palm Beach, Fla.
>
> > WSEE-TV in Erie, Pa.
>
> > WKYC-TV in Cleveland- Hide quoted text -
>
> - Show quoted text -

1069. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 19:43:55 UTC
From: "Paul E. Cater" <paulcater@roadrunner.com>
Message-ID: <465f2538$0$1387$4c368faf@roadrunner.com>
Source record: 40869

Alfred Lorona wrote:
> You can't get more energy out of anything than what you put in. You
> can't create energy. You can only transform it from one form to another.

After watching the video closely I grabbed a shot of his RF generator's meter. The scale goes to 1400 watts. So just for the fun of it lets assume the efficiency and say he is drawing 1.5kw to get a little orange flame. I think a light bulb would do much better and that's not a good example of efficiency.

Paul

1070. Linear loaded 40 meter antenna question.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 20:06:39 UTC
From: Steve <steve_lyon@prodigy.net>
Message-ID: <jVF7i.6217$y_7.1689@newssvr27.news.prodigy.net>
Source record: 40870

I have a copy of a magazine article, published in July 2002 QST, that describes a linear loaded antenna for 40 meters. The loading section is made of 450 ohm window type ladder line.

I am considering using it as part of a fan dipole in my attic and am wondering if anyone has tried this configuration on 15 meters as well as 40.

If so, what should I expect? Are there any pitfalls I should be concerned to avoid? Etc.

Thanks and 73.

Steve
WB6RIB

1071. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 22:05:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f3ngv4$9uh$1@news.service.uci.edu>
Source record: 40871

Dale Parfitt wrote:
Actually, it was art who wrote:

> I cringe at the idea of the news media filtering out the garbage!

Turns out they don't do very much filtering anymore, Art. It used to be called verification, and corroboration of sources. At one time the practice was even considered a journalistic prerequisite. But they have done away with that formality now for the most part. This provides us with immediate and unfettered access to mountainous heaps of garbage printed in newspapers and broadcast on the nightly news - and which is gleaned in no small part from that irreproachable font of knowledge and wisdom known as the internet.

Firesign Theater once proclaimed 'Everything You Know is Wrong'.
Thanks to the above it is now possible for that to be literally true;
a fact which evidences itself with greater profusion each election day.

ac6xg

1072. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 22:16:21 UTC
From: Dave <noone@nowhere.com>
Message-ID: <VOH7i.7247$Au6.6613@trndny04>
Source record: 40872

"Dale Parfitt" <par@parelectronics.com> wrote in message
news:_wD7i.1509$WZ6.1337@trnddc03...
> I cringe at the idea of the news media filtering out the garbage!
> It is for the viewer to determine what is garbage and what is not.
> Many a multimillionaire owes his fortune to what others have
> considered garbage where others have deemed themselves as
> educated enough to detrmine what is garbage and what is treasure.
> Look at the good side of this picture instead of piling on ridicule.
> Here we have is a human being who is fighting for something new
> and beneficial to all with all the energy and education that he
> has within him so that he can hold on to life. The life he has
> is enjoyable because he believes he is on the brink of success,
> where his life is still usefull instead of lying on a hospital bed.
> For a human to be brought from sadness into happiness is a
> wonderfull thing that typifies the human race and encouragement
> is what a human needs instead of derision to enjoy a life that
> has been given him. It is not sad to see a life ending in enjoyment
> but it is sad to pile on derision on how a human carries on the
> fight for life even in the light of a meagre education.
> If he was my grandpa I would encourage him until the end and be
> very proud of him and not use my education to discourage him.
> Actually the news media should use that story for those people
> who are interested in what is good in life as well as those
> who only have derision for the efforts of others.
> Regards
> Art
>
> Here will be the proof that this is more folly. I am going to note this
> date in my organizer.
> Next year on this date- we'll see where this has gone.
> Another individual with a poor foundation in science wasting his time and
> money- but that's his choice I suppose. I prefer to be more productive.
> Maybe I can hook him up with a guy that cornered me yesterday to discuss
> crop circles.
>
> Dale W4OP
>

just get him together with art. maybe if they put the 1400w into a gaussian
antenna they can aim it and get the efficiency up over 100% and set the
whole ocean on fire!

1073. Re: Linear loaded 40 meter antenna question.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-05-31 23:32:10 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns994261016AE4Bnonenowhere@61.9.191.5>
Source record: 40873

"Steve" <steve_lyon@prodigy.net> wrote in
news:jVF7i.6217$y_7.1689@newssvr27.news.prodigy.net:

> I have a copy of a magazine article, published in July 2002 QST, that
> describes a linear loaded antenna for 40 meters. The loading section
> is made of 450 ohm window type ladder line.
>
> I am considering using it as part of a fan dipole in my attic and am
> wondering if anyone has tried this configuration on 15 meters as well
> as 40.
>
> If so, what should I expect? Are there any pitfalls I should be
> concerned to avoid? Etc.

Steve,

The artice at http://www.vk1od.net/cobra/index.htm may be of interest.

Owen

1074. WTT TPL 400-512 mhz amp for slinky dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 01:08:44 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <AkK7i.1131$Jl3.224@newsfe12.lga>
Source record: 40874
Cross-posted to: rec.radio.swap,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.swap

I have a very used looking TPL power amp. 1-4 watts in 40-50 watts out.
400-512 mhz.

Factory tuned to 466.xxx. This amp is untested. I have no way to test it. I
will trade for a slinky dipole antenna. Must be in good shape I want to try
to use it in my 2nd floor apartment. With directions on how to make it work.

Mike WB2GLW

1075. Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 01:32:41 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <_GK7i.6932$C96.2665@newssvr23.news.prodigy.net>
Source record: 40875

BTW, bought the "Vhf" collection from Cebik
and the model eznec files are pretty good! Would
recommend them, BUT be aware: SOME will NOT work
as downloaded (as ELNEC/EZNEC is limited to 500
segments). At least one had over 1000 segments!
be sure to reduce these segments IN SAME (or
similar) amounts, until they are under 500
segments (right hand column) total! then they
run fine! A very interesting collection of
antenna files and worth every penny!
As info, Jim NN7K

> Irv, you are correct when you stated it was a big site!
> I spent a lot of time reading readers comments until my eyes glazed
> over.
> It was like reading every quabble from our own archives for the last
> twenty years.
> I think I will have to read the Cebik articles for myself and trace it
> down that way
> which will be much more educating. I am glad however that I used the
> word "atributed"
> rather than stating it as a fact. I will continue with this progect
> Regards
> Art
>

1076. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 02:44:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <135v1vrb00rgd8b@corp.supernews.com>
Source record: 40876

Jim - NN7K wrote:
> BTW, bought the "Vhf" collection from Cebik
> and the model eznec files are pretty good! Would
> recommend them, BUT be aware: SOME will NOT work
> as downloaded (as ELNEC/EZNEC is limited to 500
> segments). At least one had over 1000 segments!
> be sure to reduce these segments IN SAME (or similar) amounts, until
> they are under 500
> segments (right hand column) total! then they
> run fine! A very interesting collection of
> antenna files and worth every penny!
> As info, Jim NN7K

EZNEC+ allows 1500 segments.

Roy Lewallen, W7EL

1077. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 02:45:53 UTC
From: herbert.don@gmail.com
Message-ID: <1180645095.889368.307130@d30g2000prg.googlegroups.com>
Source record: 40727

how many s-units more exseptional gain does your v have compared to my
dipole at 20 feet?

On May 30, 9:02 am, art <aun...@insightbb.com> wrote:
> I read a comment attributed to Cebik where he stated that any
> antenna that is not 1/4, 5/8, 1/2 or 1 wave length is not much of an
> antenna !
> This is a false statement especially when one considers an antenna
> element
> based on > 1 WL. This antenna is widely used and well described
> in all antenna books.
> I have modelled a similar arrangement in Gaussian form
> where the elements are bent into a Vee shaped like yagi with elements
> extremely close together where it provides exceptional gain and
> pattern
> and can be related visually to a bent long boom but without
> elements.
> A planar antenna can also be made with a similar length of radiator
> with
> a variable resonator that makes it applicable to a continuous10 thru
> 20
> antenna wherein the resonator serves as a radiating portion instead
> of
> the normal coax stub. Also ideal for S.W. listeners on intervening
> frequencies.(See Cecil's antenna page which uses variable stub
> lengths instead of a variable resonator)
> Seems like a lot of mis information is being given out with respect
> to
> antennas apparently with the silent agreement of perceived antenna
> experts
> and where caustic opinions out weigh technical content .
> Regards
> Art

1078. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 03:07:20 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3o2krfta1@nnrp.linuxfan.it>
Source record: 40728

Jim Kelley wrote:

> ...
> Turns out they don't do very much filtering anymore, Art. It used to be
> called verification, ...

Funny, I lived through those times. Even Walter Cronkite speculated on such things as a conspiracy in Kennedys' death, etc. He sat there and calmly gave you the good, the bad and the ugly. Nightly we got body counts of the war and seen graphic picture of such things as mutilated bodies and buddhist monks pouring gas on themselves and burning to death in the streets of vietnam.

It is much different now. We all know it is strange on how a congressman can go into office whose worth can be counted in thousands and come out a multimillionaire, especially when his yearly salary is about 100,000 or so. Reporters are so controlled they fear to say chit if they have a mouthful!

But, back then men were more honest. Now we have family dynasty's (bush sr., bush jr.--bill, hilary) and it is difficult to draw a line between BIG MONEY (oil, drug companies, military contractors, etc.) and gov't.

It is good to keep in mind a saying that is as old as the hills, "Truth is stranger than fiction." And, I have found it is hardly ever the perpetrator who ends up in the slammer--he has had a good bit of time to plan his crime and has a suitable and believable fall guy(s) set up way ahead of time.

And, before anyone accuses me of being a conspiracy nut, my whole life has been a conspiracy. A conspiracy to take someone elses' money and put it in my pocket (legally--or at least without breaking the law!) A conspiracy to be an "insider" and "fortune teller" and walk away with the money others have lost in "the game." A conspiracy to place myself, my wife, my family, my community, my county, my state and my country ahead of all others.

It really all depends on how you look at things, doesn't it?

No, if some nut is claiming something, I wanna know about it. While I am still sucking air and not dirt, I will attempt to captain my ship. If some of the crew are screaming insane things, I wanna know about that too ... if it damages others psyches, so be it. If I am fooled, I'll be that much smarter next time ...

JS

1079. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 03:20:54 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3o3e9$k2l$1@nnrp.linuxfan.it>
Source record: 40729

art wrote:

Look at Edisons' invention, the light bulb.

It makes a much better heater than a light source (only a few percent of the energy consumed is given off as usable light!)

Besides, perhaps next they will find out that the rf power can be reduced a hundrend-fold if the proper catalyst is used. Perhaps attacking the hydrogen/oxygen bond on multi-levels will finally be found to be feasible ...

I have never seen in any book ANY speculation that rf could break hydrogen/oxygen bonds--only that microwaves could boil water! That in itself seems a major break through that the brain dead have glossed over in their claim of "it won't work!" Besides all that, it appears to me that the bond is being broken well below the boiling point of the salt water--seems like sodium chloride is already working as some sort of catalyst--let's all hope a magnitudes better catalyst is found!

JS

1080. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 03:33:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3o45d$k2l$2@nnrp.linuxfan.it>
Source record: 40730

John Smith I wrote:

In the above:

... and it is difficult to draw a line between BIG MONEY (oil, drug companies, military contractors, etc.) and gov't.

Should have been:

... and it is difficult to draw a line between BIG MONEY (oil, drug companies, military contractors, etc.), gov't AND THE NEWS.

JS

1081. Re: Optimized wideband antenna OWA

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 03:47:17 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <465f96d5$0$17207$39cecf19@news.twtelecom.net>
Source record: 40731

Jimmie D wrote:

>>>
>>> - Show quoted text -
>> Pound to a penny that you never read the patent or comments given on
>> this newsgroup
>> in the mid 90s or even OWA descriptions You can always give me a
>> pointer as to why
>> it was "run of the mill" matching system or where the OWA was
>> different, or all
>> the same. Like all things new comments abound that "I already knew
>> that" or
>> "it is nothing special".
>> What is it that you have against progress with respect to antennas?
>> Seems like any opposition to " all is known about antennas" is a
>> signal for attack
>> Art
>> in ham radio these days to keep the status quo!
>> Art
>>
>
> You lose, give me the pound..
>
>

I am SOOOOOO glad that I plonked Art.

I recommend that everyone does it.

tom
K0TAR

1082. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 04:57:31 UTC
From: KEYCLOWN AUCTION RATOUT CENTRAL <keyklownzrnutjobs@yahoo.com>
Message-ID: <1180673851.493708.254070@q69g2000hsb.googlegroups.com>
Source record: 40732

On May 30, 11:42 am, Ken C <cprst...@nospam.att.net> wrote:
> On Tue, 29 May 2007 20:37:59 -0700, "Sal M. Onella"
>
> <salmone...@food.poisoning.org> wrote:
> > Maybe you could try a product called "Gorilla Glue."
>
> The RF current flows into the base and from there into the tube. I
> don't think putting an insulator between them is a viable solution.
>
> I have thought about some conducting epoxy, thinned a bit so it seeps
> in, but I am not even confident about that.
>
> Ken KC2JDY

if the base is big enough in thickness, how about making a small hole thru and thru the bottom of the whip and the base then pinning it with a piece of wire run through both? If you were to sand off the plating at the bottom of the whip, you will most likely find it is brass or some other alloy. A thin piece of brass or copper wire, or a thin brass screw would then take to solder along with the whip where the plating is ground away. This would hold the bottom and the whip fairly well together.

1083. Dipole exposed to the elements question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 05:22:28 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <0fOdnZEE8LaNMMLbnZ2dnUVZ_judnZ2d@insightbb.com>
Source record: 40733

I'm getting ready to put up an Alpha Delta DX-LB-Plus antenna. I notice there are a lot of exposed terminals. (Perhaps the nuts and bolts are stainless?). Should the connections be water sealed somehow?

--
Bob D. ND9B

1084. Re: Dipole exposed to the elements question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 10:43:12 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <465ff838$0$19512$4c368faf@roadrunner.com>
Source record: 40734

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:0fOdnZEE8LaNMMLbnZ2dnUVZ_judnZ2d@insightbb.com...
> I'm getting ready to put up an Alpha Delta DX-LB-Plus antenna. I notice
> there are a lot of exposed terminals. (Perhaps the nuts and bolts are
> stainless?). Should the connections be water sealed somehow?
>
> --
> Bob D. ND9B
>

I use RTV, the non acetic kind.Regular RTV is more corrosive than leaving it
out.
I think this comes in black too that is sa lot more UV resistant but I
havent tried this yet

1085. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 11:52:14 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <74mdnaZ4U4Jblf3bRVnytQA@bt.com>
Source record: 40735

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f3o3e9$k2l$1@nnrp.linuxfan.it...
> art wrote:
>
> Look at Edisons' invention, the light bulb.
>
> It makes a much better heater than a light source (only a few percent of
> the energy consumed is given off as usable light!)
>
> Besides, perhaps next they will find out that the rf power can be
> reduced a hundrend-fold if the proper catalyst is used. Perhaps
> attacking the hydrogen/oxygen bond on multi-levels will finally be found
> to be feasible ...
>
> I have never seen in any book ANY speculation that rf could break
> hydrogen/oxygen bonds--only that microwaves could boil water! That in
> itself seems a major break through that the brain dead have glossed over
> in their claim of "it won't work!" Besides all that, it appears to me
> that the bond is being broken well below the boiling point of the salt
> water--seems like sodium chloride is already working as some sort of
> catalyst--let's all hope a magnitudes better catalyst is found!
>
> JS

John

Commercial microwave ovens have always worked on the principle of heating water by being tuned to the vibrational frequency of water molecules. It seems obvious that if sufficiently focused, the microwave energy would cause spontaneous decomposition of the water molecules into their constituent oxygen and hydrogen molecules. The addition of sodium chloride, or any salt, to the water can act as a catalyst by causing energy to become more tightly focused or by 'tuning' the molecules to become more susceptable to the microwave frequency(ies) involved. Sugared drinks heat more quickly than plain water in a microwave oven. While this may reduce the energy input requirements, there is no possibility of recovering a greater amount of energy than was input to initiate the reaction. This sounds like another version of the cold fusion debate, albeit not so cold.

There is no magic here. A kilowatt of energy focused into an area of less than a tenth of a cubic millimetre will instantaneously disassociate virtually any substance known to science.

A commercial fusion reactor is currently being built in France. It will cost billions of dollars to complete, but when it becomes operational there will

be a surplus of energy generated. That is our future and the future of energy production. A jar full of salty water will never power the average home or car unless it is surrounding several pounds of Plutonium. :-)

Mike G0ULI

1086. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 12:56:58 UTC
From: Ken C <cprstn54@nospam.att.net>
Message-ID: <sm50631m0plknggnvg9ll3tkmbunkeamra@4ax.com>
Source record: 40736

On Thu, 31 May 2007 21:57:31 -0700, KEYCLOWN AUCTION RATOUT CENTRAL
<keyklownzrnutjobs@yahoo.com> wrote:

>if the base is big enough in thickness, how about making a small hole
>thru and thru the bottom of the whip and the base then pinning it with
>a piece of wire run through both? If you were to sand off the plating
>at the bottom of the whip, you will most likely find it is brass or
>some other alloy. A thin piece of brass or copper wire, or a thin
>brass screw would then take to solder along with the whip where the
>plating is ground away. This would hold the bottom and the whip fairly
>well together.

Right you are!

Previous attempts to heat the base and flow in solder failed, so I
assumed it was steel.

Turns out to be nickel-plated brass:
http://www.mouser.com/catalog/specsheets/114269.pdf

So, I should be able to drill a small hole and solder in a small
copper or brass pin. Or grind a small crater and let some solder flow
in.

Ken KC2JDY

1087. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 13:06:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%QU7i.7151$5j1.5039@newssvr21.news.prodigy.net>
Source record: 40737

Mike Kaliski wrote:
> A jar full of salty water will never power the average
> home or car unless it is surrounding several pounds of Plutonium. :-)

Can you prove that "never" assertion? :-)
--
73, Cecil http://www.w5dxp.com

1088. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 14:36:35 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180708654_51911@sp12lax.superfeed.net>
Source record: 40738

Mike Kaliski wrote:

>
> Commercial microwave ovens have always worked on the principle of heating
> water by being tuned to the vibrational frequency of water molecules.

Hmmm. The first resonant peak of the
water molecule is around 1THz, while at
the microwave operating frequency of
2.45GHz there are no resonances of the
water molecule.

The 2.45GHz frequency has no particular
connection to the resonant frequencies
of candidate food molecules.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1089. Re: Screw-on telescopic antenna with loose base?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 15:01:32 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <gxW7i.14$554.4@trnddc07>
Source record: 40739

"Ken C" <cprstn54@nospam.att.net> wrote in message
news:48so531jl5gbavv7b00b100u7bnn8ojk19@4ax.com...
>I am using screw-on telescopic antennas for my doppler rig.
>
> These have four dimples at the base securing the tube to the base.
>
> After a while, the tube comes loose from the base and the antenna will
> no longer screw off or on because the tube turns freely about the
> base.
>
> I have tried using a pointed punch to increase the dimples, to no
> avail.
>
> They are $5 apiece from Mouser, so if possible, I would like to
> salvage them. I seem to get around eight on-off cycles per antenna. I
> am tightenting them only by hand.
>
> It is possible that some of the loosening is cause by the bending
> force of the 55 mph wind on a 19" whip.
>
> Any suggestions?
>
> Ken KC2JDY

Hi Ken

I wonder if you could increase the life by forcing a sleave over the tube
where the dimples are. Actually, I thought of a small clamp around the
tube where the dimples are, but I suspect the tube is rather small diameter.
Besides, I'm not sure I am understanding the problem properly.

Jerry

1090. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 15:08:00 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3pcs2$v6h$1@nnrp.linuxfan.it>
Source record: 40740

Mike Kaliski wrote:

> ...

It would be interesting to know what freq was being used in the video ...

If it were microwave, I wouldn't think that guy would be keeping his vision too much longer. A KW (heck, even a hundred watts or less over time!) turned into the room would be working on his cataracts, BIG TIME!

JS

1091. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 15:47:15 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3pf5l$v6h$2@nnrp.linuxfan.it>
Source record: 40741

John Smith I wrote:
> Mike Kaliski wrote:
>
> > ...
>
> It would be interesting to know what freq was being used in the video ...
>
> If it were microwave, I wouldn't think that guy would be keeping his
> vision too much longer. A KW (heck, even a hundred watts or less over
> time!) turned into the room would be working on his cataracts, BIG TIME!
>
> JS

Amazing it takes so much to get me motivated ...

I have a 2.5 KW lab microwave bought at auction in the garage. Just
walked out, wiped an inch of dust off it, plugged it in and placed a cup
of super saturated salt water in and turned it on. Boiled the water is
under 15 seconds--NO RELEASE OF HYDROGEN!

1) It appears that phenomenon is freq dependent!

2) Or, is the whole video a sham?

There is more to that video than I at first thought ...

JS

1092. Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 15:54:28 UTC
From: maxpowervk@yahoo.com.au
Message-ID: <1180713268.474138.279890@w5g2000hsg.googlegroups.com>
Source record: 40742

I came across two ferrite toroids with the measurements of 35mm diameter, the hole in the middle is 21mm and it is 13mm thick. On the packet it says that the ferrite material is L15. Does anybody know if L15 is equivalent to 43 or 61 ferrite material? I have searched the net but have been unable to find any information. Any information would be appreciated. Cheers.

1093. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 16:04:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hog063hu6h8evhm8kds3gigi0sc87lbppt@4ax.com>
Source record: 40743

On Fri, 01 Jun 2007 08:03:09 -0700, art <aunwin@insightbb.com> wrote:

>From the above one can see that approx 15 dbi is the most
>that can be expected from a forced inline array with the pattern
>of radiation staying constant showing that max efficiency has
>been reached. I will leave it to others to give their take on the
>above
>listing.

Hi Art,

With 2 minutes of modeling (and using the only 3 element yagi model
offered by EZNEC for FREE), I got 15.14 dBi.

Why does a gaussian array need 10 elements to get less?

73's
Richard Clark, KB7QHC

1094. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 16:15:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v2h063pof5dejrmb1vh8s1ns6dab0h8mlk@4ax.com>
Source record: 40744

On Fri, 01 Jun 2007 09:04:21 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>With 2 minutes of modeling (and using the only 3 element yagi model
>offered by EZNEC for FREE), I got 15.14 dBi.

Add another minute, and I could raise it to:
15.23 dBi
no, no, another 15 seconds to get:
15.47 dBi

Do 10 element gaussian arrays have poor efficiency?

73's
Richard Clark, KB7QHC

1095. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 16:31:23 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466049d3$0$4870$4c368faf@roadrunner.com>
Source record: 40745

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:hog063hu6h8evhm8kds3gigi0sc87lbppt@4ax.com...
> On Fri, 01 Jun 2007 08:03:09 -0700, art <aunwin@insightbb.com> wrote:
>
>>From the above one can see that approx 15 dbi is the most
>>that can be expected from a forced inline array with the pattern
>>of radiation staying constant showing that max efficiency has
>>been reached. I will leave it to others to give their take on the
>>above
>>listing.
>
> Hi Art,
>
> With 2 minutes of modeling (and using the only 3 element yagi model
> offered by EZNEC for FREE), I got 15.14 dBi.
>
> Why does a gaussian array need 10 elements to get less?
>
> 73's
> Richard Clark, KB7QHC

Has there ever been a definition of a guassian array. From the best I can
figure ART just claimed it otbe a bunch of random lengths mounted on a boom
but every time I see a model he presents its just a mucked up yagi.

Jimmie

1096. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 16:36:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jgi063pkdepfcn3uqga9qc8eb3qh4efnh2@4ax.com>
Source record: 40746

On Fri, 1 Jun 2007 12:31:23 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:
>"Richard Clark" <kb7qhc@comcast.net> wrote in message
>> Why does a gaussian array need 10 elements to get less?
>
>Has there ever been a definition of a guassian array. From the best I can
>figure ART just claimed it otbe a bunch of random lengths mounted on a boom
>but every time I see a model he presents its just a mucked up yagi.

Hi Jimmie,

The definition of a gaussian array, by "theory" is something that
changes to fit the occasion (or it could be said to be a new work of
science that is still in progress).

The definition of a gaussian array, by performance, is an inferior
antenna that is more difficult to erect than the relatively mundane
example of the NBS Yagi. I didn't pick the NBS for its spectacular
performance (there are better designs), I simply picked the first
model available so as to not waste time (yet again).

73's
Richard Clark, KB7QHC

1097. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 16:57:08 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <_NKdnZMBObt80v3bRVnysQA@pipex.net>
Source record: 40747

maxpowervk@yahoo.com.au wrote:
> I came across two ferrite toroids with the measurements of 35mm
> diameter, the hole in the middle is 21mm and it is 13mm thick. On the
> packet it says that the ferrite material is L15. Does anybody know if
> L15 is equivalent to 43 or 61 ferrite material? I have searched the
> net but have been unable to find any information. Any information
> would be appreciated. Cheers.
>

Where did they come from? Sounds like it may have been from a kit.

Charlie.

--
M0WYM
www.radiowymsey.org

1098. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:00:08 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <eMKdnT5wzqALzf3bnZ2dnUVZ8qaqnZ2d@pipex.net>
Source record: 40748

maxpowervk@yahoo.com.au wrote:
> I came across two ferrite toroids with the measurements of 35mm
> diameter, the hole in the middle is 21mm and it is 13mm thick. On the
> packet it says that the ferrite material is L15. Does anybody know if
> L15 is equivalent to 43 or 61 ferrite material? I have searched the
> net but have been unable to find any information. Any information
> would be appreciated. Cheers.
>

Here's how to check them:

http://www.w8pgw.org/node/303

Charlie.

--
M0WYM
www.radiowymsey.org

1099. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:11:21 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46605331$0$12446$4c368faf@roadrunner.com>
Source record: 40749

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f3pf5l$v6h$2@nnrp.linuxfan.it...
> John Smith I wrote:
>> Mike Kaliski wrote:
>>
>> > ...
>>
>> It would be interesting to know what freq was being used in the video ...
>>
>> If it were microwave, I wouldn't think that guy would be keeping his
>> vision too much longer. A KW (heck, even a hundred watts or less over
>> time!) turned into the room would be working on his cataracts, BIG TIME!
>>
>> JS
>
> Amazing it takes so much to get me motivated ...
>
> I have a 2.5 KW lab microwave bought at auction in the garage. Just
> walked out, wiped an inch of dust off it, plugged it in and placed a cup
> of super saturated salt water in and turned it on. Boiled the water is
> under 15 seconds--NO RELEASE OF HYDROGEN!
>
> 1) It appears that phenomenon is freq dependent!
>
> 2) Or, is the whole video a sham?
>
> There is more to that video than I at first thought ...
>
> JS

He didnt say the flame was caused by hydrogen, ratheris was a chemist
friend. How much BS have you heard start out as I dont know but I have this
friend........

Jimmie

1100. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:22:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1360le07j773o88@corp.supernews.com>
Source record: 40750

There's one thing we can count on, for sure, no question, no doubt:
Whatever magical catalyst is found, whatever wonderful principle is
discovered, whatever bonds are broken. . .

It will require more energy to turn the water into hydrogen and oxygen
than you'll get back when the hydrogen and oxygen are recombined. By any
method -- burning, in a fuel cell, whatever.

You can take that to the bank. Anyone claiming otherwise is ignorant,
delusional, a charlatan, or some combination of those. Anyone believing
it is sadly lacking in the most basic of science education.

Roy Lewallen, W7EL

Mike Kaliski wrote:
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f3o3e9$k2l$1@nnrp.linuxfan.it...
>> art wrote:
>>
>> Look at Edisons' invention, the light bulb.
>>
>> It makes a much better heater than a light source (only a few percent of
>> the energy consumed is given off as usable light!)
>>
>> Besides, perhaps next they will find out that the rf power can be
>> reduced a hundrend-fold if the proper catalyst is used. Perhaps
>> attacking the hydrogen/oxygen bond on multi-levels will finally be found
>> to be feasible ...
>>
>> I have never seen in any book ANY speculation that rf could break
>> hydrogen/oxygen bonds--only that microwaves could boil water! That in
>> itself seems a major break through that the brain dead have glossed over
>> in their claim of "it won't work!" Besides all that, it appears to me
>> that the bond is being broken well below the boiling point of the salt
>> water--seems like sodium chloride is already working as some sort of
>> catalyst--let's all hope a magnitudes better catalyst is found!
>>
>> JS
>
> John
>
> Commercial microwave ovens have always worked on the principle of heating
> water by being tuned to the vibrational frequency of water molecules. It
> seems obvious that if sufficiently focused, the microwave energy would cause
> spontaneous decomposition of the water molecules into their constituent

> oxygen and hydrogen molecules. The addition of sodium chloride, or any salt,
> to the water can act as a catalyst by causing energy to become more tightly
> focused or by 'tuning' the molecules to become more susceptable to the
> microwave frequency(ies) involved. Sugared drinks heat more quickly than
> plain water in a microwave oven. While this may reduce the energy input
> requirements, there is no possibility of recovering a greater amount of
> energy than was input to initiate the reaction. This sounds like another
> version of the cold fusion debate, albeit not so cold.
>
> There is no magic here. A kilowatt of energy focused into an area of less
> than a tenth of a cubic millimetre will instantaneously disassociate
> virtually any substance known to science.
>
> A commercial fusion reactor is currently being built in France. It will cost
> billions of dollars to complete, but when it becomes operational there will
> be a surplus of energy generated. That is our future and the future of
> energy production. A jar full of salty water will never power the average
> home or car unless it is surrounding several pounds of Plutonium. :-)
>
> Mike G0ULI
>
>

1101. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:24:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <IDY7i.16$Gy4.1@trndny08>
Source record: 40751

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:466049d3$0$4870$4c368faf@roadrunner.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:hog063hu6h8evhm8kds3gigi0sc87lbppt@4ax.com...
>> On Fri, 01 Jun 2007 08:03:09 -0700, art <aunwin@insightbb.com> wrote:
>>
>>>From the above one can see that approx 15 dbi is the most
>>>that can be expected from a forced inline array with the pattern
>>>of radiation staying constant showing that max efficiency has
>>>been reached. I will leave it to others to give their take on the
>>>above
>>>listing.
>>
>> Hi Art,
>>
>> With 2 minutes of modeling (and using the only 3 element yagi model
>> offered by EZNEC for FREE), I got 15.14 dBi.
>>
>> Why does a gaussian array need 10 elements to get less?
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Has there ever been a definition of a guassian array. From the best I can
> figure ART just claimed it otbe a bunch of random lengths mounted on a
> boom but every time I see a model he presents its just a mucked up yagi.
>
> Jimmie
you got it. except art claims some kind of 'equilibrium' between the
elements... but then only 1 feed point, so it is basically a random
parasitic set of elements acting like a bad yagi.

1102. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:30:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sil0635bo20cosuae4i2j86oqsdkeanu4r@4ax.com>
Source record: 40752

On Fri, 01 Jun 2007 08:03:09 -0700, art <aunwin@insightbb.com> wrote:

># el boom lth inches gain dbi
>4 460 14.85

Let's see, by adding one more element to the NBS Yagi, I got 15.72
dBi.

This means that the NBS yagi is 110% efficient compared to a gaussian
array. This is due to the physics of Newtonian Bales which is
superior to gaussian bundles.

73's
Richard Clark, KB7QHC

1103. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 17:36:41 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3plir$7a5$1@nnrp.linuxfan.it>
Source record: 40753

Roy Lewallen wrote:

> ...

I'd say there were two possibilities there:

1) It ain't happened yet--so it never will.

2) It ain't happened yet--because we don't yet know enough.

Frankly, I think those coming up with new ideas will subscribe to the second ...

I do know that manganese dioxide can act as a catalyst in different situations as to seem "magical." (i.e. over come bonds at lower energy levels.)

Regards,
JS

1104. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 18:03:30 UTC
From: maxpowervk@yahoo.com.au
Message-ID: <1180721010.020439.293480@w5g2000hsg.googlegroups.com>
Source record: 40754

I haven't got an antenna analyser to do the above checks. The toroids came in a box of stuff from a hamfest. They are in a packet which has the brand name "Duratech" printed on it.

1105. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 18:23:24 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180722258_52681@sp12lax.superfeed.net>
Source record: 40755

maxpowervk@yahoo.com.au wrote:
> I haven't got an antenna analyser to do the above checks. The toroids
> came in a box of stuff from a hamfest. They are in a packet which has
> the brand name "Duratech" printed on it.
>

If you have any means at all of mesuring
inductance, you can go here:

http://en.wikipedia.org/wiki/Inductor
Inductor - Wikipedia, the free encyclopedia

Find the formula (#6) for the inductance
of a toroidal ring. Enter the
appropriate values and solve for u
(permeability of the core). Then look at
ferrites and iron power core properties
with the calculated permeability at the
test frequency. You'll probably find
several core materials that fit.

I think that's about all that can be done.

Chuck

----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1106. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 18:33:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <hEZ7i.9930$4Y.5397@newssvr19.news.prodigy.net>
Source record: 40756

John Smith I wrote:
> 2) It ain't happened yet--because we don't yet know enough.
>
> Frankly, I think those coming up with new ideas will subscribe to the
> second ...

We know that e = mc^2 All we need is a method
for conversion of ordinary mass into energy.
--
73, Cecil http://www.w5dxp.com

1107. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 18:51:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3ppvc$vh9$1@nnrp.linuxfan.it>
Source record: 40757

Cecil Moore wrote:

> ...
> We know that e = mc^2 All we need is a method
> for conversion of ordinary mass into energy.

Cecil:

Absolutely!

However, I am much more interested in converting energy to matter.

Be nice to have a little machine in the backyard converting sunlight
into gold!

NO, I am NOT talking about gardening marijuana. <grin>

Regards,
JS

1108. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <0v66j4-pbq.ln1@mail.specsol.com>
Source record: 40758

Roy Lewallen <w7el@eznec.com> wrote:
> There's one thing we can count on, for sure, no question, no doubt:
> Whatever magical catalyst is found, whatever wonderful principle is
> discovered, whatever bonds are broken. . .

> It will require more energy to turn the water into hydrogen and oxygen
> than you'll get back when the hydrogen and oxygen are recombined. By any
> method -- burning, in a fuel cell, whatever.

> You can take that to the bank. Anyone claiming otherwise is ignorant,
> delusional, a charlatan, or some combination of those. Anyone believing
> it is sadly lacking in the most basic of science education.

> Roy Lewallen, W7EL

Yep, but the ignorant will never realize or admit they are ignorant and
the snake oil salesman always has a job.

--
Jim Pennino

Remove .spam.sux to reply.

1109. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:14:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Yd_7i.7323$5j1.1783@newssvr21.news.prodigy.net>
Source record: 40759

John Smith I wrote:
> Be nice to have a little machine in the backyard converting sunlight
> into gold!

m = e/c^2 That would take a heck of a lot of sunlight.
--
73, Cecil http://www.w5dxp.com

1110. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:18:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3prem$vh9$2@nnrp.linuxfan.it>
Source record: 40760

jimp@specsol.spam.sux.com wrote:

> ...
> Yep, but the ignorant will never realize or admit they are ignorant and
> the snake oil salesman always has a job.
>

The truly ignorant will never realize that the device does NOT have to
be over unity, nor even a unity device.

Utilizing wind, water, ocean wave generators, sunlight, etc. to power a
rf generator and produce hydrogen+oxygen during off peak times would be
a HIGHLY profitable method of storage of energy!

Just realizing the replacement of batteries with this simple method
demonstrates its' importance.

JS

1111. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:20:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3pria$vh9$3@nnrp.linuxfan.it>
Source record: 40761

Cecil Moore wrote:
> John Smith I wrote:
>> Be nice to have a little machine in the backyard converting sunlight
>> into gold!
>
> m = e/c^2 That would take a heck of a lot of sunlight.

Cecil:

OK. I suspect you correct.

I'll consider the marijuana. ;-)

Regards,
JS

1112. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:22:47 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180725767.888547.256800@u30g2000hsc.googlegroups.com>
Source record: 40762

On 1 Jun, 11:51, John Smith I <assemblywiz...@gmail.com> wrote:
> Cecil Moore wrote:
>
> > ...
>
> > We know that e = mc^2 All we need is a method
> > for conversion of ordinary mass into energy.
>
> Cecil:
>
> Absolutely!
>
> However, I am much more interested in converting energy to matter.
>
> Be nice to have a little machine in the backyard converting sunlight
> into gold!
>
> NO, I am NOT talking about gardening marijuana. <grin>
>
> Regards,
> JS

John
DO do you think that Americans are not interested in experimenting any
more because
if anything new comes about that is usefull we can hire the engineers
from India
who have already done the research? Actually it seems that it has gone
beyond that
when you see the outcry against the Gaussian antenna or even boiling
water.
Do Americans really believe really believe that all is known and it is
a waste of time
to experiment? That if you are educated under the American system you
have the
ability to determine before hand what will work and what will not
work?
As an immigrant I was asked by the media the other day do I believe
that immigrants
that do the work that Americans wont do have a different aproach to
life?
I pointed him to read this newsgroup and make up his own mind , but I
also did tell
him to look up history to see how past Empires were lost, but I am not

sure
that he got my point
Art

1113. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:27:00 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Geidnf0-xsHG7v3bnZ2dnUVZ8sWhnZ2d@bt.com>
Source record: 40763

"Chuck" <no.spam@no.spam.at.all> wrote in message
news:1180708654_51911@sp12lax.superfeed.net...
> Mike Kaliski wrote:
>
> >
> > Commercial microwave ovens have always worked on the principle of
heating
> > water by being tuned to the vibrational frequency of water molecules.
>
>
> Hmmm. The first resonant peak of the
> water molecule is around 1THz, while at
> the microwave operating frequency of
> 2.45GHz there are no resonances of the
> water molecule.
>
> The 2.45GHz frequency has no particular
> connection to the resonant frequencies
> of candidate food molecules.
>
> Chuck
>
> -----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet
News==----
> http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+
Newsgroups
> ----= East and West-Coast Server Farms - Total Privacy via Encryption
=----

Chuck

That would be why returns on 3 Cm marine radar are wiped out in heavy rain then. I can vouch for the fact that heavy rain and spray can result in 100% obscuration of ship radar targets.

Aircraft also use radar to detect storms. The severity of the weather ahead is determined by analysis of the probable size of the water droplets in the cloud, which affects the level of the radar return.

While water molecules may have an inherent resonance at 1 THz, it is generally accepted by the scientific community that microwave ovens work by exciting water molecules, amongst others, in food. I can't recall ever cooking anything in a microwave that wasn't wet or at least damp. Well I have tested some bits of plastic for suitability for use at RF, but that wasn't for eating - and the wife was out!!!

I am happy to accept that there is no direct correlation between the resonant frequency of a water molecule at 1 THz and a microwave oven magnetron operating in the Ghz range. However, microwave ovens will heat even distilled water quite effectively and heating is defined as an increase in vibrational energy of molecules. So however the process actually works, some principle of resonance must exist to allow the excitation of the water molecules to occur. Either that, or microwave ovens actually work by heating the food with infra red radiation derived using waste heat from the magnetron and we have all been fooled. :-)

Mike G0ULI

1114. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:32:18 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3ps84$vh9$4@nnrp.linuxfan.it>
Source record: 40764

art wrote:

> ...

Art:

Well, your point is well taken here.

Correct. They want the news media to filter all for them, thus relieving them of exercising mental muscle for themselves.

They rely on denying anything new is coming along until it already is developed and accepted; then they claim they knew it all along.

You'd think them embarrassed over the above; but then, you'd be mistaken.

However, the gaussian antenna escapes me ... at least for the present time. But, I don't want the news to filter you! <GRIN>

Regards,
JS

1115. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:37:32 UTC
From: richardharrison@webtv.net
Message-ID: <27321-4660757C-95@storefull-3252.bay.webtv.net>
Source record: 40765

Richard Clark, KB7QHC wrote:
"Sonething of a parasitic half Rhombic (or parasitic V)".

Yes, but the rhombic or Vee antenna usually needs sides which are wavelengths long to produce significant gain. I don`t know what Art has proposed. The TV antenna on the roof near me looks like a Yagi with its elements all bent to the same angle with the boom. Their lengths aren`t multiwavelength even at 200 MHz. Maybe at UHF? VHF gain would depend on phasing between the reflector and the driven element, and the multiple directors and the driven element. Thus its performance would begin with its similarity with the straight Yagi, I`d wager.

Before cable and satellite were available, many configurations were tried for TV. Some were sold more on appearance than performance.

It`s tough to cover a 4 to 1 frequency range smoothly, but they tried. Some produced decent pictures at some distance from the transmitters over many VHF channels. Amazing!

Best regards, Richard Harrison, KB5WZI

1116. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 19:45:40 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1180727197_53001@sp12lax.superfeed.net>
Source record: 40766

Mike Kaliski wrote:

> That would be why returns on 3 Cm marine radar are wiped out in heavy rain
> then. I can vouch for the fact that heavy rain and spray can result in 100%
> obscuration of ship radar targets.
>
> Aircraft also use radar to detect storms. The severity of the weather ahead
> is determined by analysis of the probable size of the water droplets in the
> cloud, which affects the level of the radar return.
>
> While water molecules may have an inherent resonance at 1 THz, it is
> generally accepted by the scientific community that microwave ovens work by
> exciting water molecules, amongst others, in food. I can't recall ever
> cooking anything in a microwave that wasn't wet or at least damp. Well I
> have tested some bits of plastic for suitability for use at RF, but that
> wasn't for eating - and the wife was out!!!
>
> I am happy to accept that there is no direct correlation between the
> resonant frequency of a water molecule at 1 THz and a microwave oven
> magnetron operating in the Ghz range. However, microwave ovens will heat
> even distilled water quite effectively and heating is defined as an increase
> in vibrational energy of molecules. So however the process actually works,
> some principle of resonance must exist to allow the excitation of the water
> molecules to occur. Either that, or microwave ovens actually work by heating
> the food with infra red radiation derived using waste heat from the
> magnetron and we have all been fooled. :-)
>

Increased molecular motion certainly
accompanies increased temperature, but
depending on the water's salt content,
the skin depth of water at microwave
oven frequencies is 0.5cm to 4.7cm. So I
guess it is an absorption phenomenon,
rather than resonance. Or, infrared
radiation from the maagnetron! ;-)

This information, BTW, comes from Ron
Schmitt's "Electromagnetics Explained".

Chuck

----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1117. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vna6j4-3g6.ln1@mail.specsol.com>
Source record: 40767

Mike Kaliski <michael.kaliski@tesco.net> wrote:

> "Chuck" <no.spam@no.spam.at.all> wrote in message
> news:1180708654_51911@sp12lax.superfeed.net...
> > Mike Kaliski wrote:
> >
> > >
> > > Commercial microwave ovens have always worked on the principle of
> heating
> > > water by being tuned to the vibrational frequency of water molecules.
> >
> >
> > Hmmm. The first resonant peak of the
> > water molecule is around 1THz, while at
> > the microwave operating frequency of
> > 2.45GHz there are no resonances of the
> > water molecule.
> >
> > The 2.45GHz frequency has no particular
> > connection to the resonant frequencies
> > of candidate food molecules.
> >
> > Chuck
> >
> > ----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet
> News==----
> > http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+
> Newsgroups
> > ----= East and West-Coast Server Farms - Total Privacy via Encryption
> =----

> Chuck

> That would be why returns on 3 Cm marine radar are wiped out in heavy rain
> then. I can vouch for the fact that heavy rain and spray can result in 100%
> obscuration of ship radar targets.

> Aircraft also use radar to detect storms. The severity of the weather ahead
> is determined by analysis of the probable size of the water droplets in the
> cloud, which affects the level of the radar return.

> While water molecules may have an inherent resonance at 1 THz, it is
> generally accepted by the scientific community that microwave ovens work by
> exciting water molecules, amongst others, in food. I can't recall ever
> cooking anything in a microwave that wasn't wet or at least damp. Well I
> have tested some bits of plastic for suitability for use at RF, but that

> wasn't for eating - and the wife was out!!!

> I am happy to accept that there is no direct correlation between the
> resonant frequency of a water molecule at 1 THz and a microwave oven
> magnetron operating in the Ghz range. However, microwave ovens will heat
> even distilled water quite effectively and heating is defined as an increase
> in vibrational energy of molecules. So however the process actually works,
> some principle of resonance must exist to allow the excitation of the water
> molecules to occur. Either that, or microwave ovens actually work by heating
> the food with infra red radiation derived using waste heat from the
> magnetron and we have all been fooled. :-)

> Mike G0ULI

You can look at the stuff in a microwave as a resistive load.

What happens to a resistive load when you feed it RF?

Or even DC, but putting in all the little DC probes so the burrito heats
evenly is a pain in the butt.

--
Jim Pennino

Remove .spam.sux to reply.

1118. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:08:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n4v063lipoalkuhoauo3pe7ug1mv99t3v6@4ax.com>
Source record: 40768

On Fri, 01 Jun 2007 11:03:30 -0700, maxpowervk@yahoo.com.au wrote:

>I haven't got an antenna analyser to do the above checks.

Do you have a SWR meter?

73's
Richard Clark, KB7QHC

1119. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:11:23 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3puhc$vh9$5@nnrp.linuxfan.it>
Source record: 40769

Tony Jaa wrote:

> ...

Another video from youtube; this one is of a "magnetic motor."

http://www.youtube.com/watch?v=ffFSqsDHWYo&mode=related&search=

I am afraid I have already formed an addiction to youtube!

Regards,
JS

1120. Re: Not much of an antenna per Cebik

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:11:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <t6v063lq77qf7c7o4ocvt14sbh8di04tqa@4ax.com>
Source record: 40770

On Fri, 1 Jun 2007 14:37:32 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark, KB7QHC wrote:
>"Sonething of a parasitic half Rhombic (or parasitic V)".
>
>Yes, but the rhombic or Vee antenna usually needs sides which are
>wavelengths long to produce significant gain.

I was responding to your TV antenna example that exhibited the V shape with parasitics. The long and short wavelengths both point along the major axis.

>I don`t know what Art has proposed.

Nobody does.

>The TV antenna on the roof near me looks like a Yagi with its
>elements all bent to the same angle with the boom. Their lengths aren`t
>multiwavelength even at 200 MHz. Maybe at UHF?

Exactly.

>VHF gain would depend on
>phasing between the reflector and the driven element, and the multiple
>directors and the driven element. Thus its performance would begin with
>its similarity with the straight Yagi, I`d wager.

Exactly (but probably not with any spectacular gain for all the elements).

73's
Richard Clark, KB7QHC

1121. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:15:00 UTC
From: Dave <noone@nowhere.com>
Message-ID: <87%7i.1465$nj4.678@trndny06>
Source record: 40771

"art" <aunwin@insightbb.com> wrote in message
news:1180725767.888547.256800@u30g2000hsc.googlegroups.com...
> On 1 Jun, 11:51, John Smith I <assemblywiz...@gmail.com> wrote:
>> Cecil Moore wrote:
>>
>> > ...
>>
>> > We know that e = mc^2 All we need is a method
>> > for conversion of ordinary mass into energy.
>>
>> Cecil:
>>
>> Absolutely!
>>
>> However, I am much more interested in converting energy to matter.
>>
>> Be nice to have a little machine in the backyard converting sunlight
>> into gold!
>>
>> NO, I am NOT talking about gardening marijuana. <grin>
>>
>> Regards,
>> JS
>
> John
> DO do you think that Americans are not interested in experimenting any
> more because
> if anything new comes about that is usefull we can hire the engineers
> from India
> who have already done the research? Actually it seems that it has gone
> beyond that
> when you see the outcry against the Gaussian antenna or even boiling
> water.
> Do Americans really believe really believe that all is known and it is
> a waste of time
> to experiment? That if you are educated under the American system you
> have the
> ability to determine before hand what will work and what will not
> work?
> As an immigrant I was asked by the media the other day do I believe
> that immigrants
> that do the work that Americans wont do have a different aproach to
> life?
> I pointed him to read this newsgroup and make up his own mind , but I

> also did tell
> him to look up history to see how past Empires were lost, but I am not
> sure
> that he got my point
> Art
>

and just how do you know who on this group was educated where??

maybe those of us educated under the 'American' system have enough common sense to recognize snake oil when we see it??

A question for you... when was the last time you saw some really new invention that wasn't eventually proven to be fraud or bad science announced first on a usenet news group??? or on a tv news show???

1122. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:25:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3pvb9$vh9$6@nnrp.linuxfan.it>
Source record: 40772

Dave wrote:

> ...
> and just how do you know who on this group was educated where??
>
> maybe those of us educated under the 'American' system have enough common
> sense to recognize snake oil when we see it??
>
> A question for you... when was the last time you saw some really new
> invention that wasn't eventually proven to be fraud or bad science announced
> first on a usenet news group??? or on a tv news show???
>

Did you use that same argument when quantum physics was first being
discussed?

If not, how did you know that "insane phenomenon" was real?

Although we have already developed experimental quantum computers and we
can exploit the phenomenon, we do not understand the underlying physics
to any real degree ...

JS

1123. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:33:44 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180730024.047415.94200@u30g2000hsc.googlegroups.com>
Source record: 40773

On 1 Jun, 13:15, "Dave" <n...@nowhere.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1180725767.888547.256800@u30g2000hsc.googlegroups.com...
>
>
>
>
>
> > On 1 Jun, 11:51, John Smith I <assemblywiz...@gmail.com> wrote:
> >> Cecil Moore wrote:
>
> >> > ...
>
> >> > We know that e = mc^2 All we need is a method
> >> > for conversion of ordinary mass into energy.
>
> >> Cecil:
>
> >> Absolutely!
>
> >> However, I am much more interested in converting energy to matter.
>
> >> Be nice to have a little machine in the backyard converting sunlight
> >> into gold!
>
> >> NO, I am NOT talking about gardening marijuana. <grin>
>
> >> Regards,
> >> JS
>
> > John
> > DO do you think that Americans are not interested in experimenting any
> > more because
> > if anything new comes about that is usefull we can hire the engineers
> > from India
> > who have already done the research? Actually it seems that it has gone
> > beyond that
> > when you see the outcry against the Gaussian antenna or even boiling
> > water.
> > Do Americans really believe really believe that all is known and it is
> > a waste of time
> > to experiment? That if you are educated under the American system you
> > have the

> > ability to determine before hand what will work and what will not
> > work?
> > As an immigrant I was asked by the media the other day do I believe
> > that immigrants
> > that do the work that Americans wont do have a different aproach to
> > life?
> > I pointed him to read this newsgroup and make up his own mind , but I
> > also did tell
> > him to look up history to see how past Empires were lost, but I am not
> > sure
> > that he got my point
> > Art
>
> and just how do you know who on this group was educated where??
>
> maybe those of us educated under the 'American' system have enough common
> sense to recognize snake oil when we see it??
>
> A question for you... when was the last time you saw some really new
> invention that wasn't eventually proven to be fraud or bad science announced
> first on a usenet news group??? or on a tv news show???- Hide quoted text -
>
> - Show quoted text -

David,
I pointed him to this newsgroup because I considered you and others
with your
level of education and aproach to life was typical of the average
american.
If he read thru the this particular thread for instance I would allow
him
to figure out for himself from the educational responses the level of
education.
As for fear of the new or experimentation I suspect he would be as
baffled as I am tho I am sure he can recognise arrogance when he sees
it.
I pointed out to him what some of you see yourselfs as being the best
of America,
frankly I believe I did a diservice to the America of old, and
immigration
of the sciences from other countries is our only hope Check what Roy
has to say
with respect to the education of the masses, he considers himself to
be of
a higher level and more qualified than most that allows him to be a
judge.
Art

1124. Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 20:43:07 UTC
From: <>
Message-ID: <part1of1.1.FnqFhGjGlViw1Q@ue.ph>
Source record: 40774

What is the result of using a metal mast as the center support of an inverted V antenna. Will it work and if so can resonable low SWR be obtained using a tuner? Any advice appreciated.

TIR

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1125. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:08:37 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <pV%7i.250231$DE1.210186@pd7urf2no>
Source record: 40775

wrote:

> What is the result of using a metal mast as the center support of an inverted V
> antenna. Will it work and if so can resonable low SWR be obtained using a
> tuner? Any advice appreciated.
>
> TIR

There must be a million hams using their towers as the center support for their vees. In theory the tower is at the electrical center and has little or no effect. At least this is my theory!!! There are a few pundits who might want to argue the point.

Irv VE6BP

1126. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:10:27 UTC
From: Philo <philo@nospampse.be>
Message-ID: <7X%7i.209219$Sm7.1843248@phobos.telenet-ops.be>
Source record: 40776

wrote in message news:part1of1.1.FnqFhGjGlViw1Q@ue.ph...
> What is the result of using a metal mast as the center support of an
> inverted V
> antenna. Will it work and if so can resonable low SWR be obtained using a
> tuner? Any advice appreciated.
>
> TIR
>
> ----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet
> News==----
> http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+
> Newsgroups
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> =----

No problem at all. I use a steel telescopic pylon, 20 m long.

It supports two inverted V's: one for 40 m and one for 80 m. The wires are kept 20 cm apart by 5/8" plastic tubing. The two inverted V's are fed in parallel through a 1/4 balun at the end of a 50 ohms cable.

VSWR is almost 1/1 for 40 m. On 80 m the VSWR varies from 1/1 to 1,8/1.

At least 200 kHz of the 80 m band can be within 1,5/1. Of course, the length of the elements determines witch part of the band that is.

1127. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:21:06 UTC
From: Philo <philo@nospampse.be>
Message-ID: <6508i.209233$o6.1856613@phobos.telenet-ops.be>
Source record: 40677

"Philo" <philo@nospampse.be> wrote in message
news:7X%7i.209219$Sm7.1843248@phobos.telenet-ops.be...
> No problem at all. I use a steel telescopic pylon, 20 m long.
>
> It supports two inverted V's: one for 40 m and one for 80 m. The wires are
> kept 20 cm apart by 5/8" plastic tubing. The two inverted V's are fed in
> parallel through a 1/4 balun at the end of a 50 ohms cable.
>
> VSWR is almost 1/1 for 40 m. On 80 m the VSWR varies from 1/1 to 1,8/1.
>
> At least 200 kHz of the 80 m band can be within 1,5/1. Of course, the
> length of the elements determines witch part of the band that is.
>
That should have been "...which part of the band that is".
Sorry, my English stinks...

1128. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:21:59 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <YaidnQJIHYbSE_3bRVnyugA@bt.com>
Source record: 40678

"Chuck" <no.spam@no.spam.at.all> wrote in message
news:1180727197_53001@sp12lax.superfeed.net...
> Mike Kaliski wrote:
>
> >
> > That would be why returns on 3 Cm marine radar are wiped out in heavy
rain
> > then. I can vouch for the fact that heavy rain and spray can result in
100%
> > obscuration of ship radar targets.
> >
> > Aircraft also use radar to detect storms. The severity of the weather
ahead
> > is determined by analysis of the probable size of the water droplets in
the
> > cloud, which affects the level of the radar return.
> >
> > While water molecules may have an inherent resonance at 1 THz, it is
> > generally accepted by the scientific community that microwave ovens work
by
> > exciting water molecules, amongst others, in food. I can't recall ever
> > cooking anything in a microwave that wasn't wet or at least damp. Well I
> > have tested some bits of plastic for suitability for use at RF, but that
> > wasn't for eating - and the wife was out!!!
> >
> > I am happy to accept that there is no direct correlation between the
> > resonant frequency of a water molecule at 1 THz and a microwave oven
> > magnetron operating in the Ghz range. However, microwave ovens will heat
> > even distilled water quite effectively and heating is defined as an
increase
> > in vibrational energy of molecules. So however the process actually
works,
> > some principle of resonance must exist to allow the excitation of the
water
> > molecules to occur. Either that, or microwave ovens actually work by
heating
> > the food with infra red radiation derived using waste heat from the
> > magnetron and we have all been fooled. :-)
> >
>
>
> Increased molecular motion certainly
> accompanies increased temperature, but
> depending on the water's salt content,

> the skin depth of water at microwave
> oven frequencies is 0.5cm to 4.7cm. So I
> guess it is an absorption phenomenon,
> rather than resonance. Or, infrared
> radiation from the maagnetron! ;-)
>
> This information, BTW, comes from Ron
> Schmitt's "Electromagnetics Explained".
>
> Chuck
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Chuck

When I learned about radar it was common practice to break the waveguide and stick your hand over the transmitter end to see if you could feel any warmth! If your hand got hot, the magnetron was firing up okay. If you were of a nervous disposition, then a neon bulb was a sissy substitute for a hand.

The marine radar sets on my first ship were all Korean War vintage with a 10 Cm set with a standard range of 96 miles - well over the horizon. The navigators claimed they could spot mountain tops at over 200 miles.

The equipment was all valves and worked for an average of 3 days before each failure. Usually a 2 to 4 hour fault finding job each time. The most spectacular failure occured when the 10 Cm radar continued to work fautlessly through a severe storm before finally packing up when the sun came out. Eventually the waveguide running up the mast to the scanner was found to contain over 30 vertical feet of water! The scanner horn had been holed by a piece of railing torn off the bow in the storm. The metal railing had flown up 60 feet in the air before hitting the scanner horn and holing it. Clearing the water and patching the scanner horn with duct tape restored operation until we docked.

I know that the 10 Cm radar appeared not to have any water heating effects because the water that poured out of the waveguide was freezing and the radar had been continuously switched to transmit until shortly before looking for the fault.

So there is definitely something significant about the 3 Cm wavelengths used in microwave ovens and interaction with water molecules at that frequency.

Mike G0ULI

1129. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:24:31 UTC
From: dplatt@radagast.org
Message-ID: <fdf6j4-utm.ln1@radagast.org>
Source record: 40679

In article <part1of1.1.FnqFhGjGlViw1Q@ue.ph>, somebody wrote:

>What is the result of using a metal mast as the center support of an inverted V
>antenna. Will it work and if so can resonable low SWR be obtained using a
>tuner? Any advice appreciated.

If the metal mast is isolated from the inverted V feedpoint (e.g. you use a center insulator) then there will be no direct current conduction onto the mast. And, if the inverted V is symmetrical with respect to the mast, there won't be much opportunity for current to be induced onto the mast... it'll be exposed to equal-and-opposite RF fields from the two sides of the inverted dipole and the fields will cancel.

Since there will be little or no RF current flowing on the mast, there will be little or no effect on the antenna's feedpoint impedance and radiation pattern.

If you use a coax feedline, you could very easily have more RF flowing on the outside of the coax than on the mast... due to direct conduction at the feedpoint (if you don't use a balun) and due to induction (if the feedline is not positioned symmetrically with respect to the inverted V).

An inverted-V on a metal mast is perfectly capable of having a low SWR, even without a tuner. I have a three-wire inverted-V "fan dipole" (wires cut for 40/20/10-meter operation) mounted from the top of a 25' metal mast, and the SWR is under 2:1 throughout the width of all of these bands. The SWR depends far more on the angle of the V, and the antenna's height above ground, than it does on the presence or absence of the metal mast. Ditto for the antenna's pattern.

So, the answer is "Yes, it will work". As long as you don't connect the V itself, or the coax feedline braid, to the top of the mast, you're unlikely to be able to tell the difference between using a metal mast and a completely nonconductive mast.

You should, of course, apply all relevant safety precautions with respect to lightning, power lines, and so forth.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1130. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 21:30:01 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99434C4B9D51nonenowhere@61.9.191.5>
Source record: 40680

maxpowervk@yahoo.com.au wrote in news:1180713268.474138.279890
@w5g2000hsg.googlegroups.com:

> I came across two ferrite toroids with the measurements of 35mm
> diameter, the hole in the middle is 21mm and it is 13mm thick. On the
> packet it says that the ferrite material is L15. Does anybody know if
> L15 is equivalent to 43 or 61 ferrite material? I have searched the
> net but have been unable to find any information. Any information
> would be appreciated. Cheers.
>

Search Jaycar's site for a LO1238. If that is what you have, you could ask
them for data.

Owen

1131. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:05:39 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RK08i.9958$4Y.2657@newssvr19.news.prodigy.net>
Source record: 40681

Mike Kaliski wrote:
> So there is definitely something significant about the 3 Cm wavelengths used
> in microwave ovens and interaction with water molecules at that frequency.

From Wikipedia:
"Cooking food with microwaves was discovered by Percy Spencer
while building magnetrons for radar sets at Raytheon. He was
working on an active radar set when he noticed a strange sensation,
and saw that a peanut candy bar he had in his pocket started to melt.
Water, fat, and other substances in the food absorb energy from
the microwaves in a process called dielectric heating. Dipole
rotation is the mechanism normally referred to as dielectric
heating, and is most widely observable in the microwave oven
where it operates most efficiently on liquid water, ..."

I never realized that rotating my dipole was contributing
to global warming. :-)
--
73, Cecil http://www.w5dxp.com

1132. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:06:24 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99435276CA363nonenowhere@61.9.191.5>
Source record: 40682

Owen Duffy <none@no.where> wrote in
news:Xns99434C4B9D51nonenowhere@61.9.191.5:

...
> Search Jaycar's site for a LO1238. If that is what you have, you could
> ask them for data.

I should have added that I think it is similar to the L8 material described
in their data sheets.

I have a vague recollection of measuring the inductance of a winding on the
material, and I think the ui was around 1500 which suggests it is low loss
up to a few hundred kHz, perhaps to 1MHz or so.

Owen

1133. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:18:07 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3q5v0$e4l$1@nnrp.linuxfan.it>
Source record: 40683

Cecil Moore wrote:

> ...
> I never realized that rotating my dipole was contributing
> to global warming. :-)

I never rotate my dipole unless I am alone with the XYL. :-P

JS

1134. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:25:31 UTC
From: richardharrison@webtv.net
Message-ID: <2597-46609CDB-171@storefull-3255.bay.webtv.net>
Source record: 40685

Art wrote:
"When you refer it to a "mucked up Yagi" you must understand that the Yagi is primarily set up to focus available radiation by redistribution, where as with a Gaussian there is no focusing or relaying of energy by coupling."

Words fail me. Without redistribution, there is only a point source. More than one source is necessary for the radiant energy to produce gain. It is immaterial whether the energy gets to a second source by conduction or radiation. Interaction between the energies of more than one source is essential for gain.

Focus is convergence of energy and is the stuff gain comes from.

Best regards, Richard Harrison, KB5WZI

1135. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:31:58 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180737118.050994.123050@p77g2000hsh.googlegroups.com>
Source record: 40684

On 1 Jun, 13:15, "Dave" <n...@nowhere.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1180725767.888547.256800@u30g2000hsc.googlegroups.com...
>
>
>
>
>
> > On 1 Jun, 11:51, John Smith I <assemblywiz...@gmail.com> wrote:
> >> Cecil Moore wrote:
>
> >> > ...
>
> >> > We know that e = mc^2 All we need is a method
> >> > for conversion of ordinary mass into energy.
>
> >> Cecil:
>
> >> Absolutely!
>
> >> However, I am much more interested in converting energy to matter.
>
> >> Be nice to have a little machine in the backyard converting sunlight
> >> into gold!
>
> >> NO, I am NOT talking about gardening marijuana. <grin>
>
> >> Regards,
> >> JS
>
> > John
> > DO do you think that Americans are not interested in experimenting any
> > more because
> > if anything new comes about that is usefull we can hire the engineers
> > from India
> > who have already done the research? Actually it seems that it has gone
> > beyond that
> > when you see the outcry against the Gaussian antenna or even boiling
> > water.
> > Do Americans really believe really believe that all is known and it is
> > a waste of time
> > to experiment? That if you are educated under the American system you
> > have the

> > ability to determine before hand what will work and what will not
> > work?
> > As an immigrant I was asked by the media the other day do I believe
> > that immigrants
> > that do the work that Americans wont do have a different aproach to
> > life?
> > I pointed him to read this newsgroup and make up his own mind , but I
> > also did tell
> > him to look up history to see how past Empires were lost, but I am not
> > sure
> > that he got my point
> > Art
>
> and just how do you know who on this group was educated where??

Are you nuts? Americans stand out so heavily regardless of where in
the
World they are together with the alteration of English.
When you go overseas it is americans who talk the loudest,
why I don't know. They also believe that foreighners cannot
understand English and make fools of themselves talking about
the resident travelers.
The movie The Quiet American was just an a abberation.
I would say however that foreigners should really visit
the Mid West before they form an opinion of America
as the people are so gentlemanly here compared to the big cities
and coastal areas. As far as getting an opinion on your
educational level I am sure that reading your postings
would give a accurate reflection of your education and
your personal 'curtiousness' as I am sure that you are
doing the best that you can every time you put pen
to paper such that it really reflects you and what
you really are.You are doing your best aren't you?
Art

>
> maybe those of us educated under the 'American' system have enough common
> sense to recognize snake oil when we see it??
>
> A question for you... when was the last time you saw some really new
> invention that wasn't eventually proven to be fraud or bad science announced
> first on a usenet news group??? or on a tv news show???- Hide quoted text -
>
> - Show quoted text -

Oh come on! People know on the net that all is known and there is
nothing new,
why should I argue with that aproach and who could I convince
otherwise?
Art

1136. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 22:48:10 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <7pydnfdtnfsVP_3bnZ2dnUVZ8sOonZ2d@bt.com>
Source record: 40686

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:RK08i.9958$4Y.2657@newssvr19.news.prodigy.net...
> Mike Kaliski wrote:
> > So there is definitely something significant about the 3 Cm wavelengths
used
> > in microwave ovens and interaction with water molecules at that
frequency.
>
> From Wikipedia:
> "Cooking food with microwaves was discovered by Percy Spencer
> while building magnetrons for radar sets at Raytheon. He was
> working on an active radar set when he noticed a strange sensation,
> and saw that a peanut candy bar he had in his pocket started to melt.
> Water, fat, and other substances in the food absorb energy from
> the microwaves in a process called dielectric heating. Dipole
> rotation is the mechanism normally referred to as dielectric
> heating, and is most widely observable in the microwave oven
> where it operates most efficiently on liquid water, ..."
>
> I never realized that rotating my dipole was contributing
> to global warming. :-)
> --
> 73, Cecil http://www.w5dxp.com

Cecil

Thanks for that. I know that a company called Tappan started producing domestic microwave ovens as early as 1948 in the US. I have a rebranded model bought new in the UK in 1980 that's still going strong and in daily use. I had to open it up once when the lamp blew and took out an internal fuse. Inside the casing was a full circuit diagram with part numbers and full contact details for service. American engineering, built like a brick out house and it does what it says on the box. No turntable, just a glass shelf and power is either on or off. I have heard that some of the original 1948 models are still working and have no reason to disbelieve it.

Now if only everything else could be built to last like this...

Mike G0ULI

1137. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-01 23:51:58 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180741918.731462.237210@p77g2000hsh.googlegroups.com>
Source record: 40687

On 1 Jun, 13:25, John Smith I <assemblywiz...@gmail.com> wrote:
> Dave wrote:
>
> > ...
>
> > and just how do you know who on this group was educated where??
>
> > maybe those of us educated under the 'American' system have enough common
> > sense to recognize snake oil when we see it??
>
> > A question for you... when was the last time you saw some really new
> > invention that wasn't eventually proven to be fraud or bad science announced
> > first on a usenet news group??? or on a tv news show???
>
> Did you use that same argument when quantum physics was first being
> discussed?
>
> If not, how did you know that "insane phenomenon" was real?
>
> Although we have already developed experimental quantum computers and we
> can exploit the phenomenon, we do not understand the underlying physics
> to any real degree ...
>
> JS

Hold on now John. He was one of the first to find out that american
mathematics
was given incorrect answers. He pointed that out when that MIT doctor
gave the mathematics to prove that adding the unit of time to both
sides
of the equation (Gaussian statics law) changed a conservative field
to a non conservative field with respect to radiation.
On top of that most of the experts on the net agree with him.
To point out that american mathematics does not support
those of Gauss and Maxwell is indeed a major achievement and has
gained him mass support from the resident experts. All resist the idea
that
equilibrium exists.
Art

1138. just broowing this old post

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 03:07:44 UTC
From: Mark@kb9rqz.org
Message-ID: <emn163d8jgji74f6ani90gfuov3fs97a62@4ax.com>
Source record: 40688
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
Dlod it would help if you went and found some gruop where everybody is
indeed stupid to try your misderection tricks in

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1139. Re: just broowing this old post

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 03:15:19 UTC
From: Dloyd Lavies <DloydLavies@gmail.com>
Message-ID: <1180754119.574881.200320@p47g2000hsd.googlegroups.com>
Source record: 40689
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Jun 1, 11:07?pm, M...@kb9rqz.org wrote:
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >K4YZ wrote:
> >> Nope.
>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
>
> >> Sounds like Lennie, to me....
>
> >> Steve, K4YZ
>
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
>
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
>
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
>
> >JS
>
> Dlod it would help if you went and found some gruop where everybody is
> indeed stupid to try your misderection tricks in
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head

>
> http://kb9rqz.bravejournal.com/
>
> G
>
> --
> Posted via a free Usenet account fromhttp://www.teranews.com- Hide quoted text -
>
> - Show quoted text -

Mark, why would I need a group where everyone is stupid when I have
you? You seem to have enough stupidity to cover the entire group.
Like I've said and you can believe what you want to believe, I really
don't care, I only post under this nym or my own call, I don't need
mulitple nyms, I have no need, one is sufficent and appears that it
still is because you have been unable to detect who I am. Think for a
minute Mark, what purpose would it serve to have multiple nyms? None.

Dloyd

www.kb9rqz.blogspot.com

1140. Re: just broowing this old post

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 03:19:29 UTC
From: Mark@kb9rqz.org
Message-ID: <i7o16356h6hrkimqaem1nmaeav0le8f32t@4ax.com>
Source record: 40690
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Jun 2007 20:15:19 -0700, Dloyd Lavies
<DloydLavies@gmail.com> wrote:

>On Jun 1, 11:07?pm, M...@kb9rqz.org wrote:
>> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>>
>>
>>
>>
>>
>> <assemblywiz...@gmail.com> wrote:
>> >K4YZ wrote:
>> >> Nope.
>>
>> >> The IP Address and servers are complete proof that I do NOT share
>> >> any annonymous character's "address".
>>
>> >> Sounds like Lennie, to me....
>>
>> >> Steve, K4YZ
>>
>> >To anyone with even an elementary understanding of anonymous proxies,
>> >anonymous remailers, zombie backdoors, etc., the ability to change ones
>> >IP address and header details is simplistic, indeed, with little time
>> >spent anyone can appear to be "coming" from anywhere in the world.
>>
>> >You waste my time. Worse, you think us all idiots here. You remind me
>> >of the "street smart" prosecutors and defense attorneys who stack jurys
>> >with members of little or no technical knowledge and then call in
>> >"expert witnesses" and propose arguments of technical details to boggle
>> >their minds.
>>
>> >You have only proven that you, yourself are either ignorant to such
>> >technical details, or else you are indeed street smart, I favor the
>> >latter in this case (however, if you in the dark about such things, 15
>> >minutes on google will enlighten you.)
>>
>> >JS
>>
>> Dlod it would help if you went and found some gruop where everybody is
>> indeed stupid to try your misderection tricks in
>>
>> "one useless man is disgrace 2 become a law firm 3 or more become a congress"

>> adams
>>
>> woger you are a Congress all in your own head
>>
>> http://kb9rqz.bravejournal.com/
>>
>> G
>>
>> --
>> Posted via a free Usenet account fromhttp://www.teranews.com- Hide quoted text -
>>
>> - Show quoted text -
>
>Mark, why would I need a group where everyone is stupid when I have
>you?
you might convince somebody you were a man in such a gruop

and you don't have me dloyd

> You seem to have enough stupidity to cover the entire group.

and you are theif a fraud and a coward all things that make for a BAD
ham

>Like I've said and you can believe what you want to believe, I really
>don't care,

might generous of you

> I only post under this nym or my own call, I don't need
>mulitple nyms,
so you say but you are proven dishonest so...

> I have no need,
that is a lie you need the other to have something to tlak to when the
thread does not go your way

> one is sufficent and appears that it
>still is because you have been unable to detect who I am. Think for a
>minute Mark, what purpose would it serve to have multiple nyms? None.

you keep lying te purpose it to sound like a legion when you are only
one bitter old ham

lacking the support of anybody real you invent followers plenty of
prupose there

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1141. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 03:27:56 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4660e3ae$0$21257$39cecf19@news.twtelecom.net>
Source record: 40691

Richard Clark wrote:
> On Fri, 1 Jun 2007 12:31:23 -0400, "Jimmie D"
> <GFENDER@carolina.rr.com> wrote:
>> "Richard Clark" <kb7qhc@comcast.net> wrote in message
>>> Why does a gaussian array need 10 elements to get less?
>> Has there ever been a definition of a guassian array. From the best I can
>> figure ART just claimed it otbe a bunch of random lengths mounted on a boom
>> but every time I see a model he presents its just a mucked up yagi.
>
> Hi Jimmie,
>
> The definition of a gaussian array, by "theory" is something that
> changes to fit the occasion (or it could be said to be a new work of
> science that is still in progress).
>
> The definition of a gaussian array, by performance, is an inferior
> antenna that is more difficult to erect than the relatively mundane
> example of the NBS Yagi. I didn't pick the NBS for its spectacular
> performance (there are better designs), I simply picked the first
> model available so as to not waste time (yet again).
>
> 73's
> Richard Clark, KB7QHC

An NBS beats it? Those are considered to be the absolute dreck of the
VHF and up antenna world.

Anyone could compete with this bunch. Would be a perfect government
contract. ;)

tom
K0TAR

1142. Manual or Schematic for Cushcraft "ATV5" Multiband Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 04:16:47 UTC
From: Kevin Hastings <myfamilydotcom@hotmail.com>
Message-ID: <4660ef3d$0$4069$9a566e8b@news.aliant.net>
Source record: 40692

Last weekend I asked for help from this group about a mystery vertical I bought at a swap met (see 'Help Setting Up Unidentified Cushcraft Multiband Vertical' May 29th).

It now appears that this is a very old Cushcraft ATV5, but that's all I've been able to learn.

Could anybody scan me the manual for such an antenna so I can experiment with it this weekend?

Thanks,

Kevin
VE9-XYZ
myfamilydotcom@hotmail.com

1143. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 04:53:04 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1180759984.841376.133670@r19g2000prf.googlegroups.com>
Source record: 40693

On Jun 1, 10:32 am, art <aun...@insightbb.com> wrote:

> Jimmie
> Let us talk common sense. Remember its origins is based on a static
> field
> ...
> Art

Art,

I don't much care what the _definition_ is, but I am interested in what the _purpose_ is. In terms of "features and benefits," why would I care about this antenna? At least with the "crossed field antenna" and "fractal antennas," I understood _why_ one would be interested in the claimed benefits (though they never seemed to actually be delivered), but so far I haven't seen anything to get me excited and wanting to learn more about this "Gaussian" thing you've been tossing about with respect to antennas.

Please understand that there are plenty of cases to which "Gaussian" is applied that I do see the benefit to, both practical and theoretical, but this "Gaussian antenna" thing is just leaving me cold, so far.

Cheers,
Tom

1144. Re: Manual or Schematic for Cushcraft "ATV5" Multiband Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 05:33:33 UTC
From: F8BOE <f8boe@bluemail.ch>
Message-ID: <4661012d$0$11894$426a74cc@news.free.fr>
Source record: 40694

Kevin Hastings wrote:

> Last weekend I asked for help from this group about a mystery vertical I
> bought at a swap met (see 'Help Setting Up Unidentified Cushcraft
> Multiband Vertical' May 29th).
>
> It now appears that this is a very old Cushcraft ATV5, but that's all I've
> been able to learn.
>
> Could anybody scan me the manual for such an antenna so I can experiment
> with it this weekend?
>
> Thanks,
>
> Kevin
> VE9-XYZ
> myfamilydotcom@hotmail.com

cushcraft used to have pdf manuals on it's homepage

Ciao @+

1145. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 10:21:21 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46614498$0$30612$4c368faf@roadrunner.com>
Source record: 40695

wrote in message news:part1of1.1.FnqFhGjGlViw1Q@ue.ph...
> What is the result of using a metal mast as the center support of an
> inverted V
> antenna. Will it work and if so can resonable low SWR be obtained using a
> tuner? Any advice appreciated.
>
> TIR

I had an inverted V for 80m supported from the top of my Rohn 25 tower

It was not directly supported by the tower but ratherit was suspended from
the end of a wooden yardarm.

Jimmie

1146. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 10:47:54 UTC
From: Philo <philo@nospampse.be>
Message-ID: <uVb8i.210120$6i1.1574963@phobos.telenet-ops.be>
Source record: 40696

```
"Philo" <philo@nospampse.be> wrote in message
news:6508i.209233$o6.1856613@phobos.telenet-ops.be...
> "Philo" <philo@nospampse.be> wrote in message
> news:7X%7i.209219$Sm7.1843248@phobos.telenet-ops.be...
>> No problem at all. I use a steel telescopic pylon, 20 m long.
>>
>> It supports two inverted V's: one for 40 m and one for 80 m. The wires
>> are kept 20 cm apart by 5/8" plastic tubing. The two inverted V's are fed
>> in parallel through a 1/4 balun at the end of a 50 ohms cable.
>>
>> VSWR is almost 1/1 for 40 m. On 80 m the VSWR varies from 1/1 to 1,8/1.
>>
>> At least 200 kHz of the 80 m band can be within 1,5/1. Of course, the
>> length of the elements determines witch part of the band that is.
>>
> That should have been "...which part of the band that is".
> Sorry, my English stinks...
>
Sorry, one more correction: the balun is a 1/1 type.
```

1147. Anti Corona Caps

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 11:53:03 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <GI-dnTbCgtzux_zbRVnytQA@bt.com>
Source record: 40697

Only Applicable to UK readers (sorry) but I noticed that Sainsburys Home Base (Norwich, Norfolk) have some stainless steel globes in their gardening section. Globes are £15 for one about a foot across and £20 for a larger 18 inch version. Quite a few of the balls on display had dents in them, so perhaps a lower price could be negotiated :-)

Strikes me that these globes would make ideal anti corona/capacitance caps for high power LF vertical antennas or perhaps a suitable cap for a Tesla coil.

Previously I have seen dedicated suppliers charge £80-£100 for this sort of stuff. Just thought this might be useful info especially if they are available across the UK.

Mike G0ULI

1148. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 12:02:09 UTC
From: richardharrison@webtv.net
Message-ID: <2597-46615C41-258@storefull-3255.bay.webtv.net>
Source record: 40698

Art wrote:
"With respect to the rest of your words, they fail me too."

OK, I`ll try again.

Antenna gain results from interference, constructive and destructive.
Two or more sources are needed to interfere.

Best regards, Richard Harrison, KB5WZI

1149. Re: Manual or Schematic for Cushcraft "ATV5" Multiband Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 13:06:26 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <rXd8i.391410$7g3.127472@newsfe14.phx>
Source record: 40699

There is a manual for a Cushcraft AV5 at URL:
http://www.cushcraft.com/support/pdf/av3482.pdf
Is that the one?
Lamont

"F8BOE" <f8boe@bluemail.ch> wrote in message
news:4661012d$0$11894$426a74cc@news.free.fr...
> Kevin Hastings wrote:
>
>> Last weekend I asked for help from this group about a mystery vertical I
>> bought at a swap met (see 'Help Setting Up Unidentified Cushcraft
>> Multiband Vertical' May 29th).
>>
>> It now appears that this is a very old Cushcraft ATV5, but that's all
>> I've
>> been able to learn.
>>
>> Could anybody scan me the manual for such an antenna so I can experiment
>> with it this weekend?
>>
>> Thanks,
>>
>> Kevin
>> VE9-XYZ
>> myfamilydotcom@hotmail.com
>
> cushcraft used to have pdf manuals on it's homepage
>
> Ciao @+

1150. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 13:54:21 UTC
From: nm5k@wt.net
Message-ID: <1180792461.560632.78820@q69g2000hsb.googlegroups.com>
Source record: 40700

On Jun 1, 11:30 am, Richard Clark <kb7...@comcast.net> wrote:

>
> This means that the NBS yagi is 110% efficient compared to a gaussian
> array. This is due to the physics of Newtonian Bales which is
> superior to gaussian bundles.
>
> 73's
> Richard Clark, KB7QHC

Hummm, I think newtonian bales, and gaussian bundles are both inferior
to cluster &^%$'s... :/
MK

1151. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 14:00:08 UTC
From: maxpowervk@yahoo.com.au
Message-ID: <1180792808.218763.251660@n15g2000prd.googlegroups.com>
Source record: 40701

Hello Owen,
I have tracked the product down to Jaycar but they don't know anything about the material. The person I contacted was very vague and couldn't steer me towards anybody that would know what material it was. All I want to know is if the toroids would be any good for HF 1:1 baluns. I have just made a balun using a FT-140-61 which is very close to the same dimensions as the 2 toroids in the Duratech packet. If they can be used they are a fair bit cheaper than sourcing FT-140-61 toroids.
In reply to Richard Clark, yes I do have a SWR meter.
Cheers
Max

1152. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 14:46:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9pf8i.10153$4Y.6557@newssvr19.news.prodigy.net>
Source record: 40702

maxpowervk@yahoo.com.au wrote:
> All I
> want to know is if the toroids would be any good for HF 1:1 baluns.

An antenna analyzer, like the MFJ-259B, is a very
useful piece of test equipment for all types of
measurements of this kind. Using the MFJ-259B, I
discovered that the Amidon brochure, "showing typical
'Z' in ohms for one turn at 25 MHz", is misleading.
Their "one turn" goes through the core twice which
I consider as being two turns. That's bad news for
w2du baluns.

If you could gain access to an MFJ-259B, you could
run the same kind of measurement on your toroids.
Heck, if you send one to me, I will run the experiment
and send it back to you.
--
73, Cecil http://www.w5dxp.com

1153. Re: Manual or Schematic for Cushcraft "ATV5" Multiband Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 15:09:23 UTC
From: Kevin Hastings <myfamilydotcom@hotmail.com>
Message-ID: <46618827$0$4035$9a566e8b@news.aliant.net>
Source record: 40703

No, this is not the AV5, it's the ATV5 which has completely different dimensions, which makes it harder to figure out/ This one is NOT on their website.

Thanks,

Kevin

"Kevin Hastings" <myfamilydotcom@hotmail.com> wrote in message news:4660ef3d$0$4069$9a566e8b@news.aliant.net...
> Last weekend I asked for help from this group about a mystery vertical I
> bought at a swap met (see 'Help Setting Up Unidentified Cushcraft
> Multiband Vertical' May 29th).
>
> It now appears that this is a very old Cushcraft ATV5, but that's all I've
> been able to learn.
>
> Could anybody scan me the manual for such an antenna so I can experiment
> with it this weekend?
>
> Thanks,
>
> Kevin
> VE9-XYZ
> myfamilydotcom@hotmail.com
>

1154. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 15:20:42 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1180797642.285325.209440@a26g2000pre.googlegroups.com>
Source record: 40704

On Jun 2, 7:20 am, art <aun...@insightbb.com> wrote:
> On 1 Jun, 21:53, K7ITM <k...@msn.com> wrote:
>
>
>
> > On Jun 1, 10:32 am, art <aun...@insightbb.com> wrote:
>
> > > Jimmie
> > > Let us talk common sense. Remember its origins is based on a static
> > > field
> > > ...
> > > Art
>
> > Art,
>
> > I don't much care what the _definition_ is, but I am interested in
> > what the _purpose_ is. In terms of "features and benefits," why would
> > I care about this antenna? At least with the "crossed field antenna"
> > and "fractal antennas," I understood _why_ one would be interested in
> > the claimed benefits (though they never seemed to actually be
> > delivered), but so far I haven't seen anything to get me excited and
> > wanting to learn more about this "Gaussian" thing you've been tossing
> > about with respect to antennas.
>
> > Please understand that there are plenty of cases to which "Gaussian"
> > is applied that I do see the benefit to, both practical and
> > theoretical, but this "Gaussian antenna" thing is just leaving me
> > cold, so far.
>
> > Cheers,
> > Tom
>
> The definition was requested and I answed that request
> The Gaussian thing I am tossing around is something that the experts
> refuse
> to acknoweledge in any way. Over more than twenty years this group of
> experts have attacked all experimentors and have got away with it.
> I am a experimentoras you know and I have been attacked since day one
> over my experiments and patents. On the Gaussian thing they refuse to
> acknoweledge
> the connection between Gaussian statics law and other laws of the
> masters.
> Even a Doctrate holder tried to convince them of the connecting
> mathematics

> but they have rejected all. To me it suggest that over the years
> many of these suedo experts have over estimated their abilities. Why
> they refuse
> the Gaussian connection I do not know but I am going to hammer away at
> it because
> there are many silent observers who surely understand the physics
> involved.
> And each time I bring the subject up I smile as protagonists continue
> to deny the
> Gaussian connection. Actually Tom if a person or group finally came to
> their sences
> and acknoweledged the Gaussian connection that I flaunt we all we be
> on a more stable keel.
> They asked for the mathematical proof after I presented the antenna,
> that mathematical proof
> was provided and the Gaussian connection was rejected.
> To me and others this sort of thing has happened time and time again,
> I am not running away
> as other hams have been forced to do. I will stay until they are
> forced to acknoweledge
> the fickIties of science where ever it may lead and I will continue to
> make an
> example of the assailants inadequacies with respect to experimentation
> and its findings.
> I am an east ender from London, if I am wrongly pushed I will push
> back regardles of the
> inflicted pain that is applied to me so you better explore other
> tactics to make your points.
> Art

Art,

I'm puzzled why you would go off on that same old rant and ignore the key question I asked: why should I care about this antenna? What are its features and benefits? What are its advantages over competing antennas that have similar features and benefits? I'm not trying to "make points" but simply to understand why I should care about this antenna. You may have previously posted things about that, but I got lost in all the other words that didn't get me excited about it--words that never told me why I would care about it. Is it particularly compact? Is it easy to build? Will it stay together well? Does it do a better job letting me communicate than antennas I already know about?

If it causes you too much pain to tell us why it's an antenna worthy of consideration over other existing antennas, please just ignore my question and I'll go away and let you write whatever you want about it.

Cheers,
Tom

1155. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 15:35:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <be33635jq4u70tlplofoc5jtfhtquu5jfh@4ax.com>
Source record: 40705

On Sat, 02 Jun 2007 06:54:21 -0700, nm5k@wt.net wrote:

>Hummm, I think newtonian bales, and gaussian bundles are both inferior
>to cluster &^%$'s... :/

Hmmmm, that's the first time I've seen &^%$ take the possessive - but
you're right, that's what we're gettin'.

73's
Richard Clark, KB7QHC

1156. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 15:57:43 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <so43635lfqnpf6vnijruf7gm43r5svct5o@4ax.com>
Source record: 40706

On Sat, 02 Jun 2007 09:46:31 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>maxpowervk@yahoo.com.au wrote:
>> All I
>> want to know is if the toroids would be any good for HF 1:1 baluns.
>
>An antenna analyzer, like the MFJ-259B, is a very
>useful piece of test equipment for all types of
>measurements of this kind. Using the MFJ-259B, I
>discovered that the Amidon brochure, "showing typical
>'Z' in ohms for one turn at 25 MHz", is misleading.
>Their "one turn" goes through the core twice which
>I consider as being two turns. That's bad news for
>w2du baluns.
>
>If you could gain access to an MFJ-259B, you could
>run the same kind of measurement on your toroids.
>Heck, if you send one to me, I will run the experiment
>and send it back to you.

Hi Cecil,

You need to move up a notch. Check out http://w5big.com/

I've had one for several months now and won't want to be without it.

Danny, K6MHE

1157. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 16:22:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <BPg8i.7456$5j1.2864@newssvr21.news.prodigy.net>
Source record: 40707

Danny Richardson wrote:
> You need to move up a notch. Check out http://w5big.com/
> I've had one for several months now and won't want to be without it.

Thanks for the URL, Danny - didn't know about it.
--
73, Cecil http://www.w5dxp.com

1158. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 16:53:25 UTC
From: nm5k@wt.net
Message-ID: <1180803205.816808.135140@h2g2000hsg.googlegroups.com>
Source record: 40708

On Jun 2, 9:20 am, K7ITM <k...@msn.com> wrote:
> On Jun 2, 7:20 am, art <aun...@insightbb.com> wrote:

>
> If it causes you too much pain to tell us why it's an antenna worthy
> of consideration over other existing antennas, please just ignore my
> question and I'll go away and let you write whatever you want about
> it.
>
> Cheers,
> Tom

LOL, I can see in his answering post, that he did indeed ignore
your valid question, and spewed forth the usual whiny drivel...
Woe is me, sayeth Art...
Note this comment...
>""You could change the subject to the patent on Constant Impedance
>Matching System since that also was rejected by the amateur
> masses on this newsgroup to add fresh fire to the conversations. ""
Heck, I modeled his small loop/cap thing and proved it did work.
Just fine as far as matching is concerned. But I didn't agree with
his other claims. IE: that there is substantial radiation from the
loop,
etc. He claimed you could steer the pattern, by changing the value
of the cap if I remember right.
I modeled said device, "I called it a loopole", and showed that this
wasn't true.
But I never said it didn't "work" as far as a matching device.
I just said it didn't work like he thinks it does.
This was basically ignored.. He has a fine system of ignoring
any information that does not suit his agenda.
The only problem is I have a fairly decent system of detecting
BS... I really don't even have to know much about whatever it is
being discussed..
If it's BS, I can usually smell it a mile away.. I may not know why
I smell the pecular aroma I do, but I will smell it none the less.
Woe is me, sayeth Art.
MK

1159. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 22:18:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9944547CC3F30nonenowhere@61.9.191.5>
Source record: 40709

maxpowervk@yahoo.com.au wrote in news:1180792808.218763.251660
@n15g2000prd.googlegroups.com:

> Hello Owen,
> I have tracked the product down to Jaycar but they don't know anything
> about the material. The person I contacted was very vague and couldn't
> steer me towards anybody that would know what material it was. All I
> want to know is if the toroids would be any good for HF 1:1 baluns. I

You didn't ask that question initially.

As I said, I think that the material is low loss below about 1MHz. I am away from home at the moment and don't have access to my records of testing the things.

I doubt that the material is suitable for a HF voltage balun. Lossy ferrite is still usefull for suppression purposes, and you could probably use the cores for a 1:1 choke style balun at HF. One of the issues with lossy choke baluns is efficiency of the solution, and more importantly power rating.

Jaycar also sell powdered iron cores in similar sizes (LO1246, HY-2 material, ui 75, Al 165nH). They have much lower ui (need more turns for a given inductance), lower loss, and are more expensive.

> have just made a balun using a FT-140-61 which is very close to the
> same dimensions as the 2 toroids in the Duratech packet. If they can
> be used they are a fair bit cheaper than sourcing FT-140-61 toroids.

For some reason, US magnetics are overpriced in Oz. It seems everyone charges FedEx rates to post a couple of dollars worth of cores that should fit in a padded bag for $5. There is a market there for someone in the US to sell reasonably priced Fair-rite or similar cores on Ebay with low postage.

The other option is to try Neosid in Sydney, have a look at their web site. I know they do a range of ferrites and powdered iron cores of various shapes and sizes.

> In reply to Richard Clark, yes I do have a SWR meter.

If a given balun causes a poor SWR reading on a known dummy load, then the balun is inadequate, but the converse does not necessarily apply. The test is an important one, but not comrehensive.

Owen

1160. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-02 22:28:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9944563F01226nonenowhere@61.9.191.5>
Source record: 40710

Cecil Moore <nospam@w5dxp.com> wrote in news:9pf8i.10153$4Y.6557
@newssvr19.news.prodigy.net:

> maxpowervk@yahoo.com.au wrote:
>> All I
>> want to know is if the toroids would be any good for HF 1:1 baluns.
>
> An antenna analyzer, like the MFJ-259B, is a very
> useful piece of test equipment for all types of
> measurements of this kind. Using the MFJ-259B, I
...

The '259B is no doubt a handy device, but very limited for measuring components. Have you tried to measure at an inductance that has more than 250 ohms of reactance at some frequency of interest? Have you tried to explore self resonance of a coil..., invariably it runs into the same problem of inductive reactance going off scale way below the point at which self resonance bites in.

When talking about ferrite or powdered iron cored inductors of reactance over 200 ohms, where mu is frequency dependent and flux dependent, I find the '259B nearly useless.

Owen

1161. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 00:11:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13641q9iekj8hcb@corp.supernews.com>
Source record: 40711

Owen Duffy wrote:
>
> The '259B is no doubt a handy device, but very limited for measuring
> components. Have you tried to measure at an inductance that has more than
> 250 ohms of reactance at some frequency of interest? Have you tried to
> explore self resonance of a coil..., invariably it runs into the same
> problem of inductive reactance going off scale way below the point at
> which self resonance bites in.
>
> When talking about ferrite or powdered iron cored inductors of reactance
> over 200 ohms, where mu is frequency dependent and flux dependent, I find
> the '259B nearly useless.
>

I've had just the opposite experience. I find the 259B to be extremely useful in determining ferrite types and the impedances of inductors. Generally a single "turn" (pass through the hole) is adequate for measurement. For most toroidal inductors the impedance is closely proportional to the square of the number of turns, so the value of multi-turn inductors can be extrapolated with reasonable accuracy. Of course, two or three turns can be used for measurement if the unit can't resolve the impedance of a single turn.

The frequency dependence of the mu and loss is just why the 259B is so useful -- I can find the impedance at the frequency or range of frequencies it'll be used at.

I very seldom design magnetic components for applications where flux density noticeably alters the impedance. If the signal is so large as to permit this to happen, you'll be generating serious harmonics and, if multiple signals are present, intermod. If the saturation is being caused by DC, it's often possible to bias the core with the same current while making measurements. And I've never hit a powdered iron core with enough signal or DC to get anywhere near saturation. They tolerate much higher flux density than ferrites.

I'd really feel handicapped in designing baluns and wideband transformers, in particular, without my 259B or something similar.

Roy Lewallen, W7EL

1162. 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 00:12:47 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <HKqdnUN3BMIdmv_bnZ2dnUVZ8vWdnZ2d@pipex.net>
Source record: 40712

Interestingly, I am able to put out a signal on 6m using a fan dipole designed to work from 20 through 10m. Today I got a report of 5-7 over a 1600 km path. The antenna design can be seen at http://www.radiowymsey.org/FanDipole/FanDipole.gif .

As far as I can see none of the dipoles resonate on 6m - the 40m dipole would if it was straight dipole with no loading coils. I guess one of the dipoles has an odd multiple near enough.

The fan dipole goes into a 50 MHz LPF and then the ICOM 703 ATU. I wonder if anyone has an insight into how this antenna is working on 6m.

Charlie.

--
M0WYM
www.radiowymsey.org

1163. Re: Cushcraft R3 matching network part detail

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 00:22:07 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466209a0$0$21253$39cecf19@news.twtelecom.net>
Source record: 40713

N4VBH wrote:
> Does anyone know what is exactly in the "matching network assembly"
> part for the Cushcraft R3 vertical? I'm sure it's a couple of small
> capacitors, but I need the values in order to build a replacement for
> my antenna. Everything else on the antenna is operational (the tuning
> capacitor, elements, remote control, etc.).
>
> Thanks,
> Prentice
> N4VBH
>

Per Joe, W1JR

HI Tom,

You're in luck. I have one of the largest (if not the most complete)
collections of Cushcraft assembly manuals etc. anywhere.

According to my notes, the lowest capacitor, the one closest to
ground is around 78 pFd and the upper one is around 138 pFd. I'm sure
anything near that value will be sufficient.

73,

Joe, W1JR

At 11:13 PM 6/1/2007, you wrote:
>You may know the answer to this question -
>
>Does anyone know what is exactly in the "matching network assembly"
>part for the Cushcraft R3 vertical? I'm sure it's a couple of small
>capacitors, but I need the values in order to build a replacement for
>my antenna. Everything else on the antenna is operational (the tuning
>capacitor, elements, remote control, etc.).
>
>Thanks,
>Prentice
>N4VBH

1164. Current Unofficial draft

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 00:23:09 UTC
From: keyclownzRnuts@mailinator.com
Message-ID: <1180830189.805722.173350@d30g2000prg.googlegroups.com>
Source record: 40714

Prev by Date: Current Unofficial draft versions of Sections 5.6 and
6.6
Next by Date: Test Message to TG5
Prev by thread: Current Unofficial draft versions of Sections 5.6 and
6.6
Next by thread: Test Message to TG5
Index(es):
Date
Thread

1165. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 00:32:58 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <X_n8i.6720$YM5.4022@bignews2.bellsouth.net>
Source record: 40715

"charlie" <wehatespam@wymsey.co.uk> wrote in message
news:HKqdnUN3BMIdmv_bnZ2dnUVZ8vWdnZ2d@pipex.net...
> Interestingly, I am able to put out a signal on 6m using a fan
> dipole designed to work from 20 through 10m. Today I got a report of
> 5-7 over a 1600 km path. The antenna design can be seen at
> http://www.radiowymsey.org/FanDipole/FanDipole.gif .
>
> As far as I can see none of the dipoles resonate on 6m - the 40m
> dipole would if it was straight dipole with no loading coils. I
> guess one of the dipoles has an odd multiple near enough.
>
> The fan dipole goes into a 50 MHz LPF and then the ICOM 703 ATU. I
> wonder if anyone has an insight into how this antenna is working on 6m.
>

I would not be surprised if its also works on 2 meters as well.
I would think a fan dipole would operate similar to a discone.
But the explanation of how it works is simple : its magic. (fm to some)

1166. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 01:32:21 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <FSo8i.12908$296.8019@newsread4.news.pas.earthlink.net>
Source record: 40716

"charlie" <wehatespam@wymsey.co.uk> wrote in message
news:HKqdnUN3BMIdmv_bnZ2dnUVZ8vWdnZ2d@pipex.net...
> Interestingly, I am able to put out a signal on 6m using a fan
> dipole designed to work from 20 through 10m. Today I got a report of
> 5-7 over a 1600 km path. The antenna design can be seen at
> http://www.radiowymsey.org/FanDipole/FanDipole.gif .
>
> As far as I can see none of the dipoles resonate on 6m - the 40m
> dipole would if it was straight dipole with no loading coils. I
> guess one of the dipoles has an odd multiple near enough.
>
> The fan dipole goes into a 50 MHz LPF and then the ICOM 703 ATU. I
> wonder if anyone has an insight into how this antenna is working on 6m.
>
>
> Charlie.

When 6 meters is hot almost anything will work. I had put together a 6
meter to 20 meter transverter running about 10 watts. Hooked it to a
trapped dipole (40 to 10 meters) and the first contact I made was from
North Carolina to Canada.

To see how well the antenna is working you need something to compair it to.
Say a 6 meter dipole .

1167. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 02:49:57 UTC
From: dplatt@radagast.org
Message-ID: <lrm9j4-tvj.ln1@radagast.org>
Source record: 40717

>Interestingly, I am able to put out a signal on 6m using a fan
>dipole designed to work from 20 through 10m. Today I got a report of
>5-7 over a 1600 km path. The antenna design can be seen at
>http://www.radiowymsey.org/FanDipole/FanDipole.gif .
>
>As far as I can see none of the dipoles resonate on 6m - the 40m
>dipole would if it was straight dipole with no loading coils. I
>guess one of the dipoles has an odd multiple near enough.

Resonance of the antenna itself has little (some would say almost
nothing) with the antenna's ability to radiate. Resonant or not, if
you can get power into the radiator, it'll radiate!

Using a resonant antenna is convenient, in many situations, because it
can provide a convenient feedpoint inpedance (no reactance, and a
modest resistive impedance) which is easy to match to the feedline.

However, it's not necessary. You can radiate very effectively with a
non-resonant antenna, if you can match it to the transmitter's needs
in a way which doesn't introduce high losses. The matching can be
performed either at the transmitter (as you're doing it) or at the
antenna feedpoint. The latter is usually more efficient, but is often
less flexible.

Using non-resonant antennas, with a coax feedline, and matching at the
transmitter with an ATU, is an approach which tends to have a bad
reputation among modern hams, because of the high losses which can
result. Low-impedance coax feedlines carry relatively high currents,
and (in high-SWR situations) the I^2*R losses can add up fast and eat
most of your power. Add in the internal losses in an ATU when it's
tuned to match a difficult load, and you can end up with a pretty
weak-sounding signal.

The same non-resonant antenna, fed using a balanced ATU using
high-impedance balanced feedline, or matched at the feedpoint, could
be a lot more efficient.

My guess is that either your 17M or 20M segment is close enough to a
3/2-wavelength doublet on 6M (as you guess) so that its feedpoint
impedance isn't too terribly reactive. Referenced to a 50-ohm feed,
it might present a feedpoint impedance between 5:1 and 10:1... high
enough that you'll have some significant excess loss on the feedline,
but not enough to cripple your operation.

--
Dave Platt <dplatt@radagast.org> AE6EO

Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1168. Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 07:57:26 UTC
From: Thomas & Karen Mitchell <kg7uATolympus.net>
Message-ID: <qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com>
Source record: 40718

(I realize that a through-the-glass antenna is less than ideal.
Nevertheless, that's what I have to use in my situation.) The one I
have is for 2 meters (NOT dual band), and the label says up to 50
watts. I have an Icom IC-2200H, which has a maximum of 65 watts
output.

What bad things may/could/will happen if I put 65 watts through the
antenna?

Thanks!

Tom Mitchell -- KG7U
Port Angeles, Washington. USA

Tom Mitchell, Port Angeles, Washington, USA
http://www.olympus.net/personal/kg7u

1169. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 10:25:31 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <EZSdnRMDCaLpCv_bRVnytAA@bt.com>
Source record: 40719

"Thomas & Karen Mitchell" <kg7uATolympus.net> wrote in message
news:qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com...
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> --
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> --

Tom

Through glass antennas work using capacitance. The two plates either side of the glass form the capacitance with the glass acting as the insulator. Attempting to put too much power through a capacitor usually results in overheating or a breakdown of the insulator. This could potentially result in a broken screen.

Another thing to consider is the mismatch that the through glass capacitor makes with your transmitter. Some of the power will inevitably be reflected back to the output stages causing possible overheating at full power.

I would guess that 65 watts would be safe enough for brief transmissions but for longer chats keep the power down below 50 watts. For mobile use, the difference in signal strength, a fraction of an S-point, is unlikely to be noticed by anyone receiving your signal.

Mike G0ULI

1170. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 13:20:40 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <kjf563lv53nniq7knvlr96lhtbo1cgn2mv@4ax.com>
Source record: 40720

On Sun, 03 Jun 2007 01:12:47 +0100, charlie <wehatespam@wymsey.co.uk>
wrote:

>Interestingly, I am able to put out a signal on 6m using a fan
>dipole designed to work from 20 through 10m. Today I got a report of
>5-7 over a 1600 km path. The antenna design can be seen at
>http://www.radiowymsey.org/FanDipole/FanDipole.gif .
>
>As far as I can see none of the dipoles resonate on 6m - the 40m
>dipole would if it was straight dipole with no loading coils. I
>guess one of the dipoles has an odd multiple near enough.
>
>The fan dipole goes into a 50 MHz LPF and then the ICOM 703 ATU. I
>wonder if anyone has an insight into how this antenna is working on 6m.
>
>
>Charlie.

I can tune my 20 meter dipole to the low end of 6 (that is, 1:1 swr)
using my mfj 986 tuner with the antenna capacitor set at about 4.75.
I'm thinking of just putting up a plain 6 meter dipole, for
comparison.

bob
k5qwg

1171. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 13:57:58 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4662c8dd$0$12499$4c368faf@roadrunner.com>
Source record: 40721

```
"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:EZSdnRMDCaLpCv_bRVnytAA@bt.com...
>
> "Thomas & Karen Mitchell" <kg7uATolympus.net> wrote in message
> news:qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com...
>> (I realize that a through-the-glass antenna is less than ideal.
>> Nevertheless, that's what I have to use in my situation.) The one I
>> have is for 2 meters (NOT dual band), and the label says up to 50
>> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
>> output.
>>
>> What bad things may/could/will happen if I put 65 watts through the
>> antenna?
>>
>> Thanks!
>>
>> Tom Mitchell -- KG7U
>> Port Angeles, Washington. USA
>> --------------------------------------------------------------------------
>> Tom Mitchell, Port Angeles, Washington, USA
>> http://www.olympus.net/personal/kg7u
>> --------------------------------------------------------------------------
>
> Tom
>
> Through glass antennas work using capacitance. The two plates either side
> of
> the glass form the capacitance with the glass acting as the insulator.
> Attempting to put too much power through a capacitor usually results in
> overheating or a breakdown of the insulator. This could potentially result
> in a broken screen.
>
> Another thing to consider is the mismatch that the through glass capacitor
> makes with your transmitter. Some of the power will inevitably be
> reflected
> back to the output stages causing possible overheating at full power.
>
> I would guess that 65 watts would be safe enough for brief transmissions
> but
> for longer chats keep the power down below 50 watts. For mobile use, the
> difference in signal strength, a fraction of an S-point, is unlikely to be
> noticed by anyone receiving your signal.
>
> Mike G0ULI
```

>
>

My friend has a 71 Dodge Charger, He used one because he didnt want to drill any holes in this classic muscle car. He made the mistake of running about 200 wats to the antenna and it caused the plastic sheet in the saftey glas to delaminate.. He has a big white spot on the edge of his rear window now. I have run one without any damage to the window but I got a lot of picket fencing with it. Didnt keep it for long.

Unless you are talking about a classic car drilling a hole in the roof doesnt effect resell valure

Jimmie

1172. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 14:40:28 UTC
From: w9gb <spam_protect@arrl.net>
Message-ID: <coidnYJUI7edTv_bnZ2dnUVZWhednZ2d@comcast.com>
Source record: 40722

Used a 110 watt MASTR 2 mobile through one in 1980s.

What happens after about 2 minutes of talk time -- box heats up and SWR
rises substantially.
When I removed the tuning box a couple years later -- components toasted.

SO, when it says 50 watts maximum -- they mean it.

gb

"Thomas & Karen Mitchell" <kg7uATolympus.net> wrote in message
news:qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com...
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> --
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> --

1173. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 17:14:09 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1180890849.000240.322750@q66g2000hsg.googlegroups.com>
Source record: 40723

On Jun 2, 5:28 pm, Owen Duffy <n...@no.where> wrote:
> The '259B is no doubt a handy device, but very limited for measuring
> components. Have you tried to measure at an inductance that has more than
> 250 ohms of reactance at some frequency of interest? Have you tried to
> explore self resonance of a coil..., invariably it runs into the same
> problem of inductive reactance going off scale way below the point at
> which self resonance bites in.

Like anything else, there is a limit to the usefulness of an MFJ-259B
but
it is far from useless. Toroids can be characterized by using one or
two
windings to keep the impedance within the 259's range. And self-
resonance
in a coil is super easy. Set the coil up as a base loaded mobile
antenna
without a stinger. Find the first lowest impedance. That's self-
resonance
when the coil is 90 degrees long and the reflected wave is
interferring
with the forward wave at the test point.

Some of the things that limits the usefullness of the MFJ-259B are the
concepts
of the user. If one doesn't believe in (or ignores) the separate
existence of the
forward and reflected waves, then the 259 becomes a lot less useful.
--
73, Cecil, w5dxp.com

1174. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 18:42:07 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <13662u6a8m6bpf2@corp.supernews.com>
Source record: 40724

Thomas & Karen Mitchell wrote:
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> ---
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> ---

Tom;

The only thing you want to watch out for is to not place the antenna
pads on one of the defrost wires.
I have used one in the past with good success.
Dave WD9BDZ

1175. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 19:13:15 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <spE8i.10525$4Y.5346@newssvr19.news.prodigy.net>
Source record: 40726

Cecil Moore wrote:
> On Jun 2, 5:28 pm, Owen Duffy <n...@no.where> wrote:
>> The '259B is no doubt a handy device, but very limited for measuring
>> components. Have you tried to measure at an inductance that has more than
>> 250 ohms of reactance at some frequency of interest? Have you tried to
>> explore self resonance of a coil..., invariably it runs into the same
>> problem of inductive reactance going off scale way below the point at
>> which self resonance bites in.
>
> Like anything else, there is a limit to the usefulness of an MFJ-259B
> but
> it is far from useless. Toroids can be characterized by using one or
> two
> windings to keep the impedance within the 259's range. And self-
> resonance
> in a coil is super easy. Set the coil up as a base loaded mobile
> antenna
> without a stinger. Find the first lowest impedance. That's self-
> resonance
> when the coil is 90 degrees long and the reflected wave is
> interferring
> with the forward wave at the test point.
>
> Some of the things that limits the usefullness of the MFJ-259B are the
> concepts
> of the user. If one doesn't believe in (or ignores) the separate
> existence of the
> forward and reflected waves, then the 259 becomes a lot less useful.
> --
> 73, Cecil, w5dxp.com
>

Whaddaya mean, "believe in"? If I pray to the waves, will they
bring good luck?
73,
Tom Donaly, KA6RUH

1176. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 19:13:50 UTC
From: herbert.don@gmail.com
Message-ID: <1180898030.860937.263460@d30g2000prg.googlegroups.com>
Source record: 40725

i do would that help me with my mess of ferrites?

On Jun 1, 1:08 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Fri, 01 Jun 2007 11:03:30 -0700, maxpowe...@yahoo.com.au wrote:
> >I haven't got an antenna analyser to do the above checks.
>
> Do you have a SWR meter?
>
> 73's
> Richard Clark, KB7QHC

1177. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 19:27:15 UTC
From: herbert.don@gmail.com
Message-ID: <1180898835.597528.217070@z28g2000prd.googlegroups.com>
Source record: 40777

3 elements does sound more efficient than 10 gassians
what woud the best 10 element gain look like?

On Jun 1, 10:05 am, art <aun...@insightbb.com> wrote:
> On 1 Jun, 09:15, Richard Clark <kb7...@comcast.net> wrote:
>
>
>
> > On Fri, 01 Jun 2007 09:04:21 -0700, Richard Clark <kb7...@comcast.net>
> > wrote:
>
> > >With 2 minutes of modeling (and using the only 3 element yagi model
> > >offered by EZNEC for FREE), I got 15.14 dBi.
>
> > Add another minute, and I could raise it to:
> > 15.23 dBi
> > no, no, another 15 seconds to get:
> > 15.47 dBi
>
> > Do 10 element gaussian arrays have poor efficiency?
>
> > 73's
> > Richard Clark, KB7QHC- Hide quoted text -
>
> - Show quoted text -

1178. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 19:32:16 UTC
From: herbert.don@gmail.com
Message-ID: <1180899136.415795.321120@g37g2000prf.googlegroups.com>
Source record: 40778

Sounds like mine (but it is only for SWLing)

On Jun 1, 2:08 pm, Irv Finkleman <fink...@shaw.ca> wrote:
> wrote:
> > What is the result of using a metal mast as the center support of an inverted V
> > antenna. Will it work and if so can resonable low SWR be obtained using a
> > tuner? Any advice appreciated.
>
> > TIR
>
> There must be a million hams using their towers as the center support for
> their vees. In theory the tower is at the electrical center and has little
> or no effect. At least this is my theory!!! There are a few pundits who might
> want to argue the point.
>
> Irv VE6BP

1179. 6 Metre Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 19:58:59 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <npudndwCoMMegP7bRVnyggA@pipex.net>
Source record: 40779

I was wondering if anyone can explain to me how it is that the following antenna puts out a reasonable signal on 6 metres (5-7 over a 1600 km path from England to Spain. The rig is an ICOM IC 703 and the tuned SWR is under 1.4:1 over the whole 6m band and 1:1 from 50.120 to 52 MHz.

The antenna is a loft mounted fan dipole cut and resonated for 40, 20, 17, 15 & 10 metres. You can see the design dimensions at http://www.radiowymsey.org/FanDipole/FanDipole.gif , in practice the dimensions were all trimmed by around 5 per cent. The final resonances at the TX were measured as 14.3, 18.09, 21.188, 28.44 MHz , the centre of the 40m loaded dipole I calculate to resonate at around 30 MHz. There is a 1:1 balun with around 10 metres of coax into a LPF and then the 703. No odd harmonics work out for 6 meters, so I wonder what is doing the radiating?

Charlie.

--
M0WYM
www.radiowymsey.org

1180. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 20:14:24 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <tpidncJpg_S9vP7bRVnyvgA@pipex.net>
Source record: 40780

Ralph Mowery wrote:
<SNIP>
>
> When 6 meters is hot almost anything will work. I had put together a 6
> meter to 20 meter transverter running about 10 watts. Hooked it to a
> trapped dipole (40 to 10 meters) and the first contact I made was from
> North Carolina to Canada.
>
> To see how well the antenna is working you need something to compair it to.
> Say a 6 meter dipole .
>
>
Ralph,

Looks like I'll be up in the loft again next weekend! I had a good
weekend giving away points in the UK 6m Group contest, it's a very
interesting band.

Cheers,

Charlie.

--
M0WYM
www.radiowymsey.org

1181. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 20:16:44 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <tpidnf1pg_Q2vP7bRVnyvgA@pipex.net>
Source record: 40781

Hal Rosser wrote:

>
> I would not be surprised if its also works on 2 meters as well.
> I would think a fan dipole would operate similar to a discone.
> But the explanation of how it works is simple : its magic. (fm to some)
>
>

Hal,

A 2 metre rig is on my shopping list :) Not sure about the magic as
my contacts were all SSB :)

Charlie.

--
M0WYM
www.radiowymsey.org

1182. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 20:31:25 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <CpSdncg4SeGAuP7bnZ2dnUVZ8q6unZ2d@pipex.net>
Source record: 40782

Dave Platt wrote:
<SNIP>
> My guess is that either your 17M or 20M segment is close enough to a
> 3/2-wavelength doublet on 6M (as you guess) so that its feedpoint
> impedance isn't too terribly reactive. Referenced to a 50-ohm feed,
> it might present a feedpoint impedance between 5:1 and 10:1... high
> enough that you'll have some significant excess loss on the feedline,
> but not enough to cripple your operation.
>

Dave,

Thanks for your detailed reply, I certainly need to keep down my
losses with only 10 watts and the indoor antenna.

It's probably the 17m segment because it looks as if the 17 comes
out at around 54MHz. As suggested, next weekend I will put up a 6 m
dipole and make comparisons.

Cheers!

Charlie.

--
M0WYM
www.radiowymsey.org

1183. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 21:08:49 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <C5G8i.14237$C96.5195@newssvr23.news.prodigy.net>
Source record: 40783

Charlie-- That antenna has one of its dipoles
resonate at 18.090 MHz. 3 X 18.090 = Aprox 54
MHZ ! Also, dipoles tend to be broadband
devices. This is the same reason that a 40 Meter
dipole is useable on 15 meters! And, the
SWR doesnt do much more than increase loss in the
feedline (on long runs), so it should work
at least until you get an antenna with some gain
on 6! Jim NN7K

charlie wrote:
> Interestingly, I am able to put out a signal on 6m using a fan
> dipole designed to work from 20 through 10m. Today I got a report of
> 5-7 over a 1600 km path. The antenna design can be seen at
> http://www.radiowymsey.org/FanDipole/FanDipole.gif .
>
> As far as I can see none of the dipoles resonate on 6m - the 40m
> dipole would if it was straight dipole with no loading coils. I
> guess one of the dipoles has an odd multiple near enough.
>
> The fan dipole goes into a 50 MHz LPF and then the ICOM 703 ATU. I
> wonder if anyone has an insight into how this antenna is working on 6m.
>
>
> Charlie.
>

1184. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 21:23:21 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <ejG8i.14243$C96.13220@newssvr23.news.prodigy.net>
Source record: 40784

These are not the most effecient, and depending on
the
glass, you may find that there is some metalic
content in the glass, makeing a perfect match
impossible. Think was a pic, in QST couple months
ago of one (struck by lightning), showed the
fractured glass. But, the difference between
50 and 65 watts is very little in the scheme of
things, Maybe 1 Db. Most likely would make little
difference- the METAL CONTENT of the glass, would
make more difference , as the loss would be heat!
Jim NN7K

Thomas & Karen Mitchell wrote:
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> ---
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> ---

1185. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 23:00:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3vh6d$j28$1@nnrp.linuxfan.it>
Source record: 40785

Tom Donaly wrote:

> ...
> Whaddaya mean, "believe in"? If I pray to the waves, will they
> bring good luck?
> 73,
> Tom Donaly, KA6RUH

Who knows? Maybe?

At the present time, it is unknown if RF energy is photons, waves or a combination of the two. It is known that rf exhibits qualities ...

So yes, a belief akin to what one must hold for his creator is in order here!

But then, you already knew that ...

JS

1186. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 23:10:10 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99455D476305Enonenowhere@61.9.191.5>
Source record: 40786

Roy Lewallen <w7el@eznec.com> wrote in
news:13641q9iekj8hcb@corp.supernews.com:

> Owen Duffy wrote:
>>
>> The '259B is no doubt a handy device, but very limited for measuring
>> components. Have you tried to measure at an inductance that has more
>> than 250 ohms of reactance at some frequency of interest? Have you
>> tried to explore self resonance of a coil..., invariably it runs into
>> the same problem of inductive reactance going off scale way below the
>> point at which self resonance bites in.
>>
>> When talking about ferrite or powdered iron cored inductors of
>> reactance over 200 ohms, where mu is frequency dependent and flux
>> dependent, I find the '259B nearly useless.
>>
>
> I've had just the opposite experience. I find the 259B to be extremely
> useful in determining ferrite types and the impedances of inductors.
> Generally a single "turn" (pass through the hole) is adequate for
> measurement. For most toroidal inductors the impedance is closely
> proportional to the square of the number of turns, so the value of
> multi-turn inductors can be extrapolated with reasonable accuracy. Of
> course, two or three turns can be used for measurement if the unit
> can't resolve the impedance of a single turn.
>
> The frequency dependence of the mu and loss is just why the 259B is so
> useful -- I can find the impedance at the frequency or range of
> frequencies it'll be used at.

Roy, with respect, you are describing work-arounds for the inability of the '259B to make useful measurements on inductors over about 200 ohms reactance.

Sure, the instrument can be used to characterise a core, and that information extrapolated to design an inductor with higher reactance, but you cannot measure the larger inductance directly, or discover reliably, the properties of the larger inductor like self resonance effects, or loss.

I won't address defensive posts by others who seem to have chosen to ignore my qualification "When talking about ferrite or powdered iron cored inductors of reactance over 200 ohms".

An example of the traps: a chap recently confirmed to me that indeed mu is frequency sensitive as demonstrated by the '259B measurement of the

inductance of an inductor over HF which showed inductance was highly frequency dependent. The problem was that the inductive reactance was over 250 ohms at most frequencies of measurement, and the '259B calculates inductance without warning that the value is unreliable because of the magnitude of reactance on which the inductance is calculated. Try measuring a 30uH coil's inductance over 2-30MHz using a '259B and you will see what I mean.

Owen

1187. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 23:16:06 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f3vi3n$jm8$1@nnrp.linuxfan.it>
Source record: 40788

herbert.don@gmail.com wrote:
> i do would that help me with my mess of ferrites?
> ...

1) Is your junk drawer supply good?

2) Got a freq counter?

If you answered yes to the above, build a simple 1 transistor
oscillator. Wrap a few turns on the toroid, and shunt it with a know
capacitance. Read the freq of the oscillator, using a chart available
on the web, note the capacitive reactance of the cap value in ohms.

Since capacitive reactance = inductive reactance in ohms at resonance,
it is now a simple matter to translate in the inductive reactance of the
torrid coil into uh/mh--using the osc freq and a chart from the web ...

Warmest regards,
JS

Since

1188. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-03 23:16:44 UTC
From: nm5k@wt.net
Message-ID: <1180912604.567001.324150@w5g2000hsg.googlegroups.com>
Source record: 40787

On Jun 1, 2:43 pm, <> wrote:
> What is the result of using a metal mast as the center support of an inverted V
> antenna. Will it work and if so can resonable low SWR be obtained using a
> tuner? Any advice appreciated.
>
> TIR

I actually prefer a metal mast. In case of a lightning strike, the
mast
takes the bulk of the energy to ground, instead of my coax doing all
the
dirty work. A vertical on top of the mast can act as a lightning rod,
so all bets are off on those. But with my coax supported a foot or so
below the tip of the mast, feeding dipoles, I've taken strikes with no
coax
damage so far. There is some energy that runs the feedlines, but it's
fairly
small compared to the mast itself. It's enough to make an audible arc
sound
at my coax/bulkhead ground connection though. Thats with the
connectors
screwed in too.. I've never noticed any real RF coupling problems with
a
metal mast. You will see that with metal that parallels the antenna
legs
themselves. One of the worst coupling problems I ever saw as far as
tuning, was with a set of dipoles used next to a large mobile home.
All that metal surface gave us a fit. I had to try quite a few leg
locations/wire
lengths before I could get it tuned halfway decent. That was one of
the
rare cases I've seen where even the lowest band had problems.
MK

1189. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:20:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tvp663p2jvh60hjkiofh22fsr1tbs6gj7l@4ax.com>
Source record: 40790

On Sun, 03 Jun 2007 12:13:50 -0700, herbert.don@gmail.com wrote:

>i do would that help me with my mess of ferrites?
>
>On Jun 1, 1:08 pm, Richard Clark <kb7...@comcast.net> wrote:
>> On Fri, 01 Jun 2007 11:03:30 -0700, maxpowe...@yahoo.com.au wrote:
>> >I haven't got an antenna analyser to do the above checks.
>>
>> Do you have a SWR meter?

Hi Herbert,

Pass a wrap of wire around the material if it is a bar, or through it if it is a toroid. Connect this to the output of the SWR meter. Hit it with a short blip of power and note the SWR. You have the multiple/divisor of 50 Ohms. Give it two wraps, or two passes and repeat for more clues. Repeat at the frequencies of interest. Make a chart.

Try to keep the power low and application short so you don't burn your fingers.

73's
Richard Clark, KB7QHC

1190. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:20:35 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <qpp663l6avjfnv8cfmkef57ql0c7qtphvg@4ax.com>
Source record: 40789

On Sun, 03 Jun 2007 23:10:10 GMT, Owen Duffy <none@no.where> wrote:

>I won't address defensive posts by others who seem to have chosen to
>ignore my qualification "When talking about ferrite or powdered iron
>cored inductors of reactance over 200 ohms".

Owen, are you trying to pull a Cecil or Art by changing the subject of the thread? If you recall, this thread was about identifying an unknown ferrite core. For that purpose *any instrument* capable of measuring Zmag less than 200 ohms will work fine - even one that is restricted to less than 100 ohms.

I 'm not defending the 259 as I use something else here that can measure impedances greater that 20K, but that high range servers no purpose if I am looking a impedances less than 100 ohms.

Danny, K6MHE

1191. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:43:18 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <huidncNqLtQM8_7bnZ2dnUVZ8qCqnZ2d@bt.com>
Source record: 40791

"Thomas & Karen Mitchell" <kg7uATolympus.net> wrote in message
news:qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com...
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> --
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> --
Further to my earlier posting and slightly off topic but I have been
browsing through my car manual and note that the manufacturers specifically
forbid the installation of transmitters operating at more than 10 watts
power. Checking up on this reveals that in the event of some of the
electrical earth bonding connections in the car becoming faulty or breaking
two possible disaster scenarios exist. The first is that the computerised
engine management unit might misfunction causing the engine to suddenly stop
or the antilock braking and stability systems to malfunction. The second is
that the pyrotechnic charges in the airbags might be triggered.

Admittedly these two situations are dependent on a chain of faults/failures
occuring and the manufacturers are just trying to cover themselves against
law suits. Vehicles are tested for electromagnetic immunity at far higher
levels than this, but you might want to double check your manual or with the
manufacturer about the maximum permissible transmitter power if the vehicle
is fairly new, fitted with electronic engine management, safety equipment
and airbags.

Take a deep breath before transmitting with all the controls set to 11...

Mike G0ULI

1192. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:44:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1366rjgl5pnu106@corp.supernews.com>
Source record: 40792

I agree that a 259B does not make a good general purpose instrument for measuring inductor values over the HF range. In fact, there are very few instruments which are. One of the few I know of is the HP 4191A vector impedance meter, but it's not likely to be found in many amateur workshops. Making good impedance measurements at HF is often very much more difficult than most people realize.

The 259B is, I maintain, a very good instrument for identifying core materials and for use in the design of inductors, transformers, and other magnetic components. I've used mine many times for the purpose and gotten the results I expected. That was, I thought, the subject of this thread, but it appears to have drifted elsewhere.

Roy Lewallen, W7EL

Owen Duffy wrote:
>
> Roy, with respect, you are describing work-arounds for the inability of
> the '259B to make useful measurements on inductors over about 200 ohms
> reactance.
>
> Sure, the instrument can be used to characterise a core, and that
> information extrapolated to design an inductor with higher reactance, but
> you cannot measure the larger inductance directly, or discover reliably,
> the properties of the larger inductor like self resonance effects, or
> loss.
>
> I won't address defensive posts by others who seem to have chosen to
> ignore my qualification "When talking about ferrite or powdered iron
> cored inductors of reactance over 200 ohms".
>
> An example of the traps: a chap recently confirmed to me that indeed mu
> is frequency sensitive as demonstrated by the '259B measurement of the
> inductance of an inductor over HF which showed inductance was highly
> frequency dependent. The problem was that the inductive reactance was
> over 250 ohms at most frequencies of measurement, and the '259B
> calculates inductance without warning that the value is unreliable
> because of the magnitude of reactance on which the inductance is
> calculated. Try measuring a 30uH coil's inductance over 2-30MHz using a
> '259B and you will see what I mean.
>
> Owen

1193. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:48:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1366rqii8oa19a5@corp.supernews.com>
Source record: 40793

Richard Clark wrote:
>
> Hi Herbert,
>
> Pass a wrap of wire around the material if it is a bar, or through it
> if it is a toroid. Connect this to the output of the SWR meter. Hit
> it with a short blip of power and note the SWR. You have the
> multiple/divisor of 50 Ohms. . .

Sorry, that's simply not true. You're almost certain to have reactance
-- possibly, a lot of it -- in which case the SWR can be vastly
different than the impedance divided by 50 ohms or its inverse.

Roy Lewallen, W7EL

1194. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 01:50:55 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9945788895EF2nonenowhere@61.9.191.5>
Source record: 40794

Danny Richardson <n_group@k6mhe.com> wrote in
news:qpp663l6avjfnv8cfmkef57ql0c7qtphvg@4ax.com:

> On Sun, 03 Jun 2007 23:10:10 GMT, Owen Duffy <none@no.where> wrote:
>
>>I won't address defensive posts by others who seem to have chosen to
>>ignore my qualification "When talking about ferrite or powdered iron
>>cored inductors of reactance over 200 ohms".
>
> Owen, are you trying to pull a Cecil or Art by changing the subject of
> the thread? If you recall, this thread was about identifying an
> unknown ferrite core. For that purpose *any instrument* capable of
> measuring Zmag less than 200 ohms will work fine - even one that is
> restricted to less than 100 ohms.

A fair point Danny.

I did provide some specific information on the core if you read back
through the posts, probably more than any others!

But I still stand by my statement about the limitations of the '259B in
assessing inductors as qualified.

> I 'm not defending the 259 as I use something else here that can
> measure impedances greater that 20K, but that high range servers no
> purpose if I am looking a impedances less than 100 ohms.

I envy you, seems we always need (want?) to measure something that is
beyond the range of the instrument conveniently to hand.

Owen

1195. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 02:24:59 UTC
From: Larry Benko <xxw0qe@comcast.net>
Message-ID: <4oqdnTEJbaZl6v7bnZ2dnUVZ_h6vnZ2d@comcast.com>
Source record: 40795

Roy Lewallen wrote:
> I agree that a 259B does not make a good general purpose instrument for
> measuring inductor values over the HF range. In fact, there are very few
> instruments which are. One of the few I know of is the HP 4191A vector
> impedance meter, but it's not likely to be found in many amateur
> workshops. Making good impedance measurements at HF is often very much
> more difficult than most people realize.
>

Look at the L/C meter from AADE (Almost All Digital Electronics)
www.aade.com which a 1 hour kit for $99. It is quite accurate and uses
a variable frequency oscillator so that smaller values of inductance and
capacitance are measures at higher frequencies. I own an 8753 HP
Network Analyzer and still use the L/C meter most of the time since it
is so convenient. It easily can tell the differences between
73/43/31/61 materials. I usually wrap 2 turns thru the torroid to do the
measurement.

73,
Larry, W0QE

1196. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:01:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <136704e2rfr8p96@corp.supernews.com>
Source record: 40796

Larry Benko wrote:
>
> Look at the L/C meter from AADE (Almost All Digital Electronics)
> www.aade.com which a 1 hour kit for $99. It is quite accurate and uses
> a variable frequency oscillator so that smaller values of inductance and
> capacitance are measures at higher frequencies. I own an 8753 HP
> Network Analyzer and still use the L/C meter most of the time since it
> is so convenient. It easily can tell the differences between
> 73/43/31/61 materials. I usually wrap 2 turns thru the torroid to do the
> measurement.
>
> 73,
> Larry, W0QE

That looks like a handy gadget. It wouldn't be very good for working with the kinds of ferrites often used for baluns, wideband transformers, or EMI suppression because of the very low Q encountered. Many of the ferrites I use have a Q of one or less over at least part of the frequency range of operation. And of course the L/C meter wouldn't be useful in assessing the loss or Q of inductors at all. One of the unique things about the HP unit is that it's able to resolve very small R in the presence of large X or vice-versa, which is very difficult to do. But then it costs a couple of orders of magnitude more.

A network analyzer is poorly suited for making measurements of impedances which are a great deal higher or lower than 50 ohms.

The problem with any of these instruments is that they'll all happily give you an answer, often to several decimal digits. But as Owen pointed out for the 259B, the answer can be anywhere from good to total garbage. The only way to know which is to understand the limitations of your test equipment and something about the nature of the component you're trying to measure. There just isn't any instrument which will do the thinking for you.

Roy Lewallen, W7EL

1197. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:32:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4j1763dqqt3gh6h0rshuqeu0rta19240tu@4ax.com>
Source record: 40798

On Sun, 03 Jun 2007 18:48:00 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Richard Clark wrote:
>>
>> Hi Herbert,
>>
>> Pass a wrap of wire around the material if it is a bar, or through it
>> if it is a toroid. Connect this to the output of the SWR meter. Hit
>> it with a short blip of power and note the SWR. You have the
>> multiple/divisor of 50 Ohms. . .
>
>Sorry, that's simply not true. You're almost certain to have reactance
>-- possibly, a lot of it -- in which case the SWR can be vastly
>different than the impedance divided by 50 ohms or its inverse.

Simplicity is not to be dismissed that easily (no one needs to spend
$500 to figure out ferrite). A moment's worth of very little power
will suitably allow for heat to discriminate reactance from
resistance.

73's
Richard Clark, KB7QHC

1198. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:32:50 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466387d9$0$16685$4c368faf@roadrunner.com>
Source record: 40797

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:v2h063pof5dejrmb1vh8s1ns6dab0h8mlk@4ax.com...
> On Fri, 01 Jun 2007 09:04:21 -0700, Richard Clark <kb7qhc@comcast.net>
> wrote:
>
>>With 2 minutes of modeling (and using the only 3 element yagi model
>>offered by EZNEC for FREE), I got 15.14 dBi.
>
> Add another minute, and I could raise it to:
> 15.23 dBi
> no, no, another 15 seconds to get:
> 15.47 dBi
>
> Do 10 element gaussian arrays have poor efficiency?
>
> 73's
> Richard Clark, KB7QHC

Wouldnt it be nice if Art did the comparison. He could show how his gassian antenna is better than a yagi. maybe he could find a 2 element antenna his garison antenna is better than.

1199. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:35:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u02763928bsnk9j87gpjp0003f9qujjjko@4ax.com>
Source record: 40799

On Mon, 4 Jun 2007 02:43:18 +0100, "Mike Kaliski"
<michael.kaliski@tesco.net> wrote:

>Take a deep breath before transmitting with all the controls set to 11...

Hi Mike,

Is the warrantee void within 100 yards of a 50KW AM antenna? Or
howabout those half megawatt LF stations that litter the continent?

73's
Richard Clark, KB7QHC

1200. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:45:18 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f401sgres1@nnrp.linuxfan.it>
Source record: 40800

nm5k@wt.net wrote:

> ...
> screwed in too.. I've never noticed any real RF coupling problems with
> a
> metal mast. You will see that with metal that parallels the antenna
> legs
> ...

Amazing we have not heard from the "EZNEC Experts" with plots of a metal
vs. non-metal support ...

JS

1201. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:46:05 UTC
From: Larry Benko <xxw0qe@comcast.net>
Message-ID: <rLudnXFGyNxnF_7bnZ2dnUVZ_vGinZ2d@comcast.com>
Source record: 40801

Roy Lewallen wrote:

> That looks like a handy gadget. It wouldn't be very good for working
> with the kinds of ferrites often used for baluns, wideband transformers,
> or EMI suppression because of the very low Q encountered. Many of the
> ferrites I use have a Q of one or less over at least part of the
> frequency range of operation. And of course the L/C meter wouldn't be
> useful in assessing the loss or Q of inductors at all. One of the unique
> things about the HP unit is that it's able to resolve very small R in
> the presence of large X or vice-versa, which is very difficult to do.
> But then it costs a couple of orders of magnitude more.
>
> A network analyzer is poorly suited for making measurements of
> impedances which are a great deal higher or lower than 50 ohms.
>
> The problem with any of these instruments is that they'll all happily
> give you an answer, often to several decimal digits. But as Owen pointed
> out for the 259B, the answer can be anywhere from good to total garbage.
> The only way to know which is to understand the limitations of your test
> equipment and something about the nature of the component you're trying
> to measure. There just isn't any instrument which will do the thinking
> for you.
>
> Roy Lewallen, W7EL

That is what I thought also Roy but the little L/C meter seems to work pretty well with low Q inductors. It is not measuring impedance but measuring a frequency of an inductor and known capacitor in an oscillator. The Q does change the oscillating frequency but not that much. As I said before it is super easy to tell the difference between 77/31/43/61 type ferrites. Of course the permeability difference between those types is a factor of 2 or more so ultra accuracy is not important. The original question was how to determine what type an unknown core was and not what impedance it represented at a certain frequency.

I just grabbed 3 FairRite 59XX003801 torroids (2.4" OD x 1.4" ID x .5") in 3 materials and measured a single turn with the L/C meter.

Material 61 (u=125) calc. inductance = .173uH, measured = .177uH
Material 43 (u=800) calc. inductance = 1.07uH, measured = .930uH
Material 75 (u=5000) calc. inductance = 6.85uH, measured = 7.39uH

The calculated inductances came from the FairRite catalog. I would say the "low Q" inductors measured pretty well and the materilas were very easy to distinguish.

73,
Larry, W0QE

1202. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 03:51:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4028dres2@nnrp.linuxfan.it>
Source record: 40802

John Smith I wrote:

> ...

I should have mentioned, in case it escaped your attention, a SW receiver will serve as freq counter (watch out for harmonics), if you have patience to hunt the signal ... you can "rough guess" the freq by the expectations of the expected inductance (type 43, 61, etc. and no. of turns) and the capacitance used.

JS

1203. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 04:46:31 UTC
From: richardharrison@webtv.net
Message-ID: <28667-46639927-481@storefull-3256.bay.webtv.net>
Source record: 40803

Jimmy D wrote:
"Wouldn`t it be nice if Art did the comparison?"

Yes. I thought a Gaussian was a 17-sided polygon.

Best regards, Richard Harrison, KB5WZI

1204. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 05:10:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13677moqf5tpbda@corp.supernews.com>
Source record: 40804

Larry Benko wrote:
>
> That is what I thought also Roy but the little L/C meter seems to work
> pretty well with low Q inductors. It is not measuring impedance but
> measuring a frequency of an inductor and known capacitor in an
> oscillator. The Q does change the oscillating frequency but not that
> much. As I said before it is super easy to tell the difference between
> 77/31/43/61 type ferrites. Of course the permeability difference
> between those types is a factor of 2 or more so ultra accuracy is not
> important. The original question was how to determine what type an
> unknown core was and not what impedance it represented at a certain
> frequency.
>
> I just grabbed 3 FairRite 59XX003801 torroids (2.4" OD x 1.4" ID x .5")
> in 3 materials and measured a single turn with the L/C meter.
>
> Material 61 (u=125) calc. inductance = .173uH, measured = .177uH
> Material 43 (u=800) calc. inductance = 1.07uH, measured = .930uH
> Material 75 (u=5000) calc. inductance = 6.85uH, measured = 7.39uH
>
> The calculated inductances came from the FairRite catalog. I would say
> the "low Q" inductors measured pretty well and the materilas were very
> easy to distinguish.

Yep, that's perfectly adequate to distinguish the types. You must have made the measurements at a pretty low frequency. Type 75 has a Q of 1 at about a MHz, and 43 at a few MHz, and they drop at higher frequencies. Will the circuit oscillate with Q that low?

Roy Lewallen, W7EL

1205. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 05:55:32 UTC
From: Larry Benko <xxw0qe@comcast.net>
Message-ID: <Xo2dnZQgZYbONP7bnZ2dnUVZ_jOdnZ2d@comcast.com>
Source record: 40805

Roy Lewallen wrote:

>
> Yep, that's perfectly adequate to distinguish the types. You must have
> made the measurements at a pretty low frequency. Type 75 has a Q of 1 at
> about a MHz, and 43 at a few MHz, and they drop at higher frequencies.
> Will the circuit oscillate with Q that low?
>
> Roy Lewallen, W7EL

Referring to http://www.aade.com/lcm2binst/HP.html the measurement freq.
was about 750KHz for the type 61 and 43 materials and about 70KHz for
the 75 material based on the inductances that were displayed.

73, Larry W0QE

1206. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 06:01:50 UTC
From: Larry Benko <xxw0qe@comcast.net>
Message-ID: <nPednU4mUd5WN_7bnZ2dnUVZ_o3inZ2d@comcast.com>
Source record: 40806

Larry Benko wrote:
> Roy Lewallen wrote:
>
>>
>> Yep, that's perfectly adequate to distinguish the types. You must have
>> made the measurements at a pretty low frequency. Type 75 has a Q of 1
>> at about a MHz, and 43 at a few MHz, and they drop at higher
>> frequencies. Will the circuit oscillate with Q that low?
>>
>> Roy Lewallen, W7EL
>
>
> Referring to http://www.aade.com/lcm2binst/HP.html the measurement freq.
> was about 750KHz for the type 61 and 43 materials and about 70KHz for
> the 75 material based on the inductances that were displayed.
>
> 73, Larry W0QE

Darn typo. That should be 750KHz for the type 61 and 43 and 700KHz for
the type 75. Sorry.

73,Larry W0QE

1207. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 07:01:24 UTC
From: Thomas & Karen Mitchell <kg7uATolympus.net>
Message-ID: <s2e7639qgkjoqs02rfuu31ulo0fmfjo9sl@4ax.com>
Source record: 40807

Thanks to one and all. The Icom IC-2200H doesn't have a choice of 50
watts output; it goes from 25 to 65.

So: I'll stay at 25 when in the car.

-- KG7U

Tom Mitchell, Port Angeles, Washington, USA
http://www.olympus.net/personal/kg7u

1208. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 08:11:25 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <N604pLGtk8YGFARb@ifwtech.co.uk>
Source record: 40808

Roy Lewallen wrote:
>
>The 259B is, I maintain, a very good instrument for identifying core
>materials and for use in the design of inductors, transformers, and
>other magnetic components. I've used mine many times for the purpose
>and gotten the results I expected. That was, I thought, the subject of
>this thread, but it appears to have drifted elsewhere.
>

It has certainly drifted away from Australia, and towards the USA.

In the USA, it's a good bet that an unknown ferrite core will be made by Fair-Rite, and probably one of the more common materials; or else it's probably a dust-iron core from Micrometals. With help from the catalogs, and a few known cores for reference, even quite limited test equipment will have a good chance of identifying the specific product.

But that may not be true in the rest of the world. You may have a core that is marketed in your home country but imported from another, but having been manufactured in a third country using a process licensed from... well, who knows any more? There are no world-standard sizes, and no direct equivalents between magnetic materials from different manufacturers. The best you can hope for is to identify the material as being "somewhat like" a known Fair-Rite mix.

With such uncertainties about the material itself, you can afford far fewer uncertainties about the measurement. If you don't have advanced test equipment (or an advanced understanding of the limitations of simpler equipment) then it may be better to forget about characterizing the magnetic material. If you want to know if it will work in an HF balun, it may be much easier to *make* a balun.

On the other hand, if you really want to chase down the problem of identifying and characterizing unknown cores from anywhere around the world, the following links may help.

http://users.catchnet.com.au/~rjandusimports/
No coincidence that this site is .au - they know about this problem in Australia.

There are very useful international cross-reference pages at:
http://users.catchnet.com.au/~rjandusimports/xref_mat.html
http://users.catchnet.com.au/~rjandusimports/xref_size_toroid.html
Do remember that these are not exact equivalents, only the closest available. Also note the huge gaps in the tables, where nothing even comes close.

Another very useful resource is DL5SWB's Mini Ring Core Calculator:
http://www.dl5swb.de/html/mini_ring_core_calculator.htm
This software contains extensive libraries of cores from international manufacturers, including dimensions and paint colours as well as magnetic properties. If you know the identity of the core, it will calculate the inductance from the number of turns. If you have an unknown core, and can make some meaningful measurements, there are separate functions to help identify it.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

1209. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 12:02:44 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180958564.250455.88040@o5g2000hsb.googlegroups.com>
Source record: 40809

In my search for knowledge I recently went through a big thrash with antenna tuners... Because of cost I built my own variable caps... To keep the size down I experimented with various insulators between the plates, from air up to glass...

Being that the tuners on 40 and 20 were end matching a half wave antenna element the circulating tank current was considerable... On 20 meters where the capacitor plates are 1.5" square for resonance the glass would simply shatter at about 800W for 5 seconds... Plexiglass would boil internally in roughly 20 seconds leaving this interesting rippled piece with 'steam' bubbles in the center of the plexi... Ceramic tiles seemed to work OK, but I didn't find any thin ones locally and the thick pieces resulted in plates being awkwardly large...

On 80 meters the glass plates are 4" X 6" and the glass runs barely above ambient at 2KW...

denny / k8do

1210. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 12:30:33 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180960233.892622.117880@p77g2000hsh.googlegroups.com>
Source record: 40810

Mike, out in the workshop I still have the original Fridgidaire 'radar oven' I bought in 1971, with my GM discount at the time... The magnetron was hammered on day and night by a herd of kids who are now middle aged... I can only estimate how many times that magnetron has had the filament cycled...
Assume ten times a day <probably low> times 26 years = ~96,000 cycles!!!

The pot metal latch on the door broke about 10 years back and it was relegated to shop use because some kid might fry his eyeballs if he doesn't understand he has to hold the door shut against the spring with one hand and hit the power switch with the other and the solenoid safety lock will then keep the door from springing open while the magnetron is on...
The other reason is that it didn't match the decor of the granite and stainless steel kitchen in the retirement house...
It still has power to spare and heats a cup of tea water in half the time of the expensive new microwave...

denny - k8do

1211. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 12:42:47 UTC
From: Jeff <jeff@local.host>
Message-ID: <466408ed$0$1342$834e42db@reader.greatnowhere.com>
Source record: 40811

"Denny" <k8do@mailblocks.com> wrote in message
news:1180958564.250455.88040@o5g2000hsb.googlegroups.com...
> In my search for knowledge I recently went through a big thrash with
> antenna tuners... Because of cost I built my own variable caps... To
> keep the size down I experimented with various insulators between the
> plates, from air up to glass...
>
> Being that the tuners on 40 and 20 were end matching a half wave
> antenna element the circulating tank current was considerable... On
> 20 meters where the capacitor plates are 1.5" square for resonance the
> glass would simply shatter at about 800W for 5 seconds... Plexiglass
> would boil internally in roughly 20 seconds leaving this interesting
> rippled piece with 'steam' bubbles in the center of the plexi...
> Ceramic tiles seemed to work OK, but I didn't find any thin ones
> locally and the thick pieces resulted in plates being awkwardly
> large...
>
> On 80 meters the glass plates are 4" X 6" and the glass runs barely
> above ambient at 2KW...
>
> denny / k8do

An very odd result considering that glass dielectric capacitors are sold specifically for high rf current use by people such as AVX and the like. I guess it depends on what type of glass you used. You shouldn't have used your old lead crystal glasses (;-))

73
Jeff

1212. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 13:12:01 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f41333dnj1@nnrp.linuxfan.it>
Source record: 40812

Thomas & Karen Mitchell wrote:

> ...
> So: I'll stay at 25 when in the car.
>
> -- KG7U
> ---
> Tom Mitchell, Port Angeles, Washington, USA
> http://www.olympus.net/personal/kg7u
> ---

Every engineer, worth his pay, which I know, allow at least a 20% excess
on ratings.

50 X 20% = 10 watts

50 + 10 = 60 watts

I'd run the 65 and examine the glass mount now and then. You'll see if
damage begins and switch lower power.

Warm regards,
JS

1213. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 13:20:33 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180963233.954826.313420@m36g2000hse.googlegroups.com>
Source record: 40813

Art, it may come as a total shock to you, but we do get 'your point'... It is just that some of your points are more wishful thinking than anything else and some of us are from Missouri...

It is only in your wishful thinking that todays american is lazy, unmotivated, and stupid, and only the immigrants are smart, and motivated, and hard working... America as a whole is a ferocious industrial giant who competes in the world market like an 800 pound gorilla...

An aside discussion could be why do these smart, motivated, educated immigrants have to come to the USA to be successful in the first place? But, I'll let indulge in your own thoughts on that...

No, I <we> do not believe that everything is known and there is nothing left to invent... Gravity is still a mystery... The mere presence of Dark matter totally refutes the Big Bang Theory...

1214. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 13:37:05 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1180964225.351841.132820@q66g2000hsg.googlegroups.com>
Source record: 40814

Dammit!!! I accidently bumped the mouse and the cursor was over the 'send' box and I was not ready to post my ramblings...

Anyway, to continue... This plasma guy... His demonstration is interesting, but nothing else... Plasma production by RF is well known and understood <not necessarily by me personally, but I can read>... Plasma generators are used heavily in the silicon chip industry and numerous other industrial applications (coating glass, etc..) We have spacecraft using plasma thrusters <also called ION engines> in flight, with more planned for launch by various countries...
As I commented before, notice the characteristic color of the flame, it is sodium ions being heated that an college chemistry 101 student will instantly identify on sight...
A hydroxy flame is invisible... I use hydroxy torches and they are a pain because you can't see the flame and you have to wear special glasses to both visualize what is going on and to prevent UV eye damage...
So, I am not belittling this person but I do not <so far> see anything new or unknown there... And like others on here, I am aware of the basics of physics and I do not see the potential for energy gain from his process... Perhaps on a spacecraft with abundant DC energy from solar cells it might be a handy source of open flame for other uses...

denny / k8do

1215. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 13:42:58 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f414t3dnj2@nnrp.linuxfan.it>
Source record: 40815

Denny wrote:

> ... I am aware of the
> basics of physics and I do not see the potential for energy gain from
> his process... Perhaps on a spacecraft with abundant DC energy from
> solar cells it might be a handy source of open flame for other uses...
>
> denny / k8do
>

Really?

Well, how about a geothermal engine/generator set up near a volcano
powering an rf generator and providing fuel for autos.

Hawaii seems a suitable test ground ...

JS

1216. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 14:25:01 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-5BED7D.07250104062007@individual.net>
Source record: 40816

In article <lrm9j4-tvj.ln1@radagast.org>,
dplatt@radagast.org (Dave Platt) wrote:

....an excellent diagnose of what is going on, and what he should do.
Thanks

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

1217. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 14:36:59 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Ne6dncMoUtd7vvnbnZ2dnUVZ8s6gnZ2d@bt.com>
Source record: 40817

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:u02763928bsnk9j87gpjp0003f9qujjjko@4ax.com...
> On Mon, 4 Jun 2007 02:43:18 +0100, "Mike Kaliski"
> <michael.kaliski@tesco.net> wrote:
>
> >Take a deep breath before transmitting with all the controls set to 11...
>
> Hi Mike,
>
> Is the warrantee void within 100 yards of a 50KW AM antenna? Or
> howabout those half megawatt LF stations that litter the continent?
>
> 73's
> Richard Clark, KB7QHC

Richard

It's all about RF actually within the vehicle. The bodywork acts like a Faraday cage against external influences. But I suspect you know that already :-)

A couple of years back a lightning bolt hit a field I was driving past during a storm. The dash completely blanked for 2 seconds and then came back to life - no other ill effects noted - just as well because the road was nearly completely under water at that point.

The radio key remote locking can fail if you park too close to a mobile phone mast, or someone is transmitting on 70 cms nearby, but that's about it.

As I only operate QRP I hadn't given the matter much thought until I checked in the vehicle manual and saw a footnote.

Mike G0ULI

1218. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 15:57:50 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46643672$0$1386$4c368faf@roadrunner.com>
Source record: 40818

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:Ne6dncMoUtd7vvnbnZ2dnUVZ8s6gnZ2d@bt.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:u02763928bsnk9j87gpjp0003f9qujjjko@4ax.com...
>> On Mon, 4 Jun 2007 02:43:18 +0100, "Mike Kaliski"
>> <michael.kaliski@tesco.net> wrote:
>>
>> >Take a deep breath before transmitting with all the controls set to
>> >11...
>>
>> Hi Mike,
>>
>> Is the warrantee void within 100 yards of a 50KW AM antenna? Or
>> howabout those half megawatt LF stations that litter the continent?
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Richard
>
> It's all about RF actually within the vehicle. The bodywork acts like a
> Faraday cage against external influences. But I suspect you know that
> already :-)
>
> A couple of years back a lightning bolt hit a field I was driving past
> during a storm. The dash completely blanked for 2 seconds and then came
> back
> to life - no other ill effects noted - just as well because the road was
> nearly completely under water at that point.
>
> The radio key remote locking can fail if you park too close to a mobile
> phone mast, or someone is transmitting on 70 cms nearby, but that's about
> it.
>
> As I only operate QRP I hadn't given the matter much thought until I
> checked
> in the vehicle manual and saw a footnote.
>
> Mike G0ULI
>
>

I had a similar experience with lightning. The lightning hit a tall comm tower on the side of the road, jumped out the side of the tower, hit the roof of the truck I was in, and then struck a pine tree on the other side of the road. The engine diesd and I coasted to the side of the road. After a few minutes of getting my composurer back together and surveying the damage I was able to start the truck like nothing had happened. I was expecting all the electronics to be fried.

Jimmie

1219. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 16:41:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f41fbpilg1@nntp1.jpl.nasa.gov>
Source record: 40819

Richard Clark wrote:
> On Mon, 4 Jun 2007 02:43:18 +0100, "Mike Kaliski"
> <michael.kaliski@tesco.net> wrote:
>
>
>>Take a deep breath before transmitting with all the controls set to 11...
>
>
> Hi Mike,
>
> Is the warrantee void within 100 yards of a 50KW AM antenna? Or
> howabout those half megawatt LF stations that litter the continent?
>

I'd venture that the concern is not so much radiated field (although, in the nearfield it drops off pretty quick, so a 100W transmitter on a car might well create larger field strengths than that 50kW AM station.

It's probably more the potential for conducted RF via the radio's power leads, etc. Imagine that if the chassis of the radio is RF hot, relative to the car body (oh no, that never happens, no way<grin>), so now you have significant RF current flowing in the vehicle wiring harness.

From a straight field standpoint, it's easy to exceed the ANSI RF field Maximum Permissible Exposure(MPE) with a 2m transmitter and 50W on a car. Combination of the limit being lowest, close proximity to the radiator, etc. (I seem to recall the limit is reached at about 1 meter away from a groundplane/whip antenna at 50W, albeit at 100% duty cycle)

But then, you have done your RF safety analysis, right? (Even though there's a categorical exemption from the requirement for routine evaluations for amateur mobile and portable operations, that doesn't relieve you from the requirement for safety).

In comparison, you're not going to be driving somewhere the field exceeds the limits, because they'll have a big fence keeping you beyond the distance for uncontrolled exposure limits.

As far as the original question about through glass...

Glass isn't the lowest loss dielectric to make a capacitor of (heck, even at the 100kHz used in tesla coils, it's lossy enough to crack from the thermal stresses). The glass is the dominant source of loss in using FR-4/G-10 PC boards at microwave frequencies, for instance. However, even a spectacularly bad loss tangent of 0.01 is only going to result in a 1% loss. (wood has a loss tangent of 0.03 or thereabouts at 100MHz,

depending on moisture level)

A bigger issue would be wires/conductive films for defogging.

Jim

1220. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 16:43:45 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f41fg1ilg2@nntp1.jpl.nasa.gov>
Source record: 40820

Jeff wrote:
> "Denny" <k8do@mailblocks.com> wrote in message
> news:1180958564.250455.88040@o5g2000hsb.googlegroups.com...
>
>>In my search for knowledge I recently went through a big thrash with
>>antenna tuners... Because of cost I built my own variable caps... To
>>keep the size down I experimented with various insulators between the
>>plates, from air up to glass...
>>
>>Being that the tuners on 40 and 20 were end matching a half wave
>>antenna element the circulating tank current was considerable... On
>>20 meters where the capacitor plates are 1.5" square for resonance the
>>glass would simply shatter at about 800W for 5 seconds... Plexiglass
>>would boil internally in roughly 20 seconds leaving this interesting
>>rippled piece with 'steam' bubbles in the center of the plexi...
>>Ceramic tiles seemed to work OK, but I didn't find any thin ones
>>locally and the thick pieces resulted in plates being awkwardly
>>large...
>>
>>On 80 meters the glass plates are 4" X 6" and the glass runs barely
>>above ambient at 2KW...
>>
>>denny / k8do
>
>
>
> An very odd result considering that glass dielectric capacitors are sold
> specifically for high rf current use by people such as AVX and the like. I
> guess it depends on what type of glass you used. You shouldn't have used
> your old lead crystal glasses (;-))
>

Lots of kinds of "glass" out there.

fused silica is pretty low loss
borosilicate glass (e.g. Pyrex, Kimax, etc.) is medium
windowglass (soda lime) is all over the place.

1221. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:09:51 UTC
From: nm5k@wt.net
Message-ID: <1180976991.270344.165710@m36g2000hse.googlegroups.com>
Source record: 40821

On Jun 3, 9:45 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...> screwed in too.. I've never noticed any real RF coupling problems with
> > a
> > metal mast. You will see that with metal that parallels the antenna
> > legs
>
> > ...
>
> Amazing we have not heard from the "EZNEC Experts" with plots of a metal
> vs. non-metal support ...
>
> JS

If the wires of the dipole are exactly perpendicular to the feedline,
and
no common mode currents, the plots should be the same.
The more sloping, the more coupling I would think, but even then,
it's rarely a problem.
MK

1222. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:28:53 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180978133.088118.257560@w5g2000hsg.googlegroups.com>
Source record: 40822

On 4 Jun, 06:20, Denny <k...@mailblocks.com> wrote:
> Art, it may come as a total shock to you, but we do get 'your
> point'... It is just that some of your points are more wishful
> thinking than anything else and some of us are from Missouri...
snip
We do get" your point" Could you explain in more detail,
some here will not agree with you? You may get more static
than you think if you are opposing the experts !
I warn you that it takes guts to go against the experts
and I don't think you are up to it.

....
Smart people are comming to this country because companies are
enticing themwith money. They paid all my expences as well
as the rest of the family while Americans were looking for
work with a $50,000 college loan to repay. The company I
worked for laid off over a hundred engineers of leaving only
seven of us left. With manufacturing gone overseas they are
going to have a hard time getting a position
....
I live in a insurance town and we have a company that specialising
in bringing into the community software engineers in from India for
different businesses. We have more than enough here already that
we have a full blown cricket league ! I will leave it to others
to explain that.

....
If you do not believe every thing is known what accounts for the
resistance to the new with respect to antennas? They have
even got to the point of resisting mathematics.
Some get angry because they want me to answer their questions
over and over again without reading prior postings just so
they can dig a knife in. I would be very much encouraged if
just one person acknoweledged the Gaussian aproach but sadly
this newsgroup is for arguments and ridicule.
Art

1223. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:35:00 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1180978500.175445.263890@q69g2000hsb.googlegroups.com>
Source record: 40823

On 4 Jun, 06:37, Denny <k...@mailblocks.com> wrote:
> Dammit!!! I accidently bumped the mouse and the cursor was over the
> 'send' box and I was not ready to post my ramblings...
>
> Anyway, to continue... This plasma guy... His demonstration is
> interesting, but nothing else... snip

So we should snipe at the media for printing it instead of censoring
it!
Art

>
> denny / k8do

1224. Re: 50Mhz Antenna Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:44:55 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <1MKdnY_Y3PQK0vnbRVnytwA@pipex.net>
Source record: 40824

Jim - NN7K wrote:
> Charlie-- That antenna has one of its dipoles
> resonate at 18.090 MHz. 3 X 18.090 = Aprox 54 MHZ ! Also, dipoles
> tend to be broadband
> devices. This is the same reason that a 40 Meter
> dipole is useable on 15 meters! And, the
> SWR doesnt do much more than increase loss in the
> feedline (on long runs), so it should work
> at least until you get an antenna with some gain
> on 6! Jim NN7K
>
<SNIP>

Jim,

I came to the same conclusion that iy must be the 17m dipole, I guess I got too fixed on looking for resonance (old harmonic relationships). Anyway, this coming weekend I will put up a dipole and make some comparisons and come back with the results.

Thanks!

Charlie.

--
M0WYM
www.radiowymsey.org

1225. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:47:24 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f41j7e$9vt$1@nnrp.linuxfan.it>
Source record: 40825

Tony Jaa wrote:
> Water burns!
> Man looking for cancer cure hopes to solve energy crisis
> ...

This video:
http://youtube.com/watch?v=Lud1qceKqyQ

shows John Kanzius sticking his hand into the field/path of the RF from the machine--I doubt if that is a microwave freq.

I can't seem to find a link on the man which states the freq(s) he is using ...

Regards,
JS

1226. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:55:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f41jm1$9vt$2@nnrp.linuxfan.it>
Source record: 40826

John Smith I wrote:
> Tony Jaa wrote:
>> Water burns!
>> Man looking for cancer cure hopes to solve energy crisis
> > ...
>
> This video:
> http://youtube.com/watch?v=Lud1qceKqyQ
>
> shows John Kanzius sticking his hand into the field/path of the RF from
> the machine--I doubt if that is a microwave freq.
>
> I can't seem to find a link on the man which states the freq(s) he is
> using ...
>
> Regards,
> JS

http://youtube.com/watch?v=CwughofIC2s&mode=related&search=
http://youtube.com/watch?v=P9LhJ0AqIAI&mode=related&search=

A couple more links, including one where a congressman is getting
involved and advocating federal funding for development of this mans
discovery ...

Regards,
JS

1227. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 17:57:29 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1180979849.185450.288560@n4g2000hsb.googlegroups.com>
Source record: 40627

On Jun 3, 2:13 pm, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
> Whaddaya mean, "believe in"? If I pray to the waves, will they
> bring good luck?

Many of the posters here believe that reflected EM waves don't
actually exist
in reality. Their belief systems are interferring with their
understanding of physics.
And yes, it might as well be a religion to which one prays. I know a
number of posters
who pray that reflected waves don't exist because their entire house-
of-cards will
come tumblinging down if reflected EM waves actually exist in reality
- while obeying
all the boundary conditions that Mother Nature dictates for EM waves.
Hopefully,
you are not one of those individuals.
--
73, Cecil, w5dxp.com

1228. Re: 6 Metre Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 19:12:34 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <14WdnWV5L-28-fnbnZ2dnUVZ8sfinZ2d@pipex.net>
Source record: 40628

no.spam@no.uce.bellatlantic.net wrote:
>
>
> Easy, the 17m element is acting as an EDZ (1.25WL) doublet in 6m
> and likely the other wires are by luck canceling the reactance at the
> feed point. An EDZ is a nonresonant antenna but very effective if you
> can manage the feedpoint resistance and reactance. It has some gain
> over a dipole.
>
> I use a wire antenna about 24ft long with a matching section detailed
> in WWW.CEBIK.COM under feeding theEDZ and it's setup as a 6m
> (50.16 center frequency) antenna with a 50ohm feed. Works very well
> at a height of 25ft. It's also useful as a dipole at 17m due it its
> length and feed. It's not as good as a three element beam but it's
> broad beamwidth is useful for spotting.
>
> Allison
>

Allison,

Thanks for your reply to what was my second post covering the same
issue, see "50MHz Antenna Conundrum" above. I guess that I allowed
the occasional senior moment :)

Charlie.

--
M0WYM
www.radiowymsey.org

1229. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 21:11:04 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46647ff2$0$8975$4c368faf@roadrunner.com>
Source record: 40629

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f41jm1$9vt$2@nnrp.linuxfan.it...
> John Smith I wrote:
>> Tony Jaa wrote:
>>> Water burns!
>>> Man looking for cancer cure hopes to solve energy crisis
>> > ...
>>
>> This video:
>> http://youtube.com/watch?v=Lud1qceKqyQ
>>
>> shows John Kanzius sticking his hand into the field/path of the RF from
>> the machine--I doubt if that is a microwave freq.
>>
>> I can't seem to find a link on the man which states the freq(s) he is
>> using ...
>>
>> Regards,
>> JS
>
>
> http://youtube.com/watch?v=CwughofIC2s&mode=related&search=
> http://youtube.com/watch?v=P9LhJ0AqIAI&mode=related&search=
>
> A couple more links, including one where a congressman is getting involved
> and advocating federal funding for development of this mans discovery ...
>
> Regards,
> JS

It doesnt take much to tell that the flame is a plasma arc, not hydrogen as
claimed. A neon sign transformer would probably be much more efficent.

1230. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 21:41:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4212f$8cq$1@news.service.uci.edu>
Source record: 40630

John Smith I wrote:
> Thomas & Karen Mitchell wrote:
>
> > ...
>
>> So: I'll stay at 25 when in the car.
>>
>> -- KG7U
>> ---
>>
>> Tom Mitchell, Port Angeles, Washington, USA
>> http://www.olympus.net/personal/kg7u
>> ---
>>
>
>
> Every engineer, worth his pay, which I know, allow at least a 20% excess
> on ratings.
>
> 50 X 20% = 10 watts
>
> 50 + 10 = 60 watts
>
> I'd run the 65 and examine the glass mount now and then. You'll see if
> damage begins and switch lower power.
>
> Warm regards,
> JS

Obviously the engineers who established the maximum power
specification would not advocate using greater than 50 watts.

ac6xg

1231. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:07:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9946529F14924nonenowhere@61.9.191.5>
Source record: 40631

nm5k@wt.net wrote in
news:1180976991.270344.165710@m36g2000hse.googlegroups.com:

> On Jun 3, 9:45 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>> n...@wt.net wrote:
>>
>> > ...> screwed in too.. I've never noticed any real RF coupling
>> > problems with
>> > a
>> > metal mast. You will see that with metal that parallels the antenna
>> > legs
>>
>> > ...
>>
>> Amazing we have not heard from the "EZNEC Experts" with plots of a
>> metal vs. non-metal support ...
>>
>> JS
>
>
> If the wires of the dipole are exactly perpendicular to the feedline,
> and
> no common mode currents, the plots should be the same.
> The more sloping, the more coupling I would think, but even then,
> it's rarely a problem.

Modelling the Inverted V without its support conductive mast is a little
like modelling it without a real model of its feedline, both ignore real
things that impact the antenna to some extent.

Owen

1232. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:21:45 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4239r$1ob$1@nnrp.linuxfan.it>
Source record: 40632

Jimmie D wrote:

> ...
> It doesnt take much to tell that the flame is a plasma arc, not hydrogen as
> claimed. A neon sign transformer would probably be much more efficent.
>
>

The whole point of the paper towel is to prove it is not a plasma arc,
which would burn the paper towel ...

View it again ...

JS

1233. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:38:36 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4249e$32s$1@nnrp.linuxfan.it>
Source record: 40633

Jim Kelley wrote:

> ...
> Obviously the engineers who established the maximum power specification
> would not advocate using greater than 50 watts.
>
> ac6xg

1) No engineer would advocate over-clocking computers the way I do.
2) No engineer would advocate pushing rigs and liners (power amps) to
the limits I do.
3) No engineer would advocate doing the mods to equipment I do.
4) No engineer would advocate the antenna experiments I carry out.
6) No engineer would advocate the engine mods to my vette which I have done.
7) No engineer would advocate the levels of exposure to RF I expose
myself too.
8) ...

That's what makes it fun, now doesn't it?

JS

1234. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:39:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <136954aanbf4u50@corp.supernews.com>
Source record: 40634

Owen Duffy wrote:
> nm5k@wt.net wrote in
> news:1180976991.270344.165710@m36g2000hse.googlegroups.com:
>
>> On Jun 3, 9:45 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>>> n...@wt.net wrote:
>>>
>>> > ...> screwed in too.. I've never noticed any real RF coupling
>>> > problems with
>>>> a
>>>> metal mast. You will see that with metal that parallels the antenna
>>>> legs
>>> > ...
>>>
>>> Amazing we have not heard from the "EZNEC Experts" with plots of a
>>> metal vs. non-metal support ...
>>>
>>> JS

"John Smith" doesn't hear from this "EZNEC Expert" because I plonked him
a long time ago.

>> If the wires of the dipole are exactly perpendicular to the feedline,
>> and
>> no common mode currents, the plots should be the same.
>> The more sloping, the more coupling I would think, but even then,
>> it's rarely a problem.
>
> Modelling the Inverted V without its support conductive mast is a little
> like modelling it without a real model of its feedline, both ignore real
> things that impact the antenna to some extent.
>
> Owen

If you model the antenna as being perfectly symmetrical, then it makes
no difference whether you include the mast in the model or not -- the
result will be the same (assuming that the mast isn't in electrical
contact with the antenna). It might be interesting to purposefully make
the antenna model a bit non-symmetrical to see what effect the mast
would then have.

If you're not using an effective balun, adding a feedline to the model
will have an impact on the result (as it will on a real antenna) even if
the antenna is symmetrical, provided that you include the common mode
current path in the feedline model. This means modeling the feedline as

two wires, or by using the transmission line object plus a wire to represent the outside of a coaxial cable. To be truly realistic, you need to include the entire path to the Earth. This is seldom known, so about the best you can do is to fiddle the length and orientation of your feedline model to find the worst case and assume the real antenna will have less common mode current than that.

Roy Lewallen, W7EL

1235. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:39:32 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <Zw09i.15788$C96.7470@newssvr23.news.prodigy.net>
Source record: 40635

Cecil Moore wrote:
> On Jun 3, 2:13 pm, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
>> Whaddaya mean, "believe in"? If I pray to the waves, will they
>> bring good luck?
>
> Many of the posters here believe that reflected EM waves don't
> actually exist
> in reality. Their belief systems are interferring with their
> understanding of physics.
> And yes, it might as well be a religion to which one prays. I know a
> number of posters
> who pray that reflected waves don't exist because their entire house-
> of-cards will
> come tumblinging down if reflected EM waves actually exist in reality
> - while obeying
> all the boundary conditions that Mother Nature dictates for EM waves.
> Hopefully,
> you are not one of those individuals.
> --
> 73, Cecil, w5dxp.com
>

Maybe you'll tell me who you think thinks waves of any sort can't
be reflected. I haven't run into anyone who thinks EM waves can't be
reflected, refracted, etc. Maybe there's a misunderstanding somewhere.
73,
Tom Donaly, KA6RUH

1236. Re: Metal mast for inverted V antenna support--will it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:44:55 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f424l9$32s$2@nnrp.linuxfan.it>
Source record: 40636

Roy Lewallen wrote:

> ...
> "John Smith" doesn't hear from this "EZNEC Expert" because I plonked him
> a long time ago.
> ...
> Roy Lewallen, W7EL

Roy:

You dropped out of being on the cutting edge long before I ever came along.

Don't even attempt to blame me for you devote religious beliefs in
established practices which are cloaked in "place-holder equations" ...
you only become ancient and unimportant when you quit adapting to change.

JS

1237. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 22:48:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f424sk$32s$3@nnrp.linuxfan.it>
Source record: 40637

Tom Donaly wrote:

> ...
> Maybe you'll tell me who you think thinks waves of any sort can't
> be reflected. I haven't run into anyone who thinks EM waves can't be
> reflected, refracted, etc. Maybe there's a misunderstanding somewhere.
> 73,
> Tom Donaly, KA6RUH

Very good, and oh so relevant!

Krist, even the force on a tennis ball is "reflected" back off a wall!

Better question would be, "What can't be reflected?" (well, ok, high
radiation is NOT easy to reflect!)

JS

1238. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-04 23:44:16 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4289g$e40$1@news.service.uci.edu>
Source record: 40638

John Smith I wrote:

>
> 1) No engineer would advocate over-clocking computers the way I do.
> 2) No engineer would advocate pushing rigs and liners (power amps) to
> the limits I do.
> 3) No engineer would advocate doing the mods to equipment I do.
> 4) No engineer would advocate the antenna experiments I carry out.
> 6) No engineer would advocate the engine mods to my vette which I have
> done.
> 7) No engineer would advocate the levels of exposure to RF I expose
> myself too.
> 8) ...
>
> That's what makes it fun, now doesn't it?

It's unquestionably something which separates fools and their money.

ac6xg

1239. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 00:04:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f429af$7uc$1@nnrp.linuxfan.it>
Source record: 40639

Jim Kelley wrote:

> ...
> It's unquestionably something which separates fools and their money.
>
> ac6xg
>
>

Yes, well, I am still working on a way to take to the grave with me ...
so far, NO PROGRESS!

I wish you better luck ... however, I guess others who will benefit from
the money will be more than grateful ... granting that I will be
unsuccessful in finding a way.

JS

1240. Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 00:59:37 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <UP6dnR1W1cf1KPnbnZ2dnUVZ_vOlnZ2d@insightbb.com>
Source record: 40640

I just bought a Kenwood TS-570S. This is my first 'all transistor' rig. I also just put up an Alpha Delta DX-LB Plus multi band dipole. I want to check the SWR over the various bands, but I keep getting 1 to infinity readings on the built in SWR meter. If I activate the internal antenna tuner, the SWR magically reduces to near 1:1. This is great, but how can I measure the real SWR of this antenna? I figure the real SWR can't be as good as 1:1 everywhere and also can't be as bad as 1 to infinity everywhere. The only thing the manual says about the SWR meter is that it is active during transmit.

--
Bob D. ND9B

1241. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 01:02:41 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4664b62a$0$4890$4c368faf@roadrunner.com>
Source record: 40641

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4239r$1ob$1@nnrp.linuxfan.it...
> Jimmie D wrote:
>
> > ...
>> It doesnt take much to tell that the flame is a plasma arc, not hydrogen
>> as claimed. A neon sign transformer would probably be much more efficent.
>
> The whole point of the paper towel is to prove it is not a plasma arc,
> which would burn the paper towel ...
>
> View it again ...
>
> JS

Maybe not if it is wet with salt water. If that were hydrogen you wouldnt
even see the flame. There are no bubbles of gas in the tube.
Ive seen plasma flame very similar to this when playing with an old
microwave. While zapping old disk I have seen plasma flames that look
exacltly like thiose rise up from the disk, hey maybe thats a new form of
energy too.

Jimmie

1242. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 01:40:01 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4664bee5$0$1393$4c368faf@roadrunner.com>
Source record: 40642

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f41333dnj1@nnrp.linuxfan.it...
> Thomas & Karen Mitchell wrote:
>
> > ...
>> So: I'll stay at 25 when in the car.
>>
>> -- KG7U
>> ---
>> Tom Mitchell, Port Angeles, Washington, USA
>> http://www.olympus.net/personal/kg7u
>> ---
>
> Every engineer, worth his pay, which I know, allow at least a 20% excess
> on ratings.
>
> 50 X 20% = 10 watts
>
> 50 + 10 = 60 watts
>
> I'd run the 65 and examine the glass mount now and then. You'll see if
> damage begins and switch lower power.
>
> Warm regards,
> JS

That sounds like a girl waiting until she is just a litte bit pregnant to
stat us birth control.
Either the glass cracks, it starts to delaminate, or you fry your finals,
all could be too far by the time you see it.

1243. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 01:42:00 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f42f1atcm1@nnrp.linuxfan.it>
Source record: 40643

Jimmie D wrote:

> ...

Sodium Chloride (salt) contains sodium (DUH! Huh?), well guess what, sodium ions impart a yellow color to the flame and make it visible.

Hydrogen is lighter than air (the hindenburg! Duh, again!) this makes the gas being emitted very anxious to head towards the ceiling. This also is causing heat to be convected upwards RAPIDLY!

Result, paper towel is unburned.

If it were a plasma arc, the paper towel would be one electrode. Ever see electrodes made of metal melt in a plasma arc? Carbon electrodes burn away?

Nuff said ...

Regards,
JS

1244. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 02:47:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f42irn$35e$1@nnrp.linuxfan.it>
Source record: 40644

Jimmie D wrote:
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f41333dnj1@nnrp.linuxfan.it...
>> Thomas & Karen Mitchell wrote:
>>
>>> ...
>>> So: I'll stay at 25 when in the car.
>>>
>>> -- KG7U
>>> ---
>>> Tom Mitchell, Port Angeles, Washington, USA
>>> http://www.olympus.net/personal/kg7u
>>> ---
>> Every engineer, worth his pay, which I know, allow at least a 20% excess
>> on ratings.
>>
>> 50 X 20% = 10 watts
>>
>> 50 + 10 = 60 watts
>>
>> I'd run the 65 and examine the glass mount now and then. You'll see if
>> damage begins and switch lower power.
>>
>> Warm regards,
>> JS
>
> That sounds like a girl waiting until she is just a litte bit pregnant to
> stat us birth control.
> Either the glass cracks, it starts to delaminate, or you fry your finals,
> all could be too far by the time you see it.
>
>

If the glass breaks, replace glass (highly unlikely! Bordering on
impossible!)

Glass cracking? Very unlikely!

Delamination? Perhaps, over much time ...

Fry the finals? What idiot would ever start using a rig and antenna
with no SWR indication?

JS

1245. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 03:37:59 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99468AAF7B73Bnonenowhere@61.9.191.5>
Source record: 40645

"Bob D." <bobmgtd@insightbb.com> wrote in
news:UP6dnR1W1cf1KPnbnZ2dnUVZ_vOlnZ2d@insightbb.com:

> I just bought a Kenwood TS-570S. This is my first 'all transistor'
> rig. I also just put up an Alpha Delta DX-LB Plus multi band dipole. I
> want to check the SWR over the various bands, but I keep getting 1 to
> infinity readings on the built in SWR meter. If I activate the
> internal antenna tuner, the SWR magically reduces to near 1:1. This is
> great, but how can I measure the real SWR of this antenna? I figure
> the real SWR can't be as good as 1:1 everywhere and also can't be as
> bad as 1 to infinity everywhere. The only thing the manual says about
> the SWR meter is that it is active during transmit.
>

The internal VSWR meter will be located between the PA and the input to the
ATU, so when the ATU is activated and if it was able to match up
reasonably, you should expect it to read 1:1.

If the ATU is not activated, the VSWR meter should indicate the nominal
VSWR that would occur adjacent to the transmitter on a 50 ohm line.

Owen

1246. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 06:04:48 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9946A393A696Fnonenowhere@61.9.191.5>
Source record: 40646

Thomas & Karen Mitchell <kg7uATolympus.net> wrote in
news:qqs463p7a0of4do0tfu5q2c66emlsvi5bv@4ax.com:

> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?

If your transceiver really does make 65W into a 50 ohm load, and you connected say 4m of RG58C/U to a 50 ohm load, line losses are such that only 54W reaches the load. So you might not be quite feeding the antenna with 65W, the likely amount depends on your feedline type and length.

Your antenna is probably not exactly 50 ohms, and there could be higher current or higher voltage at the coupler than for a true 50 ohm load... but the designers should have included a safety margin to cover this factor. (The on-glass coupler is the achilles heel of these things, you will feel them warm up with a bit of use.)

If the antenna is rated for 50W, and can't reliably stand 60W, it is a bit marginally rated, but on-glass mounts are a bit that way.

Owen

1247. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 07:27:37 UTC
From: Jeff <jeff@local.host>
Message-ID: <466514d3$0$1340$834e42db@reader.greatnowhere.com>
Source record: 40647

>
> That sounds like a girl waiting until she is just a litte bit pregnant to
> stat us birth control.
> Either the glass cracks, it starts to delaminate, or you fry your finals,
> all could be too far by the time you see it.

It is the ratings of the components in the matching unit that limit the
power rating not the glass, you will get smoke well before any damage to the
glass.

Jeff

1248. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 11:08:39 UTC
From: bob <bobt@iafrica.com>
Message-ID: <1181041719.622843.69010@q66g2000hsg.googlegroups.com>
Source record: 40648

On Jun 3, 9:57 am, Thomas & Karen Mitchell <kg7uATolympus.net> wrote:
> (I realize that a through-the-glass antenna is less than ideal.
> Nevertheless, that's what I have to use in my situation.) The one I
> have is for 2 meters (NOT dual band), and the label says up to 50
> watts. I have an Icom IC-2200H, which has a maximum of 65 watts
> output.
>
> What bad things may/could/will happen if I put 65 watts through the
> antenna?
>
> Thanks!
>
> Tom Mitchell -- KG7U
> Port Angeles, Washington. USA
> ---
> Tom Mitchell, Port Angeles, Washington, USAhttp://www.olympus.net/personal/kg7u
> ---

On a personal note, I have a dual bander through the glass mount. I
use a 857 yeasu and managed to fry the matching unit on the inside of
the car. From what I saw when I repaired the unit was the main
resonating cap is a brass screw in a brass tube with a 'plastic'
insulator in between. With the wattage I get from the 857 the plastic
dia-lectic melted. I replaced the cap with a professional glass 0.5 to
5 pF trimmer cap and it has worked fine ever since.

Regards bob zs6bxi

1249. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 11:30:59 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181043059.661215.12060@q75g2000hsh.googlegroups.com>
Source record: 40649

I would be very much encouraged if
> just one person acknoweledged the Gaussian aproach but sadly
> this newsgroup is for arguments and ridicule.
> Art

I have not critiqued in any post I have made, your Gaussian approach - not that I expect you have a grid on the wall and are keeping score - your method of combining Gauss, time, and classic EMF theory is beyond my mathematical abilities... Where is Dick Feynman when you need him...

Return with us now to those thrilling days of yesteryear <the cultural reference will not be familiar to you> and focus on burning water <no, not Jack Daniels>...
I am willing to learn - so what in those photos and the captions do you see is new physics? That is what is confusing me...

Plasma physics are well known <again, I personally only know what I read on the topic>... However, in a previous lifetime I was responsible for keeping a herd of 100KW RF induction heaters working, so I have some understanding of what high intensity EMF can and cannot do..
The fact that it does not work on pure water < non conductive> but has to have a conductor <a salt> added to it is a flaming directional arrow in the wilderness...
The fact that the flame color indicates sodium ions are being heated above the wick is to me, as an old lab chemist, a futher indication as to mechanism...

The real issue here is what use is this particular method of plasma induction? Interesting - yes...
Useful - questionable
A new source of power - highly suspect...

denny / k8do

1250. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 11:50:16 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181044216.128380.196810@o5g2000hsb.googlegroups.com>
Source record: 40650

>
> Lots of kinds of "glass" out there.
>
> fused silica is pretty low loss
> borosilicate glass (e.g. Pyrex, Kimax, etc.) is medium
> windowglass (soda lime) is all over the place.- Hide quoted text -
>
Exactly... If I were serious about using my capacitor design for the higher bands I would either redesign the circuit to increase the plate area or go to borosilicate glass...
My 80 - 160 remote tuners are working like gangbusters, take all the power I can make, and cost roughly a hundred bucks a pop to build... I don't operate the other bands much and can make do with simple dipoles.... Being that I have ADD (antenna deficit disorder) I am busily working on other ideas now...

denny / k8do

1251. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 12:02:29 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181044949.563628.266220@n4g2000hsb.googlegroups.com>
Source record: 40651

Bob, put up a simple dipole for a band of your choice and trim it to 1:1 without the tuner in line, on your frequency of interest... That can be your reference for comparing your all band antenna...

No, the all band cannot be 1:1 everywhere - that is called dummy load...
Yes, it can be 1:~ everywhere <unfortunately>

There are methods of actually measuring the SWR of your allband antenna. <that do not cost a ton of money>.. Perusing the measurements chapter of the ARRL antenna handbook will give you some ideas...
Reading Walt Maxwell's excellent book will give you an understanding of what is actually happening when you make those measurements...

denny / k8do

1252. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 12:39:01 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4665595a$0$30616$4c368faf@roadrunner.com>
Source record: 40653

"Denny" <k8do@mailblocks.com> wrote in message
news:1181043059.661215.12060@q75g2000hsh.googlegroups.com...
>I would be very much encouraged if
>> just one person acknoweledged the Gaussian aproach but sadly
>> this newsgroup is for arguments and ridicule.
>> Art
>
>
> I have not critiqued in any post I have made, your Gaussian approach -
> not that I expect you have a grid on the wall and are keeping score -
> your method of combining Gauss, time, and classic EMF theory is beyond
> my mathematical abilities... Where is Dick Feynman when you need
> him...
>
Guass and time were already combined many years ago by Maxwell/ Heavyside.
If Art is saying they were wrong he hasnt said how. I havent seen any math
from
Art showing how he related time to Guass's theory, How it is different from
the established relationship
and how he can justify using NEC software which uses the established
relationships(not gassian}to verify the operation of his antennas.
Art needs to give us reason to see what he sees and he hasnt.

Jimmie

1253. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 12:43:09 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46655a53$0$19475$4c368faf@roadrunner.com>
Source record: 40654

"Jeff" <jeff@local.host> wrote in message
news:466514d3$0$1340$834e42db@reader.greatnowhere.com...
> >
>> That sounds like a girl waiting until she is just a litte bit pregnant to
>> stat us birth control.
>> Either the glass cracks, it starts to delaminate, or you fry your
>> finals, all could be too far by the time you see it.
>
>
> It is the ratings of the components in the matching unit that limit the
> power rating not the glass, you will get smoke well before any damage to
> the glass.
>
> Jeff
>
So far the only damageI have seen from this is to the lamination inside the
glass. I wouldnt want to wait until this occurs before I decided to quit.

1254. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 12:46:26 UTC
From: N7ZZT - Eric Oyen <n7zzt@127.0.0.1>
Message-ID: <5699269.KU9Fjeq6qn@www.usenetzone.com>
Source record: 40652

I would recommend calling up a local ham (or a ham users group) and see if
they have an antenna analyzer you can "borrow".

its either that or order one from MFJ (they are pretty cheap and will save
you the cost of repairing a radio later due to burnt finals).

DE N7ZZT

Bob D. wrote:

> I just bought a Kenwood TS-570S. This is my first 'all transistor' rig. I
> also just put up an Alpha Delta DX-LB Plus multi band dipole. I want to
> check the SWR over the various bands, but I keep getting 1 to infinity
> readings on the built in SWR meter. If I activate the internal antenna
> tuner, the SWR magically reduces to near 1:1. This is great, but how can I
> measure the real SWR of this antenna? I figure the real SWR can't be as
> good as 1:1 everywhere and also can't be as bad as 1 to infinity
> everywhere. The only thing the manual says about the SWR meter is that it
> is active during transmit.
>

1255. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 12:49:16 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181047756.976599.33770@n4g2000hsb.googlegroups.com>
Source record: 40655

On 5 Jun, 04:30, Denny <k...@mailblocks.com> wrote:
> I would be very much encouraged if
>
> > just one person acknoweledged the Gaussian aproach but sadly
> > this newsgroup is for arguments and ridicule.
> > Art
>
> I have not critiqued in any post I have made, your Gaussian approach -
> not that I expect you have a grid on the wall and are keeping score -
> your method of combining Gauss, time, and classic EMF theory is beyond
> my mathematical abilities... Where is Dick Feynman when you need
> him...
>
> Return with us now to those thrilling days of yesteryear <the cultural
> reference will not be familiar to you> and focus on burning water <no,
> not Jack Daniels>...
> I am willing to learn - so what in those photos and the captions do
> you see is new physics? That is what is confusing me...
>
> Plasma physics are well known <again, I personally only know what I
> read on the topic>... However, in a previous lifetime I was
> responsible for keeping a herd of 100KW RF induction heaters working,
> so I have some understanding of what high intensity EMF can and cannot
> do..
> The fact that it does not work on pure water < non conductive> but has
> to have a conductor <a salt> added to it is a flaming directional
> arrow in the wilderness...
> The fact that the flame color indicates sodium ions are being heated
> above the wick is to me, as an old lab chemist, a futher indication as
> to mechanism...
>
> The real issue here is what use is this particular method of plasma
> induction? Interesting - yes...
> Useful - questionable
> A new source of power - highly suspect...
>
> denny / k8do

Well said
Art

1256. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 14:07:53 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <Z6e9i.35262$G23.34645@newsreading01.news.tds.net>
Source record: 40656

For better Quality, purchase the Palstar ZM30 antenna analyzer
http://www.palstar.com/zm30.php

"N7ZZT - Eric Oyen" <n7zzt@127.0.0.1> wrote in message
news:5699269.KU9Fjeq6qn@www.usenetzone.com...
>I would recommend calling up a local ham (or a ham users group) and see if
> they have an antenna analyzer you can "borrow".
>
> its either that or order one from MFJ (they are pretty cheap and will save
> you the cost of repairing a radio later due to burnt finals).
>
> DE N7ZZT
>
> Bob D. wrote:
>
>> I just bought a Kenwood TS-570S. This is my first 'all transistor' rig. I
>> also just put up an Alpha Delta DX-LB Plus multi band dipole. I want to
>> check the SWR over the various bands, but I keep getting 1 to infinity
>> readings on the built in SWR meter. If I activate the internal antenna
>> tuner, the SWR magically reduces to near 1:1. This is great, but how can
>> I
>> measure the real SWR of this antenna? I figure the real SWR can't be as
>> good as 1:1 everywhere and also can't be as bad as 1 to infinity
>> everywhere. The only thing the manual says about the SWR meter is that it
>> is active during transmit.
>>
>

1257. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 14:38:17 UTC
From: Bob Spooner <rls19@psu.edu>
Message-ID: <f43sgq$15sc$1@f04n12.cac.psu.edu>
Source record: 40657

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:UP6dnR1W1cf1KPnbnZ2dnUVZ_vOlnZ2d@insightbb.com...
> ... how can I measure the real SWR of this antenna? I figure the real SWR
> can't be as good as 1:1 everywhere and also can't be as bad as 1 to
> infinity everywhere. The only thing the manual says about the SWR meter is
> that it is active during transmit.
>
> --
> Bob D. ND9B
Bob,

If there is a "bypass" switch for the tuner, you may be able to use your internal SWR meter to give you a direct reading. If not and you know someone who has a JRC JST-245 that you can borrow, the SWR meter on that rig is _after_ the tuner, so you always get an antenna system reading.

73,
Bob AD3K

1258. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:16:34 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1181056594.178589.310720@g4g2000hsf.googlegroups.com>
Source record: 40658

On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:

> It's induction coupled plasma, not arc discharge plasma.
>
> But let's explore the claim that the water is "burning." If water
> burns, what are the reactants and what are the reaction products?
>
> If it's hydrogen that's burning, then it was derived from the water by
> applying enough energy to split the water molecule... and if this is
> really the case then you've input as much energy in the form of RF as
> you get back by burning the (allegedly) produced hydrogen.

Not necessarily. It could be more, less, or the same depending on the
precise nature of the reaction.

> There's this nagging little thing called conservation of energy and
> matter and getting more energy out of this particular system than you
> put into it is a violation of the fundamental laws of physics and
> chemistry.

True, but one must also consider the initial and final chemical energy
states in order to make a complete energy analysis. One can, for
example, obtain a great deal of energy from gasoline by expending a
small amount of ignition energy without violating conservation of
energy.

Thanks for the interesting induction coupled plasma discussion.

73, ac6xg

> What's really happening is that electrons are being excited to higher
> energy levels by application of an intense RF field and upon "falling
> back" to their original state release the difference in energy between
> the higher and lower states. It's not "burning" in the classic sense
> of the term.
>
> Here's a decent explanation of how induction coupled plasma is used in
> analytical chemistry.http://www.cee.vt.edu/ewr/environmental/teach/smprimer/icp/icp.html
>
> This invention will never withstand strict scientific review because
> it will be trivial to demonstrate that it doesn't produce more power
> than is input in the form of RF. No net excess power produced means
> no new power source.
>
> It's almost frightening that hams would consider the claims for this
> thing to be valid. Not that I expect hams to be competent in every

> scientific discipline, but there are some basic fundamentals
> applicable to how the universe operates...- Hide quoted text -
>
> - Show quoted text -

1259. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:20:12 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181056812.502111.159780@q75g2000hsh.googlegroups.com>
Source record: 40659

On 5 Jun, 07:24, Jim Higgins <inva...@invalid.invalid> wrote:
> On Mon, 04 Jun 2007 18:42:00 -0700, John Smith I
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >Jimmie D wrote:
>
> > > ...
>
> >Sodium Chloride (salt) contains sodium (DUH! Huh?), well guess what,
> >sodium ions impart a yellow color to the flame and make it visible.
>
> >Hydrogen is lighter than air (the hindenburg! Duh, again!) this makes
> >the gas being emitted very anxious to head towards the ceiling. This
> >also is causing heat to be convected upwards RAPIDLY!
>
> >Result, paper towel is unburned.
>
> >If it were a plasma arc, the paper towel would be one electrode. Ever
> >see electrodes made of metal melt in a plasma arc? Carbon electrodes
> >burn away?
>
> >Nuff said ...
>
> >Regards, JS
>
> It's induction coupled plasma, not arc discharge plasma.
>
> But let's explore the claim that the water is "burning." If water
> burns, what are the reactants and what are the reaction products?
>
> If it's hydrogen that's burning, then it was derived from the water by
> applying enough energy to split the water molecule... and if this is
> really the case then you've input as much energy in the form of RF as
> you get back by burning the (allegedly) produced hydrogen.
>
> There's this nagging little thing called conservation of energy and
> matter and getting more energy out of this particular system than you
> put into it is a violation of the fundamental laws of physics and
> chemistry.
>

> What's really happening is that electrons are being excited to higher
> energy levels by application of an intense RF field and upon "falling
> back" to their original state release the difference in energy between
> the higher and lower states. It's not "burning" in the classic sense
> of the term.
>
> Here's a decent explanation of how induction coupled plasma is used in
> analytical chemistry.http://www.cee.vt.edu/ewr/environmental/teach/smprimer/icp/icp.html
>
> This invention will never withstand strict scientific review because
> it will be trivial to demonstrate that it doesn't produce more power
> than is input in the form of RF. No net excess power produced means
> no new power source.
>
> It's almost frightening that hams would consider the claims for this
> thing to be valid. Not that I expect hams to be competent in every
> scientific discipline, but there are some basic fundamentals
> applicable to how the universe operates...- Hide quoted text -
>
> - Show quoted text -

The question is not what he is striving for is a valid quest.
The question is should the press or media decide on it's validity
and possibly consider the censoring of the story. Some people
on this newsgroup are angry because the story has been given
publicity that they feel is undeserved and harmfull to the minds
of some readers. They want to squash the idea by ridicule or
censorship since in their judgement it propulgates falsities
about science. If the minority in science who wish to decide
what is and what is not harmfull or fruitfull to the community
then the study of science itself is not required and
neither is debate.
Art

1260. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:40:31 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1181058031.698949.122480@k79g2000hse.googlegroups.com>
Source record: 40660

On Jun 4, 5:39 pm, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
> Maybe you'll tell me who you think thinks waves of any sort can't
> be reflected. I haven't run into anyone who thinks EM waves can't be
> reflected, refracted, etc. Maybe there's a misunderstanding somewhere.

I don't want to get personal but if you have followed the reflected
wave arguments, you know who they are. Some simple true/false
questions will highlight the argument.

1. Do reflected EM waves actually exist in reality?
2. Is the reflected EM wave a traveling wave?
3. Does a reflected EM wave obey the rules for traveling waves?
4. Do reflected EM waves contain ExB joules/second?
5. Do reflected EM waves have any effect on forward waves in a
constant Z0 environment?
6. Do standing EM waves superceed and obsolete the component traveling
waves?
7. Does reflected EM energy violate the laws of physics by standing
still within the standing wave?
8. Does reflected EM energy violate the laws of physics by just
"sloshing" around?
9. Does reflected EM energy travel in the reverse direction at VF(c)
until it encounters an impedance discontinuity?
10. Is it valid to consider the forward EM traveling wave and the
reflected EM traveling wave separately and then superpose the
resulting fields (voltages, currents)?
11. Are the decades-old EM wave intensity equations from the field of
optics valid for an RF EM wave analysis?
12. Can standing wave current be used to determine the delay through a
75m mobile loading coil?
13. Is the current "drop" through that loading coil just an illusion
caused by superposition of forward and reflected currents?
14. Would the delay be different if only a forward traveling wave was
used for measurement purposes?
--
73, Cecil, w5dxp.com

1261. Re: Determining Total Gain of an Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:48:24 UTC
From: junoexpress <MTBrenneman@gmail.com>
Message-ID: <1181058504.106491.51960@g4g2000hsf.googlegroups.com>
Source record: 40661

On May 30, 10:47 am, art <aun...@insightbb.com> wrote:
> On 29 May, 19:47, richardharri...@webtv.net (Richard Harrison) wrote:
>
> > Matt Brenenman wrote:
>
> > "When I think of how a field induces a voltage, I think of voltage as
> > being proportional to norm of the field."
>
> > OK. Terman wrote on page 2 of his 1955 opus:
> > "The strength of the wave measures in terms of microvolts per meter of
> > stress in space is also exactly the same voltage that the magnetic flux
> > of the wave induces in a conductor 1 m long when sweeping across this
> > conductor with the velocity of light."
>
> > Since Matt mentions circular polarization, one of the problems on page
> > 50 in Kraus` 3rd edition of "Antennas" is notable. It states:
> > "1-16-2 More power in C.P. Show that the average Poynting vector of a
> > circularly polarized wave is twice that of a linearly polarized wave if
> > the maximum electric field E is the same for both waves. This means that
> > the medium can handle twice as much power before breakdown with circular
> > polarization (CP) than with linear polarization (LP)."
>
> > Best regards, Richard Harrison, KB5WZI
>
> Richard,
> I am trying to decipher the above so my comments may well not be
> relavent to what you are actually saying.
> It is a given that far field circular polarisation
> results in a 3 db loss with respect to radiation compared to other
> polarisations. But one cannot from this assume that radiation
> from a radiator changes with respect to the designed polarization.
> When current is applied to a radiator in a time varient condition
> the vectors involved cannot change.
> The three phases of radiation are current application and electron
> emmission,formation of the near field and finally formation of the
> far field.
> I fail to see how vectors formed in the initial stage which can
> be seen as a Poyntings explanation changes or depends upon
> future formations of the ensueing radiation waves.
> Since the poster is interested in mathematicalanalysis of radiation
> he must obviously realise that the Laws of Conservation must be held
> and it woulkd appear that some confusion has been injected into his
> problem.
> Art

Thank you for the responses. I've been to an out of town symposium the last week, and I haven't had time yet to sit down and think about them much. I'll look at the texts suggested and then perhaps I can make a considered reply ;>).

Thank you once again,

M

1262. RE: HELP! Mystery Antenna ID!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:52:42 UTC
From: n9mxq <n9mxq@[noSpaM}aim.com>
Message-ID: <bcydnVmzw5FUG_jbnZ2dnUVZ_o-knZ2d@insightbb.com>
Source record: 40662

Well, the mystery has been solved.

With some help from the friendly folks at Cushcraft..

It's an AV-4
==========
> Hello group, I'm hoping you all can help me identify an antenna I inherited some years ago and just now dug out.
>
> It appears to be HF in banding, but I don't have an analyzer to check it out.
>
> At the bottom is 3 points for radial wires to attach. I'd like to ID this monster and maybe put it into service...
>
> Pictures can be seen at: http://jeepingene.home.insightbb.com/antenna
>
> Email me direct, or reply here.
>
> Thanks in advance.
>
> Gene N9MXQ

1263. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 15:58:02 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181059082.807434.246810@q75g2000hsh.googlegroups.com>
Source record: 40663

On 5 Jun, 05:39, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> "Denny" <k...@mailblocks.com> wrote in message
>
> news:1181043059.661215.12060@q75g2000hsh.googlegroups.com...>I would be very much encouraged if
> >> just one person acknoweledged the Gaussian aproach but sadly
> >> this newsgroup is for arguments and ridicule.
> >> Art
>
snip...
>

> Guass and time were already combined many years ago by Maxwell/ Heavyside.
> If Art is saying they were wrong he hasnt said how.

As you say..... "IF".....
Art has not said that.

I havent seen any math
> from
> Art showing how he related time to Guass's theory, How it is different from
> the established relationship
> and how he can justify using NEC software which uses the established
> relationships(not gassian}to verify the operation of his antennas.
> Art needs to give us reason to see what he sees and he hasnt.
>
> Jimmie

1264. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 16:21:32 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f442if$pe5$1@nnrp.linuxfan.it>
Source record: 40664

Jim Higgins wrote:

> ...
> This invention will never withstand strict scientific review because
> it will be trivial to demonstrate that it doesn't produce more power
> than is input in the form of RF. No net excess power produced means
> no new power source.
> ...

At no time did I ever think it was over unity. The law of conservation of energy is just another law awaiting to be "broken", i.e. a new "law" found which acts to the contrary ... after experiencing the insanity of quantum physics, it leaves ones belief system shattered!

The real exciting part, if true, is it can be utilized to greatly lessen our dependence on fossil fuels, remove the necessity of storage batteries (a storage tank for gas has a much greater life expectancy and is magnitudes cheaper in the long run than batteries, plus, the gas can be transported with NO loss, electricity can't) and can be used in conjunction with off peak usage of power to store energy. (and, especially wind, solar, wave, geothermal, river current generation, etc.)

I have often wondered why geothermal resources, such as volcanoes in Hawaii were not utilized, through electrolysis, to generate hydrogen/oxygen to remove Hawaii's dependence on oil and stop polluting paradise!

At 80% efficiency, or possibly less, I would imagine the process would become economically important. With the proper use of catalysts (platinum? palladium? Manganese Dioxide? etc.) it might even be feasible to approach 90+ efficiency. (Manganese Dioxide weakens the hydrogen/oxygen bond, if in doubt--drop a bit of Manganese Dioxide in a bit of hydrogen peroxide and watch the oxygen release! And, platinum is contained in every catalytic converter on every auto)

I am just giving the benefit of the doubt at this point, as (supposed) engineers, physicists and others are claiming this is new ... and, when you have John Kanzius called before congress to provide details and congressman English wanting to allot funds to its development, and is drafting such a bill, I am assuming there is at least a grain of truth in it all ... but then, it is easy to shake my belief in the charlatan congressmen we have today ...

JS

JS

1265. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 16:29:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4430p$u99$1@nnrp.linuxfan.it>
Source record: 40665

John Smith I wrote:

> ...

I should have pointed out, the most efficient device in the world is the lowly transformer, the properly designed xfrmr is able to achieve 95-97% efficiency in most situations ... although, due to material cost factors, this is seldom seen.

JS

1266. Re: Through-glass antenna power limits

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 16:39:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f443jbvlk1@nnrp.linuxfan.it>
Source record: 40666

Jimmie D wrote:

> ...
> So far the only damageI have seen from this is to the lamination inside the
> glass. I wouldnt want to wait until this occurs before I decided to quit.
>

De-lamination on the vettes' rear window? Absolutely WON'T take the chance!

The Park Avenue Buick? Who cares? Doubt it would even affect
resale/trade-in value ...

JS

1267. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 18:45:42 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f44b67$7tj$1@news.service.uci.edu>
Source record: 40667

Jim Higgins wrote:
> On Tue, 05 Jun 2007 15:16:34 -0000, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
>
>>On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:
>>
>>
>>>It's induction coupled plasma, not arc discharge plasma.
>>>
>>>But let's explore the claim that the water is "burning." If water
>>>burns, what are the reactants and what are the reaction products?
>>>
>>>If it's hydrogen that's burning, then it was derived from the water by
>>>applying enough energy to split the water molecule... and if this is
>>>really the case then you've input as much energy in the form of RF as
>>>you get back by burning the (allegedly) produced hydrogen.
>>
>>Not necessarily. It could be more, less, or the same depending on the
>>precise nature of the reaction.
>
>
> OK... so would you mind explaining one or more variations on "precise
> nature" that would make for a meaningful difference in energy?

Here's the thing. You stated that "you've input as much energy in the form of RF as you get back by burning the (allegedly) produced hydrogen." I'm merely pointing out that there is nothing about the physics and chemistry here which makes that guarantee. As I went on to say, a complete energy analysis requires that the initial and final energy states must also be considered. If the final energy state is higher than the initial state, then more energy will be input than released in the reaction. If the final energy state is lower than the initial energy state then more energy is released than is input. Total energy is certainly conserved in any case.

I'm sure you can see my point here. It's far from controversial.

73, ac6xg

1268. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 19:04:13 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f44c8t$8sq$1@news.service.uci.edu>
Source record: 40668

Cecil Moore wrote:

> On Jun 4, 5:39 pm, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
>
>>Maybe you'll tell me who you think thinks waves of any sort can't
>>be reflected. I haven't run into anyone who thinks EM waves can't be
>>reflected, refracted, etc. Maybe there's a misunderstanding somewhere.
>
>
> I don't want to get personal but if you have followed the reflected
> wave arguments, you know who they are. Some simple true/false
> questions will highlight the argument.
>
> 1. Do reflected EM waves actually exist in reality?
> 2. Is the reflected EM wave a traveling wave?
> 3. Does a reflected EM wave obey the rules for traveling waves?
> 4. Do reflected EM waves contain ExB joules/second?
> 5. Do reflected EM waves have any effect on forward waves in a
> constant Z0 environment?
> 6. Do standing EM waves superceed and obsolete the component traveling
> waves?
> 7. Does reflected EM energy violate the laws of physics by standing
> still within the standing wave?
> 8. Does reflected EM energy violate the laws of physics by just
> "sloshing" around?
> 9. Does reflected EM energy travel in the reverse direction at VF(c)
> until it encounters an impedance discontinuity?
> 10. Is it valid to consider the forward EM traveling wave and the
> reflected EM traveling wave separately and then superpose the
> resulting fields (voltages, currents)?
> 11. Are the decades-old EM wave intensity equations from the field of
> optics valid for an RF EM wave analysis?
> 12. Can standing wave current be used to determine the delay through a
> 75m mobile loading coil?
> 13. Is the current "drop" through that loading coil just an illusion
> caused by superposition of forward and reflected currents?
> 14. Would the delay be different if only a forward traveling wave was
> used for measurement purposes?

It's ridiculous to assert that someone "thinks EM waves can't be
reflected" based on the fact that they might happen to take issue with
one or more of your speculations on the laundry list shown above.

ac6xg

1269. Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 19:11:25 UTC
From: Proctologically Violated<antropic3.14decay@optonline2.718.net>
Message-ID: <nzi9i.33$1T2.2@newsfe12.lga>
Source record: 40669

Awl--

I posted some time ago regarding the tuning circuitry of car radios vs. home radios/stereos.
I had long noticed much superior tuning in car radios over my home radios. Several apparently knowledgeable people on a few radio ngs confirmed this, even explained it, altho this went over my head.

So based on this assumption of tuning superiority, I went to *great lengths* to remove a very nice 6-speaker stereo from a car I'm junking (1990 Mazda 929S--nice car, too, seen better days), to hook up in my shop, so I can listen to some decent radio, instead of brain-killing Reality TV.

Finally accomplished said task, and, big big bummer, the reception of the car radio in my shop/garage is even worse than my home radios/stereos!
Yet, this *same radio*, when I used to park the car this very same garage, had great reception.

Whazzup????

And, in general, what can I do about this reception problem, since it appears that a car stereo is not the immediate solution?
I have a 100 foot tree outside, and I'm thinking of climbing it and putting some kind of antenna at the top.
If I did this, what would be the best thing to put up there, for as much reception as I can get: fm, am, TV, whatever else is oscillating up there.

What is the problem here, and in much of the NYC area?. No valleys, and I am even on a bit of a hill, about 10 mi. from Manhattan.
What are my options? Preferably simple/cheap options, but at this point, I'll try pretty much anything.

When I was a kid (in NYC), I calculated wavelengths, etc, and had antennas "cut to size" for the various FM stations I was listening to, in all kinds of orientations. Musta had about 30 antennas taped up in my room. It was hilarious, BUT I got good reception, and LOTS of stations!
Those same dipole-type antennas are near-useless here.
:(

TIA.
--

Mr. P.V.'d (formerly Droll Troll), Yonkers, NY

Stop Corruption in Congress & Send the Ultimate Message:
Absolutely Vote, but NOT for a Democrat or a Republican.
Ending Corruption in Congress is the *Single Best Way*

to Materially Improve Your Family's Life.
The Solution is so simple--and inexpensive!

entropic3.14decay at optonline2.718 dot net; remove pi and e to reply--ie,
all d'numbuhs

1270. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 20:42:27 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f44i14die1@news.service.uci.edu>
Source record: 40671

Jim Higgins wrote:
> On Tue, 05 Jun 2007 11:45:42 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:

>>Here's the thing. You stated that "you've input as much energy in the
>>form of RF as you get back by burning the (allegedly) produced
>>hydrogen." I'm merely pointing out that there is nothing about the
>>physics and chemistry here which makes that guarantee. As I went on
>>to say, a complete energy analysis requires that the initial and final
>>energy states must also be considered. If the final energy state is
>>higher than the initial state, then more energy will be input than
>>released in the reaction. If the final energy state is lower than the
>>initial energy state then more energy is released than is input.
>>Total energy is certainly conserved in any case.
>>
>>I'm sure you can see my point here. It's far from controversial.
>>
>>73, ac6xg
>
>
>
> I guess I don't see your point. Whan I say energy I mean *all*
> energy, including any energy possibly stored as heat because the final
> products might remain hotter than the orginal products. If you have a
> point that overrides that trivial case I just used to guess at what
> you're talking about, then you need to explain it in more detail...
> not because I'm stupid, but because you're simply not presenting your
> case unless you do; you're just hand waving.

If there is something specific in my comments above that you don't
understand, please let me know what it is and I'll be happy to
elaborate for you.

73, ac6xg

1271. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 20:47:13 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181076433.290522.226190@h2g2000hsg.googlegroups.com>
Source record: 40670

On 5 Jun, 11:29, Jim Higgins <inva...@invalid.invalid> wrote:
> On Tue, 05 Jun 2007 08:20:12 -0700, art <aun...@insightbb.com> wrote:
> >The question is not what he is striving for is a valid quest.
> >The question is should the press or media decide on it's validity
> >and possibly consider the censoring of the story. Some people
> >on this newsgroup are angry because the story has been given
> >publicity that they feel is undeserved and harmfull to the minds
> >of some readers. They want to squash the idea by ridicule or
> >censorship since in their judgement it propulgates falsities
> >about science. If the minority in science who wish to decide
> >what is and what is not harmfull or fruitfull to the community
> >then the study of science itself is not required and
> >neither is debate.
> >Art
>
> I guess I'm one of the "angry" one... because this is yet another
> case of bad science reported to a public that is incapable of telling
> good science from bad science and which in this case wasn't even
> offered the opportunity unless it was via knowledge gained from
> elsewhere.
O.K. your complaint is noted.
Should the press add a disclaimer of the
veracity of the claims?
Should one have a trial with the assumption that
what is said is correct and not prematually presumed to be false?
At what degree level would one have to be a legitamate judge?
Should the Supreme Court be councilled before a statement is allowed
to be made?
Should the President council Congress before he faces the nation?
Should not YOU council others before you make a statement aboyut
others?
Lewellyn made an allegtation about the poor state of education of
other than himself
should he be stoned to death?
This a simple argument over something that was reported and YOU are
angry.
And you want your comments to be removed, but for why?
Do you consider that they may not be valid or stand the test of time?

This newsgroup allows you, an unknown to express his thinking
as a term of free speech while you on the other hand want to
stilt the free speech of others. Your highness, you are much to harsh
on those that you judge. Hopefully your house is not made of glass.
Art

> Yes, I think that when the press reports on a perpetual motion machine
> they're obligated (in a social contract sense vs a legal one) to point
> out that such things are really impossible. And when they report on a
> device claimed to burn water that represents a potential energy
> solution... then I think the times (energy shortages, high gas
> prices) demand more balance than was provided.
>
> The real point being that there was no "debate" in the original story.
> It was nothing more than a one sided "let's stir them up today" piece.

1272. Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 21:12:46 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <jlk9i.332892$ZA5.86766@newsfe15.phx>
Source record: 40672

I received this request from a VE ham.

"What gauge of insulated wire do I need to build a long wire for 20, 40, 80 meters.
In your personal experience, how long must the wires be to operate on said freqs. I am using an old ts-820 only. I need to build it quick to listen in on the upcoming Field day this June 23-24, 2007."

Thought I would ask here for opinions

Thanks
Lamont

1273. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 21:42:36 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99474E6F15FA3nonenowhere@61.9.191.5>
Source record: 40673

Denny <k8do@mailblocks.com> wrote in news:1181044949.563628.266220
@n4g2000hsb.googlegroups.com:

> Yes, it can be 1:~ everywhere <unfortunately>

Why perpetuate the poster's error... VSWR is by definition a ratio greater
than unity, a ratio greater than 1:1, eg 2:1, 100:1 inf:1.

Owen

1274. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 22:55:43 UTC
From: kc1di <kc1di-qrp@roadrunner.com>
Message-ID: <4665e9f0$0$11851$4c368faf@roadrunner.com>
Source record: 40674

The Shadow wrote:
> I received this request from a VE ham.
>
> "What gauge of insulated wire do I need to build a long wire for 20, 40,
> 80 meters.
> In your personal experience, how long must the wires be to operate on
> said freqs. I am using an old ts-820 only. I need to build it quick to
> listen in on the upcoming Field day this June 23-24, 2007."
>
> Thought I would ask here for opinions
>
> Thanks
> Lamont
Hi Lamont,
the definition of a true long wire is a minimum of 1 wavelength at the
lowest operating frequency. that would be about 256 feet for 80 Meters.
Though a shorter length will work many hams use a random wire that is
cut for a 1/2 wave on 80m about 136 feet or so and use it for 80 thru 10
Meters. however that antenna is not a true longwire until you get up to
40 Meters and above. Long wire are usually end fed with Open wire
feeders and a balanced matching system. they can be very good antennas
if mounted horizontal as high as possible above ground.
Hope this is of help
73 Dave Kc1di
P.S. A search of the internet will give you much info on Longwire
antennas some good some not so good.

1275. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 23:03:04 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <JYl9i.424801$115.226070@newsfe10.phx>
Source record: 40675

"kc1di" <kc1di-qrp@roadrunner.com> wrote in message
news:4665e9f0$0$11851$4c368faf@roadrunner.com...
> The Shadow wrote:
>> I received this request from a VE ham.
>>
>> "What gauge of insulated wire do I need to build a long wire for 20, 40,
>> 80 meters.
>> In your personal experience, how long must the wires be to operate on
>> said freqs. I am using an old ts-820 only. I need to build it quick to
>> listen in on the upcoming Field day this June 23-24, 2007."
>>
>> Thought I would ask here for opinions
>>
>> Thanks
>> Lamont
> Hi Lamont,
> the definition of a true long wire is a minimum of 1 wavelength at the
> lowest operating frequency. that would be about 256 feet for 80 Meters.
> Though a shorter length will work many hams use a random wire that is cut
> for a 1/2 wave on 80m about 136 feet or so and use it for 80 thru 10
> Meters. however that antenna is not a true longwire until you get up to
> 40 Meters and above. Long wire are usually end fed with Open wire
> feeders and a balanced matching system. they can be very good antennas if
> mounted horizontal as high as possible above ground.
> Hope this is of help
> 73 Dave Kc1di
> P.S. A search of the internet will give you much info on Longwire
> antennas some good some not so good.

Thanks very much I shall pass it along
Any advice as to wire guage? I have used lamp cord in the past.

Lamont

1276. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-05 23:20:51 UTC
From: You <You@shadow.orgs>
Message-ID: <You-7E085A.15211805062007@netnews.worldnet.att.net>
Source record: 40676

In article <JYl9i.424801$115.226070@newsfe10.phx>,
"The Shadow" <Repose@Zilch.com> wrote:

>
> Thanks very much I shall pass it along
> Any advice as to wire guage? I have used lamp cord in the past.
>
> Lamont
>

for simple, quick and dirty End Feed Wire antenna's, head down to
your local Electrical Supply House and get a 500" Spool of #14
or #16 Stranded Wire for $5.00US, and have yourself a good time
stringing it up in the trees.

1277. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:06:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f451bgfbc1@nnrp.linuxfan.it>
Source record: 40577

Jim Higgins wrote:

> ...

Please point out to me where the press ever claimed it was a "perpetual motion machine" (over unity.)

I am afraid I missed anyone claiming that, except some here stating that it wasn't--and the rest of us already knew that--but then, those who are not to sharp keep going around yelling that--just as if someone is claiming it is, strange bunch.

Who has the energy to point out to them that it appears a bit insane? Kind of like someone pointing out that the computer in front of 'em isn't a perpetual motion machine! DUH!!!

As I have pointed out, and am getting tired of pointing out, this may be the discovery of the century--WITHOUT HAVING TO BE AN OVER UNITY DEVICE!!! IF, and that is a pretty big if, it is real when subjected to complete scrutiny.

JS

1278. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:18:26 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f45216$gu6$1@nnrp.linuxfan.it>
Source record: 40578

Jim Higgins wrote:

> ...
> If quantum physics leaves your belief system shattered, then I'd have
> to say you don't understand quantum physics on even a superficial
> level... or else you're exaggerating your reaction to it. The math
> is a real bitch, but the generalized concepts are easily grasped by
> those who understand classical physics. But that aside, the real
> point is that quantum physics doesn't leave classical physics as a
> broken law to be tossed aside. NASA will continue to use classical
> physics to plot trajectories to the Moon or to Mars.
> ...

OMG! What was I thinking, particles that "wink in" and "wink out" are
total boring! ROFLOL!!!

> ...
> Are you even for one instant suggesting that "burning" water for a net
> release of useful energy might be true?
> ...

I pointed out that with engineers and physicists (No, I didn't examine
their degrees) it is worth a look, not a bunch of fools booing in the
isles ...

> What gas are we talking about here that can be transported with no
> loss? The current darling candidate is hydrogen... for which net
> tank-based transportation costs are tremendous. REmember - or at
> least realize - that "transportation" includes the cost to compress on
> the sending end, expand and recompress on the receiving end, plus the
> classical over the road costs. Then when you figure that the energy
> density of gasoline is 9000 Wh/l (watt-hours per liter) and for
> hydrogen compressed to 150 bar (2200 lb/sq. in.) is only 405 Wh/l you
> can see that transportation costs are far higher per watt-hour
> delivered.

You are stuck in your own world, blinded by your own thoughts ...
pipelines carrying hydrogen or hydrogen + oxygen would experience no
loss ...

> ...
> not to mention the dangers of having a ready made super bomb on every
> city corner - where a gas station used to be - just waiting for
> terrorists to set it off.

Hydrogen is magnitudes safer than gasoline, kerosene, diesel, natural
gas, etc.--due to hydrogens "buoyancy", on escape to the environment, it

rapidly escapes upwards, the bulk of heat and energy is directed upwards when burning also ...

So, you are one of the, "Yeah, I already knew that" crowd. Good, I needed an example, such as you, to show the group ...

JS

1279. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:20:17 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46660bf7$0$17204$39cecf19@news.twtelecom.net>
Source record: 40579

Jim Kelley wrote:
> On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:
>
>> It's induction coupled plasma, not arc discharge plasma.
>>
>> But let's explore the claim that the water is "burning." If water
>> burns, what are the reactants and what are the reaction products?
>>
>> If it's hydrogen that's burning, then it was derived from the water by
>> applying enough energy to split the water molecule... and if this is
>> really the case then you've input as much energy in the form of RF as
>> you get back by burning the (allegedly) produced hydrogen.
>
> Not necessarily. It could be more, less, or the same depending on the
> precise nature of the reaction.
>
>> There's this nagging little thing called conservation of energy and
>> matter and getting more energy out of this particular system than you
>> put into it is a violation of the fundamental laws of physics and
>> chemistry.
>
> True, but one must also consider the initial and final chemical energy
> states in order to make a complete energy analysis. One can, for
> example, obtain a great deal of energy from gasoline by expending a
> small amount of ignition energy without violating conservation of
> energy.
>
> Thanks for the interesting induction coupled plasma discussion.
>
> 73, ac6xg
>
>

Mr Higgins is correct, it is scary what people will believe, even when
something obvious is mentioned, like "conservation of energy".

I'd like to know what possible "final chemical energy states" might
exist here. What miracles occurred to release more energy from the
hydrogen? Combining with chlorine? Maybe, but where did the energy to
free the chlorine come from? None of the combinations will release more
than it took to free the elements from the compounds.

I'd love to find out that I'm wrong, though.

tom
K0TAR

1280. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:21:22 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4526l$gu6$2@nnrp.linuxfan.it>
Source record: 40580

Owen Duffy wrote:

> ...
> Why perpetuate the poster's error... VSWR is by definition a ratio greater
> than unity, a ratio greater than 1:1, eg 2:1, 100:1 inf:1.
>
> Owen
>

Interesting demonstration of the twisted logic prevalent on this ng ...

JS

1281. Re: Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:29:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f452le$j27$1@nnrp.linuxfan.it>
Source record: 40581

Proctologically Violatedï¿½ï¿½ wrote:
> ...
> *Finally* accomplished said task, and, big big bummer, the reception of the
> car radio in my shop/garage is even worse than my home radios/stereos!
> Yet, this *same radio*, when I used to park the car this very same garage,
> had great reception.
> ...

Been decades since I have taken a car radio and placed it in a cabinet
with its' own speaker(s), power supply, etc. and created a "Miracle Kludge."

However, if I remember correctly, I found the same as you, poor
reception--until I tuned the antenna adjusting capacitor (was a hole on
the back of the radio turned with a screw driver.) It then turned out
to be the most sensitive am set I ever owned (well, for one without a
long-wire antenna attached.)

The antenna is part of an "antenna system" of which, the car body is a
part with much influence ... ditch the car body and you have to readjust
the antenna.

Regards,
JS

1282. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 01:34:19 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f452uu$j27$2@nnrp.linuxfan.it>
Source record: 40582

John Smith I wrote:

Change:

I pointed out that with engineers and physicists (No, I didn't examine
their degrees) it is worth a look, not a bunch of fools booing in the
isles ...

to:

I pointed out that with engineers and physicists accepting that hydrogen
is being generated (No, I didn't examine their degrees), it is worth a
look--and not be deterred by a bunch of fools booing in the isles ...

JS

1283. Re: Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 02:01:23 UTC
From: Proctologically Violated<antropic3.14decay@optonline2.718.net>
Message-ID: <Lzo9i.659$Eo.70@newsfe12.lga>
Source record: 40583

Good info.

You bring up another interesting point--
Just how is the radio itself connected to the car body/aerial antenna?
Simple ground?

So many wires going to this radio, not entirely clear what's going on.
What I thought was positive and negative wires turned out to be two
positives!!
And both necessary!
Hate to tell you how long it took to figure *that* out!
There are *two* ground wires, which look like shielded antenna wires. Who
knows.....

I will look for that tuning screw. Is it insulated?
--

Mr. P.V.'d (formerly Droll Troll), Yonkers, NY

Stop Corruption in Congress & Send the Ultimate Message:
Absolutely Vote, but NOT for a Democrat or a Republican.
Ending Corruption in Congress is the *Single Best Way*
to Materially Improve Your Family's Life.
The Solution is so simple--and inexpensive!

entropic3.14decay at optonline2.718 dot net; remove pi and e to reply--ie,
all d'numbuhs

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f452le$j27$1@nnrp.linuxfan.it...
> Proctologically Violated wrote:
> > ...
>> *Finally* accomplished said task, and, big big bummer, the reception of
>> the car radio in my shop/garage is even worse than my home
>> radios/stereos!
>> Yet, this *same radio*, when I used to park the car this very same
>> garage, had great reception.
>> ...
>
> Been decades since I have taken a car radio and placed it in a cabinet
> with its' own speaker(s), power supply, etc. and created a "Miracle
> Kludge."
>
> However, if I remember correctly, I found the same as you, poor
> reception--until I tuned the antenna adjusting capacitor (was a hole on
> the back of the radio turned with a screw driver.) It then turned out to

> be the most sensitive am set I ever owned (well, for one without a
> long-wire antenna attached.)
>
> The antenna is part of an "antenna system" of which, the car body is a
> part with much influence ... ditch the car body and you have to readjust
> the antenna.
>
> Regards,
> JS
>

1284. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 02:31:00 UTC
From: richardharrison@webtv.net
Message-ID: <1962-46661C64-100@storefull-3254.bay.webtv.net>
Source record: 40585

John Smith wrote:
"Interesting demonstration of twisted logic prevalent on this ng...."

Yes but VSWR is by definition the highest a-c voltage on the line divided by the lowest a-c voltage found on the line, so its value must be one or more and never less than one.

Best regards, Richard Harrison, KB5WZI

1285. Re: Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 02:43:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f456vr$ut7$1@nnrp.linuxfan.it>
Source record: 40584

Proctologically Violatedï¿½ï¿½ wrote:

The ground, for the antenna, was at the base of the old style
telescoping whip. The ground connection to the body was through the
mount on the whip, where the mount gripped the hole in the car body.

Insulated? No, it was a plain mica cap. The screw on cap was probably
chrome plated brass ...

I have wondered if the "in glass" antenna on the cars could be replaced
with the old whip and what sort of tuning was available on the new car sets.

On my buick park avenue, there is, what appears to be, an active
antenna--it is a little plastic box attached near the rear view mirror,
compass and gps.

I have seen some car radios which have been removed from autos and the
terminal strips with all the wire connections do appear as a nightmare.
I'd certainly desire a schematic and pin-out to tinker with one. I
never bothered to look for the antenna trimmer though ... perhaps you
must remove the case these days?

JS

1286. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 03:35:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f45a1a$ut7$2@nnrp.linuxfan.it>
Source record: 40586

Richard Harrison wrote:
> John Smith wrote:
> "Interesting demonstration of twisted logic prevalent on this ng...."
>
> Yes but VSWR is by definition the highest a-c voltage on the line
> divided by the lowest a-c voltage found on the line, so its value must
> be one or more and never less than one.
>
> Best regards, Richard Harrison, KB5WZI
>

Before we steer "newbies" astray: You have ONE jar of marbles, some are black, some are white. If there are twice as many of one, as the other, you have your 2:1 ratio ...

Or, in amateur use, is related to reflection coefficient (Gin = (Zin - Z0) / (Zin+Z0))
where Z0 = normalized impedance and Zin is input impedance.

And is given by: VSWR= (1+|Gin|)/(1-| Gin |)

Regards,
JS

1287. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 04:11:25 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <BZydnegutph6rvvbnZ2dnUVZ_vamnZ2d@giganews.com>
Source record: 40587

You wrote:
> The Shadow wrote:
>
> >
> > Thanks very much I shall pass it along
> > Any advice as to wire guage? I have used lamp cord in the past.
> >
> > Lamont
> >
>
> for simple, quick and dirty End Feed Wire antenna's, head down to
> your local Electrical Supply House and get a 500" Spool of #14
> or #16 Stranded Wire for $5.00US, and have yourself a good time
> stringing it up in the trees.

In a pinch, that'll work. However... the longer the wire, the more mass & weight. The softer and/or smaller the wire and the longer the length/weight, the more stretch. For the best long-term installation, either hard-drawn copper or copper-covered steel is a much better choice. I learned that lesson with my first 40m half-wavelength dipole. I used #14 soft-drawn copper... it gradually tuned itself lower in frequency, and then broke! Many people like to buy wire antenna stuff from The Wireman (http://www.wireman.com/). I found the product line and pricing to be better at Davis RF (http://www.davisrf.com/).

73,
Bryan WA7PRC
PS: CU during FD as W7MRG (2A WWA)

1288. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 04:12:31 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <I-KdnXa1U_W0qfvbnZ2dnUVZ_o-knZ2d@giganews.com>
Source record: 40588

Bryan wrote:
> You wrote:
> > The Shadow wrote:
> >
> > >
> > > Thanks very much I shall pass it along
> > > Any advice as to wire guage? I have used lamp cord in the past.
> > >
> > > Lamont
> > >
> >
> > for simple, quick and dirty End Feed Wire antenna's, head down to
> > your local Electrical Supply House and get a 500" Spool of #14
> > or #16 Stranded Wire for $5.00US, and have yourself a good time
> > stringing it up in the trees.
>
> In a pinch, that'll work. However... the longer the wire, the more mass &
> weight. The softer and/or smaller the wire and the longer the
> length/weight, the more stretch. For the best long-term installation,
> either hard-drawn copper or copper-covered steel is a much better choice.
I
> learned that lesson with my first 40m half-wavelength dipole. I used #14
> soft-drawn copper... it gradually tuned itself lower in frequency, and
then
> broke! Many people like to buy wire antenna stuff from The Wireman
> (http://www.wireman.com/). I found the product line and pricing to be
> better at Davis RF (http://www.davisrf.com/).
>
> 73,
> Bryan WA7PRC
> PS: CU during FD as W7MRG (2A WWA)
>
Oops... the URL for The Wireman would be http://thewireman.com/

1289. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 04:23:00 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f45cr7cpr1@nnrp.linuxfan.it>
Source record: 40589

The Shadow wrote:

> ...
> "What gauge of insulated wire do I need to build a long wire for 20, 40,
> 80 meters.

In the past, I was able to purchase large coils of aluminum wire; I think it was used for either clothes line (and had a plastic covering on it), or the aluminum fencing wire.

I don't remember the gauge, or if they even gave the gauge, but it seemed to be #8 or #10.

It was cheap and light, worked well with the proper soldering techniques. Or, properly protected clamp connectors.

Since, I have looked for this wire and not been able to find it in lowes or home depot, orchard supply, etc.

Anyone know a source?

JS

1290. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 10:27:12 UTC
From: afcsman <afcsman@hotmail.com>
Message-ID: <-oKdnS9cZdljFvvbnZ2dnUVZ_u2mnZ2d@comcast.com>
Source record: 40590

John Smith I wrote:
> The Shadow wrote:
>
> > ...
>> "What gauge of insulated wire do I need to build a long wire for 20,
>> 40, 80 meters.
>
> In the past, I was able to purchase large coils of aluminum wire; I
> think it was used for either clothes line (and had a plastic covering on
> it), or the aluminum fencing wire.
>
> I don't remember the gauge, or if they even gave the gauge, but it
> seemed to be #8 or #10.
>
> It was cheap and light, worked well with the proper soldering
> techniques. Or, properly protected clamp connectors.
>
> Since, I have looked for this wire and not been able to find it in lowes
> or home depot, orchard supply, etc.
>
> Anyone know a source?
>
> JS

Many years ago I bought aluminum Electric Fence Wire at Sears. Since
they were acquired by K-Mart, I'd suggest looking at a Farm Supply or
Coop for it. It was a bit brittle, and I was burying it for my ground
planes.

Jerry, W9NPI

1291. HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 10:53:30 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <aeSdnXOFVMOxD_vbnZ2dnUVZ_uqvnZ2d@bright.net>
Source record: 40591

I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if anyone has information on the external frequency doubler so that it can use it's upper frequency position (512-1024 MHz). I want to get 902 MHz out of it to test the feed for my parabolic dish's return loss (SWR).

I can build a diode doubler to generate harmonics and then put a 1/4 wavelength of shorted-end coax across its output to select the 902 MHz harmonic, but I'd like to be able to tune all freqs between the 512 and 1024 MHz without building a lot of shorted stubs. How does HP do it with their doubler? Bandpass filtering? Could one bandpass filter cover that much range?? Maybe something as simple as a low pass filter with an Fco of 1050 MHz or so, but with this, how would I keep the fundamental freq (256-512 MHz) out of the output??

Thanks for any leads!

--
Scott N0EDV
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

1292. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 11:24:18 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <C-udnehhfPv_BPvbnZ2dnUVZ_oGlnZ2d@bright.net>
Source record: 40592

Searching Google, I was able to find a copy of the manual for the
frequency doubler unit (HP 11690A) which conveniently describes the
operation and has a schematic. I could make one, except there is one
part that is just labeled as a transformer (T1) with three windings.
That probably wouldn't be too hard to make, but no idea how many turns
for each winding...

The manual is at ftp://bama.sbc.edu/downloads/hp/11690a/11690a_service_6.pdf

Ideas??

Scott
N0EDV

Scott wrote:

> I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if
> anyone has information on the external frequency doubler so that it can
> use it's upper frequency position (512-1024 MHz). I want to get 902 MHz
> out of it to test the feed for my parabolic dish's return loss (SWR).
>
> I can build a diode doubler to generate harmonics and then put a 1/4
> wavelength of shorted-end coax across its output to select the 902 MHz
> harmonic, but I'd like to be able to tune all freqs between the 512 and
> 1024 MHz without building a lot of shorted stubs. How does HP do it
> with their doubler? Bandpass filtering? Could one bandpass filter
> cover that much range?? Maybe something as simple as a low pass filter
> with an Fco of 1050 MHz or so, but with this, how would I keep the
> fundamental freq (256-512 MHz) out of the output??
>
> Thanks for any leads!
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

1293. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 11:25:56 UTC
From: Jeff <jeff@local.host>
Message-ID: <46669a02$0$1347$834e42db@reader.greatnowhere.com>
Source record: 40593

If I remember correctly it uses a double balanced mixer as the frequency doubler, and only works at high output levels from the 8640 (+10dBm), so you would require an external attenuator to get lower levels.

The HP part No is 08754-60057.

73
Jeff
G8HUL

"Scott" <acepilot@bloomer.net> wrote in message
news:aeSdnXOFVMOxD_vbnZ2dnUVZ_uqvnZ2d@bright.net...
>I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if
>anyone has information on the external frequency doubler so that it can use
>it's upper frequency position (512-1024 MHz). I want to get 902 MHz out of
>it to test the feed for my parabolic dish's return loss (SWR).
>
> I can build a diode doubler to generate harmonics and then put a 1/4
> wavelength of shorted-end coax across its output to select the 902 MHz
> harmonic, but I'd like to be able to tune all freqs between the 512 and
> 1024 MHz without building a lot of shorted stubs. How does HP do it with
> their doubler? Bandpass filtering? Could one bandpass filter cover that
> much range?? Maybe something as simple as a low pass filter with an Fco
> of 1050 MHz or so, but with this, how would I keep the fundamental freq
> (256-512 MHz) out of the output??
>
> Thanks for any leads!
>
> --
> Scott N0EDV
> http://corbenflyer.tripod.com/
> Gotta Fly or Gonna Die
> Building RV-4 (Super Slow Build Version)

1294. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 11:45:07 UTC
From: Jeff <jeff@local.host>
Message-ID: <4666a007$0$1341$834e42db@reader.greatnowhere.com>
Source record: 40594

"Scott" <acepilot@bloomer.net> wrote in message
news:C-udnehhfPv_BPvbnZ2dnUVZ_oGlnZ2d@bright.net...
> Searching Google, I was able to find a copy of the manual for the
> frequency doubler unit (HP 11690A) which conveniently describes the
> operation and has a schematic. I could make one, except there is one part
> that is just labeled as a transformer (T1) with three windings. That
> probably wouldn't be too hard to make, but no idea how many turns for each
> winding...
>

The purpose of the transformer is to split the incoming signal in-phase and apply to the 2 input port of the double balanced mixer. The number of turns will depend a bit on the ferrite that you use for the core, I suspect that a 2 hole bead would be best, but a toroid would probably do as well.

73
Jeff

1295. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 12:43:46 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <43ad63tmbq1r1nefp7nopno139r13qutuu@4ax.com>
Source record: 40595

On Tue, 5 Jun 2007 14:12:46 -0700, "The Shadow" <Repose@Zilch.com>
wrote:

>I received this request from a VE ham.
>
>"What gauge of insulated wire do I need to build a long wire for 20, 40, 80
>meters.
>In your personal experience, how long must the wires be to operate on said
>freqs. I am using an old ts-820 only. I need to build it quick to listen in
>on the upcoming Field day this June 23-24, 2007."
>
>Thought I would ask here for opinions
>
>Thanks
>Lamont
I like to back into this kind of question...
If you have to buy wire I would buy #14 electrical house wire from
your local Home improvement store. It has enough strength to support
itself and is very durable. You can break it if you put too much
tension on it. It seems to be reusable forever! The current price for
a 500 foot spool is up to about $42.

At $0.10 per foot an 80 meter dipole (135 feet) would amount to
$13.50.

If this is a receive only antenna the mechanical qualities are the
most important.

In my experience, 1/4 wave dipole is the most useful quick & dirty on
each band.

Current band conditions may lead to a poor experience for folks
experiencing HF for the first time.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

1296. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 13:14:16 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <qaNsC5CoMrZGFwe3@g3ohx.demon.co.uk>
Source record: 40596

In message <4666a007$0$1341$834e42db@reader.greatnowhere.com>, Jeff
<jeff@local.host> writes
>
>"Scott" <acepilot@bloomer.net> wrote in message
>news:C-udnehhfPv_BPvbnZ2dnUVZ_oGlnZ2d@bright.net...
>> Searching Google, I was able to find a copy of the manual for the
>> frequency doubler unit (HP 11690A) which conveniently describes the
>> operation and has a schematic. I could make one, except there is one part
>> that is just labeled as a transformer (T1) with three windings. That
>> probably wouldn't be too hard to make, but no idea how many turns for each
>> winding...
>>
>
>The purpose of the transformer is to split the incoming signal in-phase and
>apply to the 2 input port of the double balanced mixer. The number of turns
>will depend a bit on the ferrite that you use for the core, I suspect that a
>2 hole bead would be best, but a toroid would probably do as well.
>
>73
>Jeff

An alternative (but similar) circuit is essentially the same as the
well-known two-diode fullwave (bi-phase) rectifier.

Single ferrite bead input transformer, trifilar wound with 2 or 3 turns
(say 32 -34 gauge). Bead typically 5mm long, 4mm dia, small hole, mu 100
- 200. One winding is the input (primary). The other two connected as
centre-tapped secondary. CT to ground. Diodes VHF/UHF switching/mixer
diodes. Output 'DC polarity' - either +ve or -ve (doesn't matter).
Output must have DC return to ground (if output is DC blocked, use RFC
or resistor - say 50 - 330 ohms).

Physical balance affects suppression of fundamental and odd harmonics.
Helped (maybe) if input feed is via series bifilar balun choke (2 or 3
turns on same type of bead as transformer).

Ian.
--

1297. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 13:53:25 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <s%y9i.405827$g24.328767@newsfe12.phx>
Source record: 40597

Thanks very much to all that replied. I have passed it along to our Canadian
friend
Lamont

"Bryan" <bryan.swadenerNOSPAM@comcast.net> wrote in message
news:BZydnegutph6rvvbnZ2dnUVZ_vamnZ2d@giganews.com...
> You wrote:
>> The Shadow wrote:
>>
>> >
>> > Thanks very much I shall pass it along
>> > Any advice as to wire guage? I have used lamp cord in the past.
>> >
>> > Lamont
>> >
>>
>> for simple, quick and dirty End Feed Wire antenna's, head down to
>> your local Electrical Supply House and get a 500" Spool of #14
>> or #16 Stranded Wire for $5.00US, and have yourself a good time
>> stringing it up in the trees.
>
> In a pinch, that'll work. However... the longer the wire, the more mass &
> weight. The softer and/or smaller the wire and the longer the
> length/weight, the more stretch. For the best long-term installation,
> either hard-drawn copper or copper-covered steel is a much better choice.
> I
> learned that lesson with my first 40m half-wavelength dipole. I used #14
> soft-drawn copper... it gradually tuned itself lower in frequency, and
> then
> broke! Many people like to buy wire antenna stuff from The Wireman
> (http://www.wireman.com/). I found the product line and pricing to be
> better at Davis RF (http://www.davisrf.com/).
>
> 73,
> Bryan WA7PRC
> PS: CU during FD as W7MRG (2A WWA)
>
>

1298. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 14:04:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1181138657.137858.14300@p77g2000hsh.googlegroups.com>
Source record: 40598

On Jun 5, 6:20 pm, Tom Ring <news0...@taring.org> wrote:
> Jim Kelley wrote:
> > On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:
>
> >> It's induction coupled plasma, not arc discharge plasma.
>
> >> But let's explore the claim that the water is "burning." If water
> >> burns, what are the reactants and what are the reaction products?
>
> >> If it's hydrogen that's burning, then it was derived from the water by
> >> applying enough energy to split the water molecule... and if this is
> >> really the case then you've input as much energy in the form of RF as
> >> you get back by burning the (allegedly) produced hydrogen.
>
> > Not necessarily. It could be more, less, or the same depending on the
> > precise nature of the reaction.
>
> >> There's this nagging little thing called conservation of energy and
> >> matter and getting more energy out of this particular system than you
> >> put into it is a violation of the fundamental laws of physics and
> >> chemistry.
>
> > True, but one must also consider the initial and final chemical energy
> > states in order to make a complete energy analysis. One can, for
> > example, obtain a great deal of energy from gasoline by expending a
> > small amount of ignition energy without violating conservation of
> > energy.
>
> > Thanks for the interesting induction coupled plasma discussion.
>
> > 73, ac6xg
>
> Mr Higgins is correct, it is scary what people will believe, even when
> something obvious is mentioned, like "conservation of energy".
>
> I'd like to know what possible "final chemical energy states" might
> exist here. What miracles occurred to release more energy from the
> hydrogen? Combining with chlorine? Maybe, but where did the energy to
> free the chlorine come from? None of the combinations will release more
> than it took to free the elements from the compounds.
>
> I'd love to find out that I'm wrong, though.
>
> tom

> K0TAR- Hide quoted text -
>
> - Show quoted text -

1299. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 14:33:12 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <IAz9i.89053$n_.64617@attbi_s21>
Source record: 40599

"Scott" <acepilot@bloomer.net> wrote in message
news:aeSdnXOFVMOxD_vbnZ2dnUVZ_uqvnZ2d@bright.net...
>I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if
>anyone has information on the external frequency doubler so that it can use
>it's upper frequency position (512-1024 MHz). I want to get 902 MHz out of
>it to test the feed for my parabolic dish's return loss (SWR).
>
> I can build a diode doubler to generate harmonics and then put a 1/4
> wavelength of shorted-end coax across its output to select the 902 MHz
> harmonic, but I'd like to be able to tune all freqs between the 512 and
> 1024 MHz without building a lot of shorted stubs. How does HP do it with
> their doubler? Bandpass filtering? Could one bandpass filter cover that
> much range?? Maybe something as simple as a low pass filter with an Fco
> of 1050 MHz or so, but with this, how would I keep the fundamental freq
> (256-512 MHz) out of the output??
>
> Thanks for any leads!
>
> --
> Scott N0EDV
> http://corbenflyer.tripod.com/
> Gotta Fly or Gonna Die
> Building RV-4 (Super Slow Build Version)

1300. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 14:37:24 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <EEz9i.150456$_c5.96047@attbi_s22>
Source record: 40600

> I can build a diode doubler to generate harmonics and then put a 1/4
> wavelength of shorted-end coax across its output to select the 902 MHz
> harmonic, but I'd like to be able to tune all freqs between the 512 and
> 1024 MHz without building a lot of shorted stubs. How does HP do it with
> their doubler? Bandpass filtering? Could one bandpass filter cover that
> much range?? Maybe something as simple as a low pass filter with an Fco
> of 1050 MHz or so, but with this, how would I keep the fundamental freq
> (256-512 MHz) out of the output??
>
> Thanks for any leads!
>
> --
> Scott N0EDV

You don't need the filter. The "push pull" doubler will suppress the fundamental, (By as much as 40 dB if it's well balanced). Just tune the 8640 to 451 MHz and calibrate the output. If you wish to gild the lilly, you could install a HPF with lower corner frequency of 512 MHz, but the original signal isn't much cleaner WRT harmonic content from the dividers.

W4ZCB

1301. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 14:40:23 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1181140823.760859.47800@g4g2000hsf.googlegroups.com>
Source record: 40601

On Jun 5, 6:20 pm, Tom Ring <news0...@taring.org> wrote:
> Jim Kelley wrote:
> > On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:
>
> >> It's induction coupled plasma, not arc discharge plasma.
>
> >> But let's explore the claim that the water is "burning." If water
> >> burns, what are the reactants and what are the reaction products?
>
> >> If it's hydrogen that's burning, then it was derived from the water by
> >> applying enough energy to split the water molecule... and if this is
> >> really the case then you've input as much energy in the form of RF as
> >> you get back by burning the (allegedly) produced hydrogen.
>
> > Not necessarily. It could be more, less, or the same depending on the
> > precise nature of the reaction.
>
> >> There's this nagging little thing called conservation of energy and
> >> matter and getting more energy out of this particular system than you
> >> put into it is a violation of the fundamental laws of physics and
> >> chemistry.
>
> > True, but one must also consider the initial and final chemical energy
> > states in order to make a complete energy analysis. One can, for
> > example, obtain a great deal of energy from gasoline by expending a
> > small amount of ignition energy without violating conservation of
> > energy.
>
> > Thanks for the interesting induction coupled plasma discussion.
>
> > 73, ac6xg
>
> Mr Higgins is correct, it is scary what people will believe, even when
> something obvious is mentioned, like "conservation of energy".
>
> I'd like to know what possible "final chemical energy states" might
> exist here. What miracles occurred to release more energy from the
> hydrogen? Combining with chlorine? Maybe, but where did the energy to
> free the chlorine come from? None of the combinations will release more
> than it took to free the elements from the compounds.
>
> I'd love to find out that I'm wrong, though.
>
> tom

> K0TAR- Hide quoted text -
>
> - Show quoted text -

I'm not sure what "miracle" you're inferring from my comments, Tom. Every chemical reaction has both an initial, and a final energy state.

For the benefit of those in the group who haven't taken a chemistry class, there is apparently a need for me to declare an allegence here. Obviously, water is not gasoline. The tiny flame in the movie is not the energy equivalent of hundreds of watts of RF - except perhaps to a second grader or a journalist.

My point is simply that for a given chemical mass, the difference between energy input and energy output equates with the difference between the initial chemical energy state and final chemical energy state of the chemical reaction. This follows from conservation of energy.

73, ac6xg

1302. Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 16:35:55 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <4666e2b9$0$10192$9b4e6d93@newsspool4.arcor-online.net>
Source record: 40602

Hello group -

My new interest is ferrite rod antennas.

I'm looking for a (possible) interesting doc:
UK magazine Practical Wireless, April 2000, pages 38 and 39 "An
Experimental Ferrite Rod Transmitting Antenna" by Richard Marris G2BZQ

Seems not on the net and the author doesn't have an email address or is gone.

Would be nice if someone can send it per email.

Anybody interested in ferrite antennas can contact me for info sharing.

Best regards -
Henry Kiefer

1303. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 16:58:56 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <kJB9i.150600$_c5.129311@attbi_s22>
Source record: 40603

> You don't need the filter. The "push pull" doubler will suppress the
> fundamental, (By as much as 40 dB if it's well balanced). Just tune the
> 8640 to 451 MHz and calibrate the output. If you wish to gild the lilly,
> you could install a HPF with lower corner frequency of 512 MHz, but the
> original signal isn't much cleaner WRT harmonic content from the dividers.
>
> W4ZCB
>That'll teach me to write before breakfast and engaging brain. Make that a
>push-push doubler! (Full wave rectifier configuration) The little balun
>cores in a TV balun work just fine. Make it all as symmetrical as possible.

W4ZCB

1304. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 17:16:36 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1181150196.908439.15090@a26g2000pre.googlegroups.com>
Source record: 40604

On Jun 6, 4:24 am, Scott <acepi...@bloomer.net> wrote:
> Searching Google, I was able to find a copy of the manual for the
> frequency doubler unit (HP 11690A) which conveniently describes the
> operation and has a schematic. I could make one, except there is one
> part that is just labeled as a transformer (T1) with three windings.
> That probably wouldn't be too hard to make, but no idea how many turns
> for each winding...
>
> The manual is atftp://bama.sbc.edu/downloads/hp/11690a/11690a_service_6.pdf
>
> Ideas??
>
> Scott
> N0EDV
>
>
>
> Scott wrote:
> > I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if
> > anyone has information on the external frequency doubler so that it can
> > use it's upper frequency position (512-1024 MHz). I want to get 902 MHz
> > out of it to test the feed for my parabolic dish's return loss (SWR).
>
> > I can build a diode doubler to generate harmonics and then put a 1/4
> > wavelength of shorted-end coax across its output to select the 902 MHz
> > harmonic, but I'd like to be able to tune all freqs between the 512 and
> > 1024 MHz without building a lot of shorted stubs. How does HP do it
> > with their doubler? Bandpass filtering? Could one bandpass filter
> > cover that much range?? Maybe something as simple as a low pass filter
> > with an Fco of 1050 MHz or so, but with this, how would I keep the
> > fundamental freq (256-512 MHz) out of the output??
>
> > Thanks for any leads!
>
> --
> Scotthttp://corbenflyer.tripod.com/
> Gotta Fly or Gonna Die
> Building RV-4 (Super Slow Build Version)

Beware!! The schematic is a little misleading. The top winding is
not coupled to the other two. Consider in a perfect transformer, if
it were, the output (right) ends of the upper and lower windings would
be identical. The purpose of the top winding is to improve the
balance at the output. In the bridges we've built, we normally make

two (as nearly as practical) identical transformers, both with bifilar windings, but the one used for the "upper" winding in the schematic shown just shorts the two windings together, so it's just an inductor, but it matches the inductance of the other one, used as a current-mode balun transformer, and also matches the parasitic resistances and capacitances. The circuit for the balun is easy to simulate (e.g. in LTSpice) and demonstrate how the added inductor dramatically improves the balance at low frequencies.

As others have pointed out, you really don't need much filtering; the circuit suppresses the fundamental and odd harmonics, so if you've built it carefully, just a LPF that cuts off at 1.2GHz or so should be about all the help it needs, unless you want a really clean signal for some specific application, in which case a little bandpass filter could clean things up further.

Cheers,
Tom

1305. Flag Ant. reduced size, higher freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 19:10:09 UTC
From: amdx <amdx@knology.net>
Message-ID: <7611d$46670690$18d6b40c$9808@KNOLOGY.NET>
Source record: 40605

I'm looking for info on reducing the size of a Flag antenna
to use it between 7 and 12 Mhz. Any design pages available?
For SW reception.
Mike

1306. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 19:17:19 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f47182$f3l$1@nnrp.linuxfan.it>
Source record: 40606

Jim Kelley wrote:

> ...
> is not the energy equivalent of hundreds of watts of RF - except
> perhaps to a second grader or a journalist.
> ...

Great, you must have good eyes.

I can't tell what wattage is being used. Exactly RF power is being used?

JS

1307. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 19:26:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f471q5$m9b$1@nnrp.linuxfan.it>
Source record: 40607

Jim Higgins wrote:

> ...
> Now, John, in that context please find where I said the press claimed
> the device was over unity.

You were claiming the news claimed it was over unity, I asked you where?

Here is your text:

> Yes, I think that when the press reports on a perpetual motion machine
> they're obligated (in a social contract sense vs a legal one) to point
> out that such things are really impossible.

So, I ask you again, "Where did the press claim the device was over unity?"

Also, how might this device be the discovery of the century as you suggest above? What is newly discovered here? What potential does it hold that might qualify it for discovery of the century status? Please try to be specific.

This has been more than over-explained in my previous posts ... if you don't see how, open your eyes ...

JS

1308. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 19:34:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4728l$n4s$1@nnrp.linuxfan.it>
Source record: 40608

Jim Higgins wrote:

> [total BS]

Crack the valve on a tank of hydrogen for a sec or two, in the open.
Now attempt to light a match and ignite it, you can't, it is already
above your head.

Crack the value on a tank of propane and light the match, place the
match near the ground (propane is heavier than air) and WATCH OUT,
you're pants are on fire ...

JS

1309. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 19:53:37 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f473i6ivt1@news.service.uci.edu>
Source record: 40609

John Smith I wrote:

> I can't tell what wattage is being used. Exactly RF power is being used?

If I told you I'd have to kill you. It's a black helicopter thing.
Alien technology. I'm sure you understand. ;-)

ac6xg

1310. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 20:04:01 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f473vloid1@nnrp.linuxfan.it>
Source record: 40610

Jim Kelley wrote:
>
>
> John Smith I wrote:
>
>> I can't tell what wattage is being used. Exactly RF power is being used?
>
> If I told you I'd have to kill you. It's a black helicopter thing.
> Alien technology. I'm sure you understand. ;-)
>
> ac6xg

I know one thing, a damn fool is claim to know something he does NOT!

JS

1311. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 20:21:53 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f47577$k1v$1@news.service.uci.edu>
Source record: 40611

John Smith I wrote:

> Jim Kelley wrote:
>
>>
>>
>> John Smith I wrote:
>>
>>> I can't tell what wattage is being used. Exactly RF power is being
>>> used?
>>
>>
>> If I told you I'd have to kill you. It's a black helicopter thing.
>> Alien technology. I'm sure you understand. ;-)
>>
>> ac6xg
>
>
> I know one thing, a damn fool is claim to know something he does NOT!

For someone who claims not to believe that more energy is output than
input, I believe ye doth protest too much.

ac6xg

1312. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 20:38:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f475vo$3g2$1@nnrp.linuxfan.it>
Source record: 40612

Jim Kelley wrote:

> [chit]

Gesus!

Now you're a damn psychic! ROFLOL

JS

1313. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 20:43:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f476ag$3ph$1@nnrp.linuxfan.it>
Source record: 40613

Jim Kelley wrote:

My posts say it all, I have an open mind to the hydrogen generation (I don't think you can start a plasma arc with a butane lighter, but you can ignite hydrogen, etc.)

Sodium ions would be introduced to the flame simply from the bursting of the bubbles ... result, yellow flame.

The device does NOT have to be over-unity, nor even unity, to be of major economic/energy/storage importance ...

The people here are so dense they just don't get it ...

etc., etc., etc. ...

JS

1314. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 20:50:16 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f476mg$fm2$1@f04n12.cac.psu.edu>
Source record: 40614

Tom Ring wrote:

> Mr Higgins is correct, it is scary what people will believe, even when
> something obvious is mentioned, like "conservation of energy".
>
> I'd like to know what possible "final chemical energy states" might
> exist here. What miracles occurred to release more energy from the
> hydrogen? Combining with chlorine? Maybe, but where did the energy to
> free the chlorine come from? None of the combinations will release more
> than it took to free the elements from the compounds.
>
> I'd love to find out that I'm wrong, though.

Wow, go away for a few days, and everyone is peein' in the pool!

Di-Hydrogen Oxide is, as the name suggests, "already burnt". Or call it oxidized if you wish.

The gullible know just enough to make an almost intelligent assumption - "Well Hydrogen is really flammable - Look at what happened to the Hindenburg! - disregarding that what they were watching burn was the incredibly flammable fabric coating, and because there is a good chance that the red insensitive film emulsions of the day would have a hard time seeing that hydrogen flame. But I digress.

And Oxygen! That stuff is pretty good at making things burn! By golly, release those, and we have a world full of fuel for the family Escalade! Fuel will be too cheap to meter!

But sorry sports fans, it did indeed oxidize, and a long time ago at that. So well burnt that it does a fair job of putting out most fires.

Electrolyzing is after a fashion un-oxidizing it. That will almost certainly take more energy than whatever is produced. I have to say almost certainly because there is always the chance that a singularity will pop up here in the newsgroup and start spitting out refrigerators. But almost certainly not...

Pure water is hard to electrolyze, and adding chemicals like salt to enhance the conductivity produces some nasty additional chemistry. Like that Cl. Wonder what that will make with the H?

There are some dum idees in da world. This one qualifies.

I hate to disappoint you Tom, but you are *not* wrong. 8^)

- 73 de Mike KB3EIA -

1315. Re: Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 21:31:00 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4792o$3ph$2@nnrp.linuxfan.it>
Source record: 40615

Proctologically Violatedï¿½ï¿½ wrote:

If all else fails, an active antenna should give that radio real "ears."

http://guests.antennex.com/rooms/science/new/incred2.pdf

JS

1316. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 22:57:12 UTC
From: Dave <noone@nowhere.com>
Message-ID: <cZG9i.8665$fX4.703@trndny03>
Source record: 40616

"art" <aunwin@insightbb.com> wrote in message
news:1181155291.963963.188630@j4g2000prf.googlegroups.com...
>I have spent a considerable amount of time in researching the above
> subject
> as a result of some comments made regarding Gauss's law of Statics
> and its connection to the above Poynting's Vector. I have not yet
> found
> a description of an actual proof similar to described by the Gaussian
> Antenna
> and have found a number considerable number of " attempts" to provide
> such a proof on the internet. But as yet none have been found as
> substantial
> as a clustered radiated elements in equilibrium.
> What I did find was a indepth explanation of electro magnetism by
> Harvey
> on the net that discusses antenna radiation from it's beginnings
> together
> with past untruths that are put under the microscope. These papers may
> not
> be equal to what is presently understood by scholars but never the
> less
> I thought I would share it with the antenna and radiation minded
> people
> of this group.. If somebody knows of the existence of a real time
> proof
> of Poynting's Vector i.e by a bench experiment I would apreaciate a
> pointer to where it can be seen
> Ofcourse if there are some comments to be made on the Harvey papers
> this would be a good place to put them.
> Art
>
the Poynting vector is nothing but a way to represent power in 3 dimensions.
That is it, nothing more, no magic, nothing worth proving, just a simple
statement of energy flowing through a surface. Now if you could prove it
wrong that might be interesting, but otherwise it follows directly from
conservation of energy and obeys all the related laws.

1317. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-06 22:57:51 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <INidnZmEbtfTofrbnZ2dnUVZ8sqjnZ2d@bt.com>
Source record: 40617

"Henry" <ehydra_news_20070423@arcor.de> wrote in message
news:4666e2b9$0$10192$9b4e6d93@newsspool4.arcor-online.net...
> Hello group -
>
>
> My new interest is ferrite rod antennas.
>
> I'm looking for a (possible) interesting doc:
> UK magazine Practical Wireless, April 2000, pages 38 and 39 "An
> Experimental Ferrite Rod Transmitting Antenna" by Richard Marris G2BZQ
>
> Seems not on the net and the author doesn't have an email address or is
gone.
>
>
> Would be nice if someone can send it per email.
>
>
> Anybody interested in ferrite antennas can contact me for info sharing.
>
>
> Best regards -
> Henry Kiefer
>
Henry,

I vaguely recall reading this article also. As I recall it was claimed that it was possible to use ferrite quite successfully to receive and transmit on frequencies up to 7MHz or 40 metres. I believe the antenna used a couple of six inch ferrite rods side by side with the old medium wave and long wave windings removed and perhaps 15 or 20 turns of wire to resonate on 40 metres wound over a sliding card sleeve. The sleeve was made loose enough to slide along the ferrite rods to achieve the best point of operation.

I would suggest getting a couple of old ferrite rods and experimenting with some wire and a capacitor for resonance.

The problem with ferrite is that it tends to be very lossy in transmitting applications. The principles that concentrate received signals in a loop of wire wound around the ferrite rod, result in transmitted signals becoming concentrated in the ferrite rod, which then absorbs a lot of the RF energy and reradiates it as heat. One or two six inch ferrite rods should be okay for transmitter powers up to 10 watts.

The reason for using ferrite rods was to develop a small antenna with similar properties to a dipole. One that could be rotated in the shack to null out interference etc. Transmission efficiency will be very poor, but the directional properties and the fact that you only need to radiate milliwatts to work thousands of miles using CW may mean this type of antenna will work fine for you.

One thing it wasn't, was a type of miracle whip. I have built one of those following instructions on the web and it works okay at QRP powers from 3.5 MHz to 28 MHz. The transmission efficiency is rubbish, but it gets some sort of a signal out and is fine for receiving. The miracle whip type of antenna uses a wire wound ferrite toroid as a matching autotransformer to match the impedence of a short whip to 50 ohms.

Try the link below for some more info on how ferrite works for receiving and transmitting antennas

http://www.st-andrews.ac.uk/~jcgl/Scots_Guide/RadCom/part7/page5.html

This page suggests transmitter powers of less than a watt be used with ferrite, but I think it depends on the heating effects you get with the rods you end up using. There are many different formulations used in making ferrite rods and toroids and some rods will work very much better than others in this type of application.

Mike G0ULI

1318. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 00:15:42 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <x5adneHMgqIT0_rbRVnyjAA@bt.com>
Source record: 40618

In all the debate about what type of flame is burning, how much and what type of power is being generated and how; the main point seems to have been lost. This guy is primarily claiming that he has developed a cure for cancer and not a limitless source of power - that's just an incidental by product. He has a lot of expensive looking equipment that can generate focused microwave radiation. It can produce enough power to dissassociate water molecules and/or create plasma flames. He also appears to have access to some buckminster fullerine C60/C70 particles judging by the colour of the solution in one of the test tubes.

His (rather simplistic) hypothesis is that cancer cells are better supplied with blood than other cells in the body (which is generally true). By injecting metallic nano particles into the bloodstream, these particles will be carried preferentially to cancer sites (which again is generally true for the first few minutes after injection). His machine is then used to zap the patient and all the nano particles will heat up to 65 degrees centigrade and destroy the cancers (wishful thinking but true if it could be achieved) leaving the rest of the body unharmed.

The principles are basically correct but the nano particles will not differentially seek out tumour sites in the way he hopes. The time variables and circulation patterns in different individuals are too great. What happens if the cancer is interfering with general circulation as it often does? Current research is aimed at finding compounds which will bind to specific tumour sites using specifically engineered proteins. Once this has been achieved, then metallic or other types of particles can be added to the protiens and used to target tumours. Then any specifically tuned radiation source could be used to heat the particles adhering to the tumours to kill them - or to release a poisonous compound designed to kill only the tumour cells.

Research in this area has been going on for years and is starting to signs of considerable success. One problem is that if you suddenly succeed in wiping out all tumour cells in the body in one hit, what will happen to all the waste products created by the dead cells? The kidneys and liver will be overwhelmed and the patient will expire from toxic shock. This is just one step on the way to developing a cure and there will probably never be a cure that involves just being zapped with microwave radiation for a couple of minutes, The cancer has all gone, but the patient dies from the side effects of the cure. The best option is to kill the tumours a bit at a time and allow the patient to recover between treatments. Either that, or a new 'cure' will be needed to flush out all the poisonous compounds as a result of the dead tumour cells rotting away inside the body.

As for sticking your hand in the path of a microwave beam, a one kilowatt CW transmission only causes a sensation of skin warmth for a few seconds exposure. Obviously other damage occurs at deeper levels in the body, where there are fewer pain sensor cells. The demonstration looks spectacular, and makes for a good news story but doesn't actually prove anything.

The idea of one man working alone in a home laboratory inventing what multi-national research corporations with billion dollar budgets cannot is a very appealing one. Unfortunately history shows that it is the well financed, research labs that tend to succeed, not the one man band. Edison, Marconi, and Bill Gates for example, were all pretty wealthy, connected and had a good deal of support behind them before they succeeded in dominating the world with their inventions. Even Tesla was doing alright for a while, until Edison 'proved' that his way of doing things was better - the advantage of having better financial support and that it was more practical and cheaper to install a proven technology using copper wire. Copper wire had been used for low power signalling applications for a long time before it was used to distribute power.

If there is anything of scientific merit at all in this 'invention', one of the multi-nationals will undoubtably have already been developing it and not revealed the details due to patent law requirements.

Hopefully I am wrong and we will all see a universal cure for cancer rolled out to hospitals in a couple of years time. Once cured, we will then be able to go out and kill ourselves by driving too fast in our hydrogen powered emission free cars.

Scientific progress works by building step by step on the work of others that have gone before. That's the way the world has worked for at least the last 6,000 years since the Babylonians, Greeks and early Arabic civilisations developed the scientific method. Individuals may have a Eureka moment, but it takes time for new theories to become accepted and its the people with financial muscle that ultimately get to exploit new innovations and make even more money.

Finally, if you look at the history on invention, you will find many instances of new technology being invented almost simultaneously around the world throughout the centuries. This points to a perhaps deeper underlying principle that technology has to reach a certain stage before the next step can be achieved. It may well be that a multiband 99% efficient HF antenna can be built into the form of a six inch cube. However, that will probably need room temperature superconductors to become available. Once that happens, people will be 'inventing' these antennas all over the world.

Rant mode off

Mike G0ULI

1319. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 00:26:28 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f47jbn$v1a$1@nnrp.linuxfan.it>
Source record: 40619

Jim Higgins wrote:

> ...
> Please explain your assessment of the major economic/energy/storage
> importance of the device if it isn't over-unity or even unity. Please
> take as many screens as you need to fully enlighten the dense ones
> among us.

Geesh, no wonder you are always appearing to stumble about ...

1) Geothermal, river current, wave, solar, wind could be used to
generate automobile/home fuel in off peak hours. (or, for that matter,
just developed for the sole purpose of fuel)

2) The cost, replacement cost, maintaince of batteries would be eliminated.

3) There is no loss in transporting hydrogen via pipelines versus
electricity and powerline loss.

If you need more, you have no visualization skills at all ...

JS

1320. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 00:34:18 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f47jqe$873$1@nnrp.linuxfan.it>
Source record: 40620

Jim Higgins wrote:

> ...

You are a stupid ass who wishes to do character attacks and diversion to manipulate ...

kiss off stupid ... I haven't the time for out-and-out idiots ... go to rram where you belong.

PLONK!

JS

1321. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 01:00:30 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9947D5C48B2CFmcoslocomcastnet@216.196.97.136>
Source record: 40621

richardharrison@webtv.net (Richard Harrison) wrote in news:28667-46639927-481@storefull-3256.bay.webtv.net:

> Jimmy D wrote:
> "Wouldn`t it be nice if Art did the comparison?"
>
> Yes. I thought a Gaussian was a 17-sided polygon.

heptakaidecagon?

73 de Mike KB3EIA -

1322. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 02:33:47 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46676e81$0$11787$4c368faf@roadrunner.com>
Source record: 40623

"Dave" <noone@nowhere.com> wrote in message
news:cZG9i.8665$fX4.703@trndny03...
>
> "art" <aunwin@insightbb.com> wrote in message
> news:1181155291.963963.188630@j4g2000prf.googlegroups.com...
>>I have spent a considerable amount of time in researching the above
>> subject
>> as a result of some comments made regarding Gauss's law of Statics
>> and its connection to the above Poynting's Vector. I have not yet
>> found
>> a description of an actual proof similar to described by the Gaussian
>> Antenna
>> and have found a number considerable number of " attempts" to provide
>> such a proof on the internet. But as yet none have been found as
>> substantial
>> as a clustered radiated elements in equilibrium.
>> What I did find was a indepth explanation of electro magnetism by
>> Harvey
>> on the net that discusses antenna radiation from it's beginnings
>> together
>> with past untruths that are put under the microscope. These papers may
>> not
>> be equal to what is presently understood by scholars but never the
>> less
>> I thought I would share it with the antenna and radiation minded
>> people
>> of this group.. If somebody knows of the existence of a real time
>> proof
>> of Poynting's Vector i.e by a bench experiment I would apreaciate a
>> pointer to where it can be seen
>> Ofcourse if there are some comments to be made on the Harvey papers
>> this would be a good place to put them.
>> Art
>>
> the Poynting vector is nothing but a way to represent power in 3
> dimensions. That is it, nothing more, no magic, nothing worth proving,
> just a simple statement of energy flowing through a surface. Now if you
> could prove it wrong that might be interesting, but otherwise it follows
> directly from conservation of energy and obeys all the related laws.
>
>

Dave , what kind of idiot are you not accepting Grassian antena theory.
I mean just because every Gaussy antenna array present has proven to be less

efficent than a standard yagi yo find reason not to think it is the greatest thing since sliced bread. Damned just how thick headed are you? Cant you see what a great breakthrough Gassious antennas are? 8-))

Jimmie

1323. Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 02:35:53 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <46676170$0$8912$4c368faf@roadrunner.com>
Source record: 40622

If I used electric fence wire for my RF ground radials, how long do you all think it would last?

I know the type of soil matters so lets go almost worst case, lets not go so far as to say it has a high salt content.
I am just looking for something fast and cheap that I can do when I move to my new QTH and will add proper copper wire, one by one as I can afford or find deals on something better.
Do you think it may last a year or so?

Thanks Joe
KI4ILB

1324. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 02:42:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f47rbdscm1@nnrp.linuxfan.it>
Source record: 40624

merlin-7 wrote:
> If I used electric fence wire for my RF ground radials, how long do you all
> think it would last?
> ...

I remember hearing it took 11 years for an aluminum beer can to degrade
in the soil, I believe it was in some environmental material.

But, hardly a final source ...

JS

1325. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 03:03:42 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4667757f$0$21246$39cecf19@news.twtelecom.net>
Source record: 40625

Jim Kelley wrote:
> On Jun 5, 6:20 pm, Tom Ring <news0...@taring.org> wrote:
>> Jim Kelley wrote:
>>> On Jun 5, 7:24 am, Jim Higgins <inva...@invalid.invalid> wrote:
>>>> It's induction coupled plasma, not arc discharge plasma.
>>>> But let's explore the claim that the water is "burning." If water
>>>> burns, what are the reactants and what are the reaction products?
>>>> If it's hydrogen that's burning, then it was derived from the water by
>>>> applying enough energy to split the water molecule... and if this is
>>>> really the case then you've input as much energy in the form of RF as
>>>> you get back by burning the (allegedly) produced hydrogen.
>>> Not necessarily. It could be more, less, or the same depending on the
>>> precise nature of the reaction.
>>>> There's this nagging little thing called conservation of energy and
>>>> matter and getting more energy out of this particular system than you
>>>> put into it is a violation of the fundamental laws of physics and
>>>> chemistry.
>>> True, but one must also consider the initial and final chemical energy
>>> states in order to make a complete energy analysis. One can, for
>>> example, obtain a great deal of energy from gasoline by expending a
>>> small amount of ignition energy without violating conservation of
>>> energy.
>>> Thanks for the interesting induction coupled plasma discussion.
>>> 73, ac6xg
>> Mr Higgins is correct, it is scary what people will believe, even when
>> something obvious is mentioned, like "conservation of energy".
>>
>> I'd like to know what possible "final chemical energy states" might
>> exist here. What miracles occurred to release more energy from the
>> hydrogen? Combining with chlorine? Maybe, but where did the energy to
>> free the chlorine come from? None of the combinations will release more
>> than it took to free the elements from the compounds.
>>
>> I'd love to find out that I'm wrong, though.
>>
>> tom
>> K0TAR- Hide quoted text -
>>
>> - Show quoted text -
>
> I'm not sure what "miracle" you're inferring from my comments, Tom.
> Every chemical reaction has both an initial, and a final energy
> state.
>

> For the benefit of those in the group who haven't taken a chemistry
> class, there is apparently a need for me to declare an allegence
> here. Obviously, water is not gasoline. The tiny flame in the movie
> is not the energy equivalent of hundreds of watts of RF - except
> perhaps to a second grader or a journalist.
>
> My point is simply that for a given chemical mass, the difference
> between energy input and energy output equates with the difference
> between the initial chemical energy state and final chemical energy
> state of the chemical reaction. This follows from conservation of
> energy.
>
> 73, ac6xg
>
>

You and Art are going to get along famously.

I'm done with this nonsensical thread.

tom
K0TAR

1326. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 03:12:35 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <kbudnfPNIoA56vrbnZ2dnUVZ_v2knZ2d@bright.net>
Source record: 40626

I think I might have found a modern alternative...a very small surface
mount device that looks like it will do exactly what the HP doubler does
AND only $5.95 in SINGLE quantities (The AMK-2-13+)!!

http://www.minicircuits.com/products/multipliers_sm.html

Doesn't get much easier than this!!

Scott
N0EDV

Jeff wrote:
> If I remember correctly it uses a double balanced mixer as the frequency
> doubler, and only works at high output levels from the 8640 (+10dBm), so you
> would require an external attenuator to get lower levels.
>
> The HP part No is 08754-60057.
>
> 73
> Jeff
> G8HUL
>
>
> "Scott" <acepilot@bloomer.net> wrote in message
> news:aeSdnXOFVMOxD_vbnZ2dnUVZ_uqvnZ2d@bright.net...
>
>>I recently picked up an HP 8640B Opt. 323 (8640B in a can) and wonder if
>>anyone has information on the external frequency doubler so that it can use
>>it's upper frequency position (512-1024 MHz). I want to get 902 MHz out of
>>it to test the feed for my parabolic dish's return loss (SWR).
>>
>>I can build a diode doubler to generate harmonics and then put a 1/4
>>wavelength of shorted-end coax across its output to select the 902 MHz
>>harmonic, but I'd like to be able to tune all freqs between the 512 and
>>1024 MHz without building a lot of shorted stubs. How does HP do it with
>>their doubler? Bandpass filtering? Could one bandpass filter cover that
>>much range?? Maybe something as simple as a low pass filter with an Fco
>>of 1050 MHz or so, but with this, how would I keep the fundamental freq
>>(256-512 MHz) out of the output??
>>
>>Thanks for any leads!
>>
>>--
>>Scott N0EDV
>>http://corbenflyer.tripod.com/

>>Gotta Fly or Gonna Die
>>Building RV-4 (Super Slow Build Version)
>
>
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

1327. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 06:09:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <niN9i.13033$5j1.12713@newssvr21.news.prodigy.net>
Source record: 40428

Jim Kelley wrote:
> It's ridiculous to assert that someone "thinks EM waves can't be
> reflected" based on the fact that they might happen to take issue with
> one or more of your speculations on the laundry list shown above.

You obviously have not been following the arguments.
--
73, Cecil http://www.w5dxp.com

1328. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 07:42:00 UTC
From: Jeff <jeff@local.host>
Message-ID: <4667b6f9$0$1349$834e42db@reader.greatnowhere.com>
Source record: 40429

">I have spent a considerable amount of time in researching the above
> subject
> as a result of some comments made regarding Gauss's law of Statics
> and its connection to the above Poynting's Vector. I have not yet
> found
> a description of an actual proof similar to described by the Gaussian
> Antenna
> and have found a number considerable number of " attempts" to provide
> such a proof on the internet.

The problem that you have is that the Poynting Vector does not exist as such, so it cannot be proved. It is nothing more than a mathematical nicety that happens to yield a vector product that happens to be in the direction of propagation. It is possible to devise an infinite number of similar vectors that equally well (or better in some cases) describe the energy flow through a surface.

There are plenty of derivations of the mathematical relevance of the Poynting Vector available.

The Poynting Vector is favoured because it is mathematically simple and describes energy flow adequately in a non-static case.

73
Jeff

1329. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 08:47:13 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f48gmhgjs1@news.netins.net>
Source record: 40430

On Wed, 06 Jun 2007 22:35:53 -0400, merlin-7 wrote:

> If I used electric fence wire for my RF ground radials, how long do you
> all think it would last?

> Do you think it may last a year or so?

When I was growing up on the farm, we had galvanized electric fencing wire that had been lost in the weeds, and stomped into the ground (black Iowa dirt) for YEARS and showed no sign of rust.

With todays copper prices, those half mile spools of 14AWG fence wire from the FarmFleet are looking cheaper every day.

The biggest problem I can see would be getting proper electrical contact to the radials themselves. Since steel will not take solder, and you get all kinds of nasty galvanic reactions with dissimilar metals, I would try brassing up the ends with a brazing torch, and then solder to the brass.

--Teh

1330. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 10:23:10 UTC
From: nm5k@wt.net
Message-ID: <1181211790.496636.155550@w5g2000hsg.googlegroups.com>
Source record: 40431

On Jun 6, 6:04 pm, art <aun...@insightbb.com> wrote:
> On 6 Jun, 15:57, "Dave" <n...@nowhere.com> wrote:

>
> But David, you reject the basics of a Gaussian antenna which is why I
> have reservations about your logic tho granted others appear to
> agree with you, so I want to read up on it for myself.

Shame on his mess...

> When reseaching the net I see numorous attempts to
> provide a real time proof for it but nothing as factual as the
> Gaussian antenna.

What is a "gaussian" antenna as you consider it?
All the hints I've seen so far point to some kind of array with
all elements the same length.
Fed in equilibrium so you say... :/
What makes that special? Sounds like a perverted driven array
to me.. Something anyone with a crayon, or modeling program
could conjer up various versions till the cows come home.
Why would you need to rewrite proven theory to explain a driven
array?
Seems the performance of driven arrays is already fairly well
known. Even fairly perverted ones... :/

>So contrary to what you say there is a lot going on
> in trying to find a proof for it even tho you at the same time reject
> the Gaussian connection.

A proof for what? Gaussian connection to what?
Who is doing all this whole lot of going on? Enquiring
minds wanna know...

>After seeing the automatic rejection of
> ANY ideas that represent new ideas in the amateur community I am
> beginning to wonder if the E/H antennas is a victim of the same
> syndrome .

The only ideas that seem to be rejected are the ones that distort
and mangle fairly well known principals.
Yes, I do compare your "gaussian" antenna to be about in
the same league as the E/H antenna because you both use
doo-doo bafflegab to try to "invent" yourselves some kind of new
antenna, which is really just a perverted version of an
existing known antenna.
Your's will actually perform a bit better though, since I

assume the feedline won't do the majority of the radiating,
as is the case with the E/H antenna.
But to me, both of you use what I consider as "doo-doo"
science to try to have some kind of explanation for whatever it
is you are trying to achieve.

>I am coming across many papers that suggest that there
> is more to radiation than scholars presently believe so it is
> natural to me that amateurs would automatically reject any new
> aproach by derisive comments such as junk science or similar.

It's not your antenna that is junk science.. It's just a perverted
driven array as far as I can tell.
It's the bafflegab you come up with to give it some kind of
divine level of performance that is junk science..
Just the way you constantly tweak the usual application of the
word "efficiency" is enough to scare many away.
And this "equilibrium" jibber jabber... Wouldn't it be easier to say
they are all fed in phase? Although some of our roving reporters
say you aren't actually feeding all the elements, in phase or not..
Seems to vary from day to day according to what kind of feedback
you get from the previous days posts..
I still wonder why in the heck you care what anyone here thinks
anyway.. I would just build the silly thing if it means that much
to you.
MK

1331. Re: Will the real SWR please stand up

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 11:31:44 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181215904.951019.172830@p77g2000hsh.googlegroups.com>
Source record: 40432

On Jun 5, 10:31 pm, richardharri...@webtv.net (Richard Harrison)
wrote:
> John Smith wrote:
>
> "Interesting demonstration of twisted logic prevalent on this ng...."
>
> Yes but VSWR is by definition the highest a-c voltage on the line
> divided by the lowest a-c voltage found on the line, so its value must
> be one or more and never less than one.
>
> Best regards, Richard Harrison, KB5WZI

Yup, that was a typo where I ripped off a reply in a hurry... Doesn't
change the point I was making however...

cheers ...denny / k8do

1332. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 11:42:13 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181216533.775363.233300@h2g2000hsg.googlegroups.com>
Source record: 40433

> I know the type of soil matters so lets go almost worst case, lets not go
> so far as to say it has a high salt content.
> Do you think it may last a year or so?
>
> Thanks Joe
> KI4ILB

Depends on the soil... If it is acidic the aluminum will last a long
time, mebbee forever... If it is alkaline and damp, like the Borax
mines in Utah, it will corrode away in months... So, depends upon if
you are East or West of the Missippi...
This effect is lessened if the metal is laying on top of the dirt, or
even on top of the thatch... Long story short I have some in "the
weeds / on the ground" aluminium radials in my 160 arrays and they
look just fine after eight years in Michigan...

My gut feeling is you will be fine for a year...

denny / k8do

1333. Re: Advice on long wire for 20, 40, 80 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 13:33:52 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <d72g63d3fm3ev5ckudupj8fs0av7qcrama@4ax.com>
Source record: 40434

I have bought aluminum electric fence wire (available at Lowes, Home
Depot, etc.) to play with. It wasn't but about $3 for 500-1000 feet.
Small, light and a little kinky if you aren't careful.

Buck

On Tue, 05 Jun 2007 21:23:00 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>The Shadow wrote:
>
> > ...
>> "What gauge of insulated wire do I need to build a long wire for 20, 40,
>> 80 meters.
>
>In the past, I was able to purchase large coils of aluminum wire; I
>think it was used for either clothes line (and had a plastic covering on
>it), or the aluminum fencing wire.
>
>I don't remember the gauge, or if they even gave the gauge, but it
>seemed to be #8 or #10.
>
>It was cheap and light, worked well with the proper soldering
>techniques. Or, properly protected clamp connectors.
>
>Since, I have looked for this wire and not been able to find it in lowes
>or home depot, orchard supply, etc.
>
>Anyone know a source?
>
>JS

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

1334. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 13:50:46 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <NMadna2oM4ELkPXbnZ2dnUVZ8vudnZ2d@bt.com>
Source record: 40435

<snip>
> But David, you reject the basics of a Gaussian antenna which is why I
> have reservations about your logic tho granted others appear to
> agree with you, so I want to read up on it for myself.
> When reseaching the net I see numorous attempts to
> provide a real time proof for it but nothing as factual as the
> Gaussian antenna.So contrary to what you say there is a lot going on
> in trying to find a proof for it even tho you at the same time reject
> the Gaussian connection. After seeing the automatic rejection of
> ANY ideas that represent new ideas in the amateur community I am
> beginning to wonder if the E/H antennas is a victim of the same
> syndrome . I am coming across many papers that suggest that there
> is more to radiation than scholars presently believe so it is
> natural to me that amateurs would automatically reject any new
> aproach by derisive comments such as junk science or similar.
> What does come thru is that members of this newsgroup state that
> the Gaussian antenna has already been invented but fail to point
> out the paper on it. Stating that Maxwell provided a connection
> by mathematics of the E and H fields is not enough to provide
> proof and certainly not without introducing the Gaussian
> connection so its use can be seen and verified.
> If it has actually been pre invented then there must be a
> paper conecting Poynting's vector and Gaussian statics law in
> existence rather than a conoctation in mathematics alone but
> without qualification, and certainly a reference to it in
> Jasik or Krauss. However, members have failed to point out
> such a reference where normally they always point to old books
> on the subject. It is for this reason I am looking for a
> real time proof of the Poynting's Vector because not only
> for the mathematical aproach but also for its connection to
> Poynting which you for one reject out of hand because of
> some gut feeling. If faced with the same problem I have
> no doubt you would procede the same way.
> Art
>

Art

I have arrived at this thread rather late but it appears you believe that
you have arrived at an idea for some kind of new antenna which works on the
principle of Poyntings vector and Gaussian statics law.

Poyntings vector refers to the direction of motion of an electromagnetic
wave is is frequently used to calculate power per square metre of an
idealised wavefront impacting on an imaginary surface at an arbitary

distance from an isotropic (single point) radiator. This figure can then be used to make a comparison with real life antennas to establish directions of preferential gain or loss.

Gaussian statistics refer to the distribution of typically, power over a given area or range. Generally more power is concentrated at the centre of a range with power falling symmetrically either side of a central high point.

Gaussian antennas are currently for sale and used as microwave horns to modify low intensity radar beams used in intruder detection and door opening systems. This ensures that the main lobe of power is directed to the most useful area of detection. These devices typically generate a beam in the form of a cone shape, with maximum intensity at the centre of the cone.

What you are proposing is a planar gaussian antenna which flattens the cone into more of a fan shape, displays a flat impedence over a wide bandwidth and requires around ten elements of different lengths mounted on a boom support.

I could be wrong, but I believe that you have reinvented the log periodic antenna. This antenna has a single feedpoint, operates over typically 10:1 bandwidths with flat impedence and requires a minimum of ten elements to achieve reasonable gain and bandwidth. Log periodic antennae typically have as many as 30 elements. It was much favoured by the military for it's ability to transmit a directional beam on any discrete frequency across the whole of the HF spectrum. The advent of direct satellite communication equipment has rendered these antennae somewhat redundant because they are fairly large and require substantial towers and rotators to be used to maximum advantage. They are still used where reliable, frequency agile, point to point HF links are required. VHF and UHF versions would be small enough to be suitable for installation in a typical domestic garden.

No new maths or physics are required to explain how this type of antenna works and the principles have been well understood for over 50 years. A Google search for log periodic antenna should reveal a wealth of research material for you.

Apologies if I have completely misunderstood this thread and you have invented a completely new antenna design.

Mike G0ULI

1335. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 13:58:03 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <46680f69$0$20296$9b4e6d93@newsspool3.arcor-online.net>
Source record: 40436

Hello Mike -

Thank you for the very long explanation!

Indeed, I already experimented with (unknown) ferrite rods but I'm just waiting here for new specified material (better) ferrites.
So I have time to search for more info...

Your mentioned link is one of the best I already found on the net.

In transmitting state the ui seems to fall to near 1. You can see it because the resonance frequency is going much higher (and that
will also increase harmonics)!

I'm not sure if a ferrite rod is a dipole? There is another structure possible:
Ferrit-loaded helical antenna.

Unfortunately that is a kind of black art. Not much on the net to find.

The very low radiance resistance of the ferrite rod antenna is not the main problem. You must match the impedance to the
transceiver. That is easier if the antenna is an integral part of the system end amplifier, TX-RX switch and pre-amp.

If I understood you right, the "miracle whip" is not a antenna, more an impedance transformer. Whereas the typical ferrite rod
antenna is an autotransformer by itself - simply by adding or tapping another coil on the rod.

regards -
Henry

"Mike Kaliski" <michael.kaliski@tesco.net> schrieb im Newsbeitrag
news:lNidnZmEbtfTofrbnZ2dnUVZ8sqjnZ2d@bt.com...
|
| "Henry" <ehydra_news_20070423@arcor.de> wrote in message
| news:4666e2b9$0$10192$9b4e6d93@newsspool4.arcor-online.net...
| > Hello group -
| >
| >
| > My new interest is ferrite rod antennas.
| >
| > I'm looking for a (possible) interesting doc:
| > UK magazine Practical Wireless, April 2000, pages 38 and 39 "An
| > Experimental Ferrite Rod Transmitting Antenna" by Richard Marris G2BZQ
| >
| > Seems not on the net and the author doesn't have an email address or is

| gone.
| >
| >
| > Would be nice if someone can send it per email.
| >
| >
| > Anybody interested in ferrite antennas can contact me for info sharing.
| >
| >
| > Best regards -
| > Henry Kiefer
| >
| Henry,
|
| I vaguely recall reading this article also. As I recall it was claimed that
| it was possible to use ferrite quite successfully to receive and transmit on
| frequencies up to 7MHz or 40 metres. I believe the antenna used a couple of
| six inch ferrite rods side by side with the old medium wave and long wave
| windings removed and perhaps 15 or 20 turns of wire to resonate on 40 metres
| wound over a sliding card sleeve. The sleeve was made loose enough to slide
| along the ferrite rods to achieve the best point of operation.
|
| I would suggest getting a couple of old ferrite rods and experimenting with
| some wire and a capacitor for resonance.
|
| The problem with ferrite is that it tends to be very lossy in transmitting
| applications. The principles that concentrate received signals in a loop of
| wire wound around the ferrite rod, result in transmitted signals becoming
| concentrated in the ferrite rod, which then absorbs a lot of the RF energy
| and reradiates it as heat. One or two six inch ferrite rods should be okay
| for transmitter powers up to 10 watts.
|
| The reason for using ferrite rods was to develop a small antenna with
| similar properties to a dipole. One that could be rotated in the shack to
| null out interference etc. Transmission efficiency will be very poor, but
| the directional properties and the fact that you only need to radiate
| milliwatts to work thousands of miles using CW may mean this type of antenna
| will work fine for you.
|
| One thing it wasn't, was a type of miracle whip. I have built one of those
| following instructions on the web and it works okay at QRP powers from 3.5
| MHz to 28 MHz. The transmission efficiency is rubbish, but it gets some sort
| of a signal out and is fine for receiving. The miracle whip type of antenna
| uses a wire wound ferrite toroid as a matching autotransformer to match the
| impedence of a short whip to 50 ohms.
|
| Try the link below for some more info on how ferrite works for receiving and
| transmitting antennas
|
| http://www.st-andrews.ac.uk/~jcgl/Scots_Guide/RadCom/part7/page5.html

|
| This page suggests transmitter powers of less than a watt be used with
| ferrite, but I think it depends on the heating effects you get with the rods
| you end up using. There are many different formulations used in making
| ferrite rods and toroids and some rods will work very much better than
| others in this type of application.
|
| Mike G0ULI
|
|

1336. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:05:01 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f493al$17pu$1@f04n12.cac.psu.edu>
Source record: 40437

Jim Higgins wrote:
> On Wed, 06 Jun 2007 13:43:57 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>
>> Jim Kelley wrote:
>>
>> My posts say it all, I have an open mind to the hydrogen generation (I
>> don't think you can start a plasma arc with a butane lighter, but you
>> can ignite hydrogen, etc.)
>>
>> Sodium ions would be introduced to the flame simply from the bursting of
>> the bubbles ... result, yellow flame.
>>
>> The device does NOT have to be over-unity, nor even unity, to be of
>> major economic/energy/storage importance ...
>>
>> The people here are so dense they just don't get it ...
>>
>> etc., etc., etc. ...
>>
>> JS
>
> Please explain your assessment of the major economic/energy/storage
> importance of the device if it isn't over-unity or even unity. Please
> take as many screens as you need to fully enlighten the dense ones
> among us.

The conversion of energy from one form to another doesn't have to be releasing more energy than is taken in, of course. Certainly we can envision a scenario where a large yet immobile energy source such as a power plant could be used to disassociate Water into it's component parts in order to get a portable energy source. The loss is just part of the price you have to pay to get it.

As for the transport and storage infrastructure, that is just a matter of infrastructure, and just similar to today's in scope if not in detail.

In no way does this mean that I think it is a good idea. Nasty byproducts and not really great production efficiency make it a likely loser of a project.

- 73 de Mike KB3EIA -

1337. power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:36:23 UTC
From: Andrea <fuffa2k5@gmail.com>
Message-ID: <1181226983.156149.146010@q69g2000hsb.googlegroups.com>
Source record: 40438

Hi guys,
I would like to use a (not so) random wire antenna to transmit on HF
band.
What is the power (watt) that I can use on my rig to feed the antenna?
Of course after tuning it.
I can use it full power (100W) or no?
For 100W which kind o wire is good?

Thanks.

Andrea
IZ2LSC

1338. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:37:11 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4668180d$0$14967$4c368faf@roadrunner.com>
Source record: 40439

"Tehrasha Darkon" <darkon@netins.net> wrote in message
news:f48gmhgjs1@news.netins.net...
> On Wed, 06 Jun 2007 22:35:53 -0400, merlin-7 wrote:
>
>> If I used electric fence wire for my RF ground radials, how long do you
>> all think it would last?
>
>> Do you think it may last a year or so?
>
> When I was growing up on the farm, we had galvanized electric fencing
> wire that had been lost in the weeds, and stomped into the ground (black
> Iowa dirt) for YEARS and showed no sign of rust.
>
> With todays copper prices, those half mile spools of 14AWG fence wire
> from the FarmFleet are looking cheaper every day.
>
> The biggest problem I can see would be getting proper electrical contact
> to the radials themselves. Since steel will not take solder, and you get
> all kinds of nasty galvanic reactions with dissimilar metals, I would try
> brassing up the ends with a brazing torch, and then solder to the brass.
>
> --Teh

Never had a problem soldering to steel, I ve soldered to steel chassis,
steel wire, no problem.

Jimmie

1339. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:44:17 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <luudnRolHIW-h_XbRVnytQA@bt.com>
Source record: 40440

"Henry" <ehydra_news_20070423@arcor.de> wrote in message
news:46680f69$0$20296$9b4e6d93@newsspool3.arcor-online.net...
> Hello Mike -
>
>
> Thank you for the very long explanation!
>
> Indeed, I already experimented with (unknown) ferrite rods but I'm just
waiting here for new specified material (better) ferrites.
> So I have time to search for more info...
>
> Your mentioned link is one of the best I already found on the net.
>
> In transmitting state the ui seems to fall to near 1. You can see it
because the resonance frequency is going much higher (and that
> will also increase harmonics)!
>
> I'm not sure if a ferrite rod is a dipole? There is another structure
possible: Ferrit-loaded helical antenna.
>
> Unfortunately that is a kind of black art. Not much on the net to find.
>
> The very low radiance resistance of the ferrite rod antenna is not the
main problem. You must match the impedance to the
> transceiver. That is easier if the antenna is an integral part of the
system end amplifier, TX-RX switch and pre-amp.
>
> If I understood you right, the "miracle whip" is not a antenna, more an
impedance transformer. Whereas the typical ferrite rod
> antenna is an autotransformer by itself - simply by adding or tapping
another coil on the rod.
>
>
> regards -
> Henry
>
Hi Henry,

The receiving (and transmission) patterns of ferrite rods are similar to a dipole. In actual fact, the field pattern of a ferrite rod antenna is at 90 degrees to that of a dipole if both antennae were mounted with their long axis parallel to one another. In practice, the influence of nearby buildings and structures probably distort the pattern so much that the ferrite antenna becomes pretty much omnidirectional.

You are absolutely right about the low impedence of small transmitting antennae. Matching 50 ohms to perhaps 1 ohm or less will always be a major problem. The low impedences, lead to high currents and high resistive losses, which result in the ferrite heating up as well as the interconnecting wiring.

The miracle whip type of antenna, uses a toroidal autotransformer transformer which happens to be wound on ferrite to reduce the size of the unit for portable operation. There are other ways to transform impedence to get a match to a 54 inch whip antenna. A decent transmatch ATU will load up just as well, but makes for a much bigger unit to carry around.

The ferrite rod is used to concentrate lines of flux within the wire coil winding around the rod. While this works well in a receive situation, as I understand it, the situation is effectively reversed when transmitting. The coil of wire concentrates the transmitted signal within the ferrite rod core. Because of the way ferrite is made up, it becomes extremely lossy when saturated with RF and most of the energy is dissipated as heat. The higher the frequency, the more energy is absorbed by the ferrite.

As losses are lower at lower frequencies, I would anticipate that a workable transmitting and receiving antenna could be produced for use on the 160 and 80 metre bands, with the possibility of being able to use this type of antenna on 40 metres. Certainly ferrite can be used to make a receiving antenna for use up to 7MHz or so.

I would suggest experimenting to get something that receives well on the frequency of interest. Unfortunately, receiver front ends are nearly all high impedence so this won't necessarily guarantee a match to 50 ohms. The proof is if you can manage to get a low SWR reading when trying to transmit (at low power!). The ferrite rod will be doing it's level best to act as a dummy load, but you may get enough power radiated for the system to work. The addition of a retractable whip coupled to one end of the coil may enhance transmission by allowing the ferrite rod and coil to provide the matching and the whip to do the radiating. But then we are almost back to the miracle whip idea.

If you haven't already tried one, I think you should try building a miracle whip type of antenna. It will certainly give you an idea of the performance you might get using a ferrite rod antenna, certainly in terms of received signal strengths and probably transmitted output too. Buying all the components brand new comes to under a tenner. Two twelve way switches, a 35mm diameter ferrite ring, a 54" telescopic whip antenna, a roll of 0.9 mm enamelled copper wire and a couple of metres of hook up wire, terminals as required and a miniature toggle switch. Don't worry too much about neat wiring, it will all end up looking like a rats nest when all the connections are made. Stick it in any old plastic box, you don't care if the whole circuit radiates and receives. You can eliminate the telescopic whip and use a random length of stiff wire if you want to reduce costs further. The grade of ferrite ring doesn't seem to matter too much, I used one I found in my junk box and I have no idea of the properties.

Having a good earth connection makes a world of difference to the way these miniature antennae behave. Water and central heating pipes work okay, but you may pick up quite a lot of local electrical noise as well. Be prepared to hunt around for a decent quiet earthing point.

Mike G0ULI

1340. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:48:32 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <4VU9i.25748$JZ3.5344@newssvr13.news.prodigy.net>
Source record: 40441

Cecil Moore wrote:
> Jim Kelley wrote:
>> It's ridiculous to assert that someone "thinks EM waves can't be
>> reflected" based on the fact that they might happen to take issue with
>> one or more of your speculations on the laundry list shown above.
>
> You obviously have not been following the arguments.

Neither have you, Cecil.
73,
Tom Donaly, KA6RUH

1341. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:55:21 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <WgCD8+CZxBaGFwCu@g3ohx.demon.co.uk>
Source record: 40442

In message <4668180d$0$14967$4c368faf@roadrunner.com>, Jimmie D
<GFENDER@carolina.rr.com> writes
>
>"Tehrasha Darkon" <darkon@netins.net> wrote in message
>news:f48gmhgjs1@news.netins.net...
>> On Wed, 06 Jun 2007 22:35:53 -0400, merlin-7 wrote:
>>
>>> If I used electric fence wire for my RF ground radials, how long do you
>>> all think it would last?
>>
>>> Do you think it may last a year or so?
>>
>> When I was growing up on the farm, we had galvanized electric fencing
>> wire that had been lost in the weeds, and stomped into the ground (black
>> Iowa dirt) for YEARS and showed no sign of rust.
>>
>> With todays copper prices, those half mile spools of 14AWG fence wire
>> from the FarmFleet are looking cheaper every day.
>>
>> The biggest problem I can see would be getting proper electrical contact
>> to the radials themselves. Since steel will not take solder, and you get
>> all kinds of nasty galvanic reactions with dissimilar metals, I would try
>> brassing up the ends with a brazing torch, and then solder to the brass.
>>
>> --Teh
>
>Never had a problem soldering to steel, I ve soldered to steel chassis,
>steel wire, no problem.
>
>Jimmie
>
>
I might be wrong, but I think that you should also be able to solder to
the zinc plating of galvanized wire (after gently cleaning it).
Ian.
--

1342. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 14:59:13 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <gLydnWokIqw_gPXbnZ2dnUVZ8q2dnZ2d@bt.com>
Source record: 40443

>
> >
> > What you are proposing is a planar gaussian antenna which flattens the
cone
> > into more of a fan shape, displays a flat impedence over a wide
bandwidth
> > and requires around ten elements of different lengths mounted on a boom
> > support.
> Incorrect. It is a cluster of elements in equilibrium where all
> elements
> are resonant as is the array in its entirety. I t all ha sbeen well
> defined
> in past postings on Gaussian antennas
>
> >
> > I could be wrong, but I believe that you have reinvented the log
periodic
> > antenna.
> Yes you are wrong
>
>

Art

Thank you for your courteous response. I thought I had to be missing something. It was of course the fact that the cluster of elements and the array were all in equilibrium and resonant in their entirety. That's the bit that is obviously causing people problems and upsetting them although I must confess I don't quite understand the advantages over existing designs. The antenna is obviously directional and exhibits gain but apparently not at levels that would render existing antennae obsolete.

Good luck with the project anyway, it makes for an entertaining and enlightening read.

Mike G0ULI

1343. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 15:16:47 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <zjV9i.152449$_c5.80777@attbi_s22>
Source record: 40444

> Good luck with the project anyway, it makes for an entertaining and
> enlightening read.
>
> Mike G0ULI
>
You find this entertaining? You must be into self flagellation and masochism
too. What part was enlightening?

W4ZCB

1344. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 15:49:26 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466828fd$0$11769$4c368faf@roadrunner.com>
Source record: 40445

"Ian Jackson" <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote in message
news:WgCD8+CZxBaGFwCu@g3ohx.demon.co.uk...
> In message <4668180d$0$14967$4c368faf@roadrunner.com>, Jimmie D
> <GFENDER@carolina.rr.com> writes
>>
>>"Tehrasha Darkon" <darkon@netins.net> wrote in message
>>news:f48gmhgjs1@news.netins.net...
>>> On Wed, 06 Jun 2007 22:35:53 -0400, merlin-7 wrote:
>>>
>>>> If I used electric fence wire for my RF ground radials, how long do you
>>>> all think it would last?
>>>
>>>> Do you think it may last a year or so?
>>>
>>> When I was growing up on the farm, we had galvanized electric fencing
>>> wire that had been lost in the weeds, and stomped into the ground (black
>>> Iowa dirt) for YEARS and showed no sign of rust.
>>>
>>> With todays copper prices, those half mile spools of 14AWG fence wire
>>> from the FarmFleet are looking cheaper every day.
>>>
>>> The biggest problem I can see would be getting proper electrical contact
>>> to the radials themselves. Since steel will not take solder, and you
>>> get
>>> all kinds of nasty galvanic reactions with dissimilar metals, I would
>>> try
>>> brassing up the ends with a brazing torch, and then solder to the brass.
>>>
>>> --Teh
>>
>>Never had a problem soldering to steel, I ve soldered to steel chassis,
>>steel wire, no problem.
>>
>>Jimmie
>>
>>
> I might be wrong, but I think that you should also be able to solder to
> the zinc plating of galvanized wire (after gently cleaning it).
> Ian.
> --
>
I think your right.

Ive soldered electric fence wire with no problem, Isnt that galvanised?.

I clean it, coat the wire with flux, make a western union splice then solder.

Jimmie

1345. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 16:13:10 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <1181232790.805682.234630@j4g2000prf.googlegroups.com>
Source record: 40446

On Jun 6, 7:35 pm, "merlin-7" <merli...@sc.rr.com> wrote:
> If I used electric fence wire for my RF ground radials, how long do you all
> think it would last?
>
> I know the type of soil matters so lets go almost worst case, lets not go
> so far as to say it has a high salt content.
> I am just looking for something fast and cheap that I can do when I move to
> my new QTH and will add proper copper wire, one by one as I can afford or
> find deals on something better.
> Do you think it may last a year or so?
>
> Thanks Joe
> KI4ILB

Hi, Joe.
There are several kinds of electric fence wire. I just bought a spool, 1300' or so, of aluminum wire. There is electro-galvanized steel, also. The electro gives a smooth coating, but doesn't last.

What might be better is the stainless steel wire used to wrap telephone cable and cable TV cable to a messenger wire suspended from poles. If you examine such a line carefully, you will see the spiral wrap of wire holding is all together. The installers use a sliding wrapping tool with a spool of the wire spinning around the cables as they pull it along from the ground.

Several years ago my neighbor gave me a spool of it he found along the road after the installation crew went through with new cable. The spool was a rats nest of wire. So, they must have discarded it rather than take the time to rewind it. Anyway, it is about the same diameter as fence wire.

I suspect if you see either the telephone or cable TV installation crew, you might ask if they had any unusable wrap wire. Might get it for free!

Good luck with the project.
Paul, KD7HB

1346. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 16:20:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <0fW9i.32339$Um6.1696@newssvr12.news.prodigy.net>
Source record: 40447

Tom Donaly wrote:
> Cecil Moore wrote:
>> You obviously have not been following the arguments.
>
> Neither have you, Cecil.

Tom, please inquire about reflected energy just "sloshing"
around rather than traveling end to end at a VF(c) speed.
--
73, Cecil, w5dxp.com

1347. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 17:18:12 UTC
From: richardharrison@webtv.net
Message-ID: <8853-46683DD4-17@storefull-3257.bay.webtv.net>
Source record: 40448

Mike Kaliski wrote:
"Gausian statistics refer to the distribution of typically, power over a given area or range. Generally more power is concentrated at the centre of a range with power falling symmetrically either side of a central high point."

Art replied:
"Correct, very nuch like a band pass filter."

In a band pass filter we are interested in frequency response. Mike was speaking of beam forming. There is a difference between beam width and bandwidth. I am still trying to decipher Art`s "Gausian antenna". It would help me if Art didn`t muddle topics.

Best regards, Richard Harrison, KB5WZI

1348. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 17:20:10 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f49eve$j5n$1@news.service.uci.edu>
Source record: 40449

Jim Higgins wrote:

> Well as long as we're spouting facts here, please allow me to spout
> one that adds equal value to the discussion... most human beings have
> 5 fingers on each hand. There ya go!
>
> Now if you were to explain how some "final energy state" you might
> have in mind makes this water burning device anything but a useless
> hoax we might have something of substance to discuss.

It seems you have read something into my comments that I did not put
there.

> Your comment on energy states was offered in the context of "true, but
> one must also consider..." Where's the information that supports the
> implications of that "but?"

Hydrogen as a combustable fuel is generally considered to have a net
loss from an energy budget standpoint. You had stated that 'you get
out what you put in'. I simply tried to observe that it isn't always
the case. In the case of hydrogen generation, you don't quite get
back what you put in, and in the case of gasoline you can get back
quite a bit more (owing to the fact that all you have to do is distill
it).

73, ac6xg

1349. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 17:42:56 UTC
From: richardharrison@webtv.net
Message-ID: <8850-466843A0-143@storefull-3257.bay.webtv.net>
Source record: 40450

Art wrote:
"But let`s face it, they are amateurs by definition."

Kraus was an amateur, not to be disparaged!. W8JK.

Best regards, Richard Harrison, KB5WZI

1350. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 17:56:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bhhg63hdi5kjnnvguh7v3smr14p5379h98@4ax.com>
Source record: 40451

On Thu, 7 Jun 2007 15:59:13 +0100, "Mike Kaliski"
<michael.kaliski@tesco.net> wrote:

>It was of course the fact that the cluster of elements and the
>array were all in equilibrium and resonant in their entirety.

Hi Mike,

Anticipating that Arthur will use you as a authoritative reference,
what do you mean by equilibrium?

73's
Richard Clark, KB7QHC

1351. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 17:59:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pohg63hsigkihqu3qtp5t2qnoufb05k14d@4ax.com>
Source record: 40452

On Thu, 07 Jun 2007 14:36:23 -0000, Andrea <fuffa2k5@gmail.com> wrote:

>Hi guys,
>I would like to use a (not so) random wire antenna to transmit on HF
>band.
>What is the power (watt) that I can use on my rig to feed the antenna?
>Of course after tuning it.
>I can use it full power (100W) or no?
>For 100W which kind o wire is good?

Hi Andrea,

100W will work just fine. Use copper wire with a diameter of 1mm or
more.

73's
Richard Clark, KB7QHC

1352. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 18:01:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9uhg639387g0939t6b61g0t808btbnmvi9@4ax.com>
Source record: 40453

On Thu, 7 Jun 2007 08:47:13 +0000 (UTC), Tehrasha Darkon
<darkon@netins.net> wrote:

>The biggest problem I can see would be getting proper electrical contact
>to the radials themselves.

Clamping (wire nuts, twisting, compression joins, ...) works fine.

73's
Richard Clark, KB7QHC

1353. Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 18:20:52 UTC
From: ve2pid <ve2pid@videotron.ca>
Message-ID: <1181240452.177788.289340@w5g2000hsg.googlegroups.com>
Source record: 40454

Hi ot all

It is well known that the real ground seems to ''reflects'' a radio wave. But I think that the term ''reflects'' is a bit confusing. My understanding of the phenomenon is that the ground absorbs the incident wave and, with that energy it re-radiates a new wave with a different phase/amplitude value.

That new wave modifies the TO angle as a real optical-type reflection would do. Then, it seems that it is not a ''bending'' of the wave, but the production of a new one. With the value of the modification of the TO angle, one can deduces a ''reflected'' wave's angle, even if it not a real reflection.. Am I right?

Also, I read in a older version of the ARRL's Handbook that ''The effective ground plane, that is the plane from which ground reflections can be considered to take place, seldom is the actual surface of the ground, but a few feet below it, depending upon the characteristics of the soil.''

Considering what I said about re-routing with phase/amplitude modifications, how to interpret the text form the Handbook? How to determine the depth of that 'effective gorund plane'? Or is there any depth at all? As is, it could be interpreted as a optical reflection like occuring somewhere deep in the real ground..

Thanks..

Pierre ve2pid@videotron.ca

1354. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 18:37:26 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4668505c$0$15006$4c368faf@roadrunner.com>
Source record: 40455

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:8850-466843A0-143@storefull-3257.bay.webtv.net...
> Art wrote:
> "But let`s face it, they are amateurs by definition."
>
> Kraus was an amateur, not to be disparaged!. W8JK.
>
> Best regards, Richard Harrison, KB5WZI
>

And Art is no Professional.
If Art had been a professional he would have made a comparison with his antenna and a typical Yagi. That way he could demonstrate which is the better. He would have posted design information, he would have met honest questions with honest answers instead of telling his peers they are thick headed and have no insight becuse they will not follow his lead like Lemmings.

Jimmie

1355. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 19:21:50 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <U5-dnZTNqaWzxvXbnZ2dnUVZ8sylnZ2d@bt.com>
Source record: 40456

> > Thank you for your courteous response. I thought I had to be missing
> > something. It was of course the fact that the cluster of elements and
the
> > array were all in equilibrium and resonant in their entirety. That's the
bit
> > that is obviously causing people problems and upsetting them
> Yes, that is about it, you could also match that same definition
> to Poyntings vector but even that comes under fire. There was also
> a mathematical anylysis made by an individual contributor
> connecting Gauss but that got hammered also. But lets face it they
> are amateurs by definition.
<snip>
>

Art

I now know what you are trying to achieve and why. I was initially thinking purely in terms of amateur band HF frequencies rather than the higher end of the spectrum, where this antenna makes sense. Obviously as frequencies increase, the properties of electromagnetic waves change in the way they interact with materials. I still doubt whether any new physical theories are needed to explain what is happening and doubtless careful analysis in the future will reveal how it all works. As you suggest, spread spectrum, multi channel communications are becoming more and more essential in order to efficiently utilise the limited spectrum available and antenna designs like yours will help to minimise unnecessary interference to other users while preserving a high quality link.

Harold

Arts' postings have prompted me to investigate some areas for myself with which I was unfamiliar. While I don't subscribe to needing to find some new physical theory to explain how these antennae work, there are some interesting ideas being developed in the GHz frequency ranges. My previous professional experience revolved around radar (sorry about the pun). I haven't really been paying too much attention to the way in which wi-fi and other high frequency signalling systems worked, even though they were in similar frequency bands.

I have learned something new and see some humour in posts on this subject.

Hence entertaining and enlightening - not sadism or masochism.

Cheers

Mike G0ULI

1356. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 19:37:15 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <46685f7d$0$6406$9b4e6d93@newsspool2.arcor-online.net>
Source record: 40459

Hi Mike -

| The receiving (and transmission) patterns of ferrite rods are similar to a
| dipole. In actual fact, the field pattern of a ferrite rod antenna is at 90
| degrees to that of a dipole if both antennae were mounted with their long
| axis parallel to one another. In practice, the influence of nearby buildings
| and structures probably distort the pattern so much that the ferrite antenna
| becomes pretty much omnidirectional.
|
| You are absolutely right about the low impedence of small transmitting
| antennae. Matching 50 ohms to perhaps 1 ohm or less will always be a major
| problem. The low impedences, lead to high currents and high resistive
| losses, which result in the ferrite heating up as well as the
| interconnecting wiring.

There is a difference between ferrite heating because of ohmic losses in the coils, and ferrite losses. Both will rise temperature in ferrite rod and coil.

|
| The miracle whip type of antenna, uses a toroidal autotransformer
| transformer which happens to be wound on ferrite to reduce the size of the
| unit for portable operation. There are other ways to transform impedence to
| get a match to a 54 inch whip antenna. A decent transmatch ATU will load up
| just as well, but makes for a much bigger unit to carry around.

Where can I see an explanation of the miracle whip antenna? Mechanical construction.

|
| The ferrite rod is used to concentrate lines of flux within the wire coil
| winding around the rod. While this works well in a receive situation, as I
| understand it, the situation is effectively reversed when transmitting. The
| coil of wire concentrates the transmitted signal within the ferrite rod
| core. Because of the way ferrite is made up, it becomes extremely lossy when
| saturated with RF and most of the energy is dissipated as heat. The higher
| the frequency, the more energy is absorbed by the ferrite.
|
| As losses are lower at lower frequencies, I would anticipate that a workable
| transmitting and receiving antenna could be produced for use on the 160 and
| 80 metre bands, with the possibility of being able to use this type of
| antenna on 40 metres. Certainly ferrite can be used to make a receiving
| antenna for use up to 7MHz or so.

Yeah. At about 2MHz there is a first corner frequency for ferrits.

| Having a good earth connection makes a world of difference to the way these
| miniature antennae behave. Water and central heating pipes work okay, but

| you may pick up quite a lot of local electrical noise as well. Be prepared
| to hunt around for a decent quiet earthing point.

Mike, I don't have any earth. That is a portable design.

regards -
Henry

1357. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 19:38:00 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <R_2dnRXBPv-dwvXbnZ2dnUVZ8saonZ2d@bt.com>
Source record: 40458

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:bhhg63hdi5kjnnvguh7v3smr14p5379h98@4ax.com...
> On Thu, 7 Jun 2007 15:59:13 +0100, "Mike Kaliski"
> <michael.kaliski@tesco.net> wrote:
>
> >It was of course the fact that the cluster of elements and the
> >array were all in equilibrium and resonant in their entirety.
>
> Hi Mike,
>
> Anticipating that Arthur will use you as a authoritative reference,
> what do you mean by equilibrium?
>
> 73's
> Richard Clark, KB7QHC

Richard,

I am not certain that I have got it all completely straight in my head, but I have taken it to mean that all the elements making up the array and the array itself are designed to be resonant about a particular frequency. As this type of antenna is intended for use with spread spectrum communications, control over directivity is probably more of a consideration than gain. At the multi GHz frequencies I believe these antennas will be operating, they probably won't have any direct correlation to HF amateur band techniques. The propogation properties of electromagnetic waves change as frequency increases, so I believe that there is no hidden method behind how these antennas might work, merely at best, an as yet unrecognised mode of propogation.

Arts' postings have prompted me to do a little research into GHz frequency techniques which is an area where I had virtually no knowledge apart from installing commercial radar waveguide and making sure it was matched to the scanner. I would hate to think I was an authoritative reference in this field :-/

Cheers

Mike G0ULI

1358. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 19:38:28 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46685eab$0$9971$4c368faf@roadrunner.com>
Source record: 40457

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:U5-dnZTNqaWzxvXbnZ2dnUVZ8sylnZ2d@bt.com...
>> > Thank you for your courteous response. I thought I had to be missing
>> > something. It was of course the fact that the cluster of elements and
> the
>> > array were all in equilibrium and resonant in their entirety. That's
>> > the
> bit
>> > that is obviously causing people problems and upsetting them
>> Yes, that is about it, you could also match that same definition
>> to Poyntings vector but even that comes under fire. There was also
>> a mathematical anylysis made by an individual contributor
>> connecting Gauss but that got hammered also. But lets face it they
>> are amateurs by definition.
> <snip>
>>
>
> Art
>
> I now know what you are trying to achieve and why. I was initially
> thinking
> purely in terms of amateur band HF frequencies rather than the higher end
> of
> the spectrum, where this antenna makes sense. Obviously as frequencies
> increase, the properties of electromagnetic waves change in the way they
> interact with materials. I still doubt whether any new physical theories
> are
> needed to explain what is happening and doubtless careful analysis in the
> future will reveal how it all works. As you suggest, spread spectrum,
> multi
> channel communications are becoming more and more essential in order to
> efficiently utilise the limited spectrum available and antenna designs
> like
> yours will help to minimise unnecessary interference to other users while
> preserving a high quality link.
>
> Harold
>
> Arts' postings have prompted me to investigate some areas for myself with
> which I was unfamiliar. While I don't subscribe to needing to find some
> new
> physical theory to explain how these antennae work, there are some
> interesting ideas being developed in the GHz frequency ranges. My previous
> professional experience revolved around radar (sorry about the pun). I

> haven't really been paying too much attention to the way in which wi-fi
> and
> other high frequency signalling systems worked, even though they were in
> similar frequency bands.
>
> I have learned something new and see some humour in posts on this subject.
>
> Hence entertaining and enlightening - not sadism or masochism.
>
> Cheers
>
> Mike G0ULI
>
>
>
>

I have learned quite a bit from those who have rreplied to Art.

Jimmie

1359. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 20:03:31 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f49oan$h9n$1@nnrp.linuxfan.it>
Source record: 40460

Henry wrote:

> ...
> Where can I see an explanation of the miracle whip antenna? Mechanical construction.
> ...

Henry:

Here is a homemade "miracle whip:"

http://www.qsl.net/g4fon/Musings.htm

and here is the commercial version:

http://www.miracleantenna.com/

Regards,
JS

1360. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 20:11:38 UTC
From: Andrea <fuffa2k5@gmail.com>
Message-ID: <1181247098.622928.230300@p77g2000hsh.googlegroups.com>
Source record: 40461

Thanks Richard.
Do you know if there is a formula to calculare the max power that a
wire can supports?

Thanks.

Andrea
IZ2LSC

1361. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 20:15:20 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <46686873$0$10184$9b4e6d93@newsspool4.arcor-online.net>
Source record: 40462

"John Smith I" <assemblywizard@gmail.com> schrieb im Newsbeitrag
news:f49oan$h9n$1@nnrp.linuxfan.it...
| Henry wrote:
|
| > ...
| > Where can I see an explanation of the miracle whip antenna? Mechanical construction.
| > ...
|
| Henry:
|
| Here is a homemade "miracle whip:"
|
| http://www.qsl.net/g4fon/Musings.htm
|
| and here is the commercial version:
|
| http://www.miracleantenna.com/

OK. Thanks! Now I understand what it is.

I already use th idea of tabs on the coil on my ferrite rod antenna.

regards -
Henry

1362. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 21:18:10 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f49smlqdc1@nnrp.linuxfan.it>
Source record: 40463

Henry wrote:

> ...
> I already use th idea of tabs on the coil on my ferrite rod antenna.
>
> regards -
> Henry

Henry:

What does your ferrite rod antenna look like?

Got a schematic? Circuit diagram? Picture?

Thanks in advance,
Regards,
JS

1363. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 21:24:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f49t24uje1@nnrp.linuxfan.it>
Source record: 40464

Andrea wrote:
> Thanks Richard.
> Do you know if there is a formula to calculare the max power that a
> wire can supports?
>
> Thanks.
>
> Andrea
> IZ2LSC
>

Max power that the wire can support would be based solely on the amperage it can carry. You would need to know what the amps are at a current node ... but, I have run a KW+ on #12.

Currently, I use 1/4 inch copper tubing over steel fencing wire (steel wire is for strength.) It has supported 5KW+ easily ...

JS

1364. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 21:47:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <136gv7q3hr7e57b@corp.supernews.com>
Source record: 40465

ve2pid wrote:
> Hi ot all
>
> It is well known that the real ground seems to ''reflects'' a radio
> wave. But I think that the term ''reflects'' is a bit confusing. My
> understanding of the phenomenon is that the ground absorbs the
> incident wave and, with that energy it re-radiates a new wave with a
> different phase/amplitude value.

Not quite. The wave creates a current in the ground which produces a field. For most ground types, the field which is produced resembles a reflection that's altered in magnitude and phase.

> That new wave modifies the TO angle as a real optical-type reflection
> would do. Then, it seems that it is not a ''bending'' of the wave, but
> the production of a new one. With the value of the modification of the
> TO angle, one can deduces a ''reflected'' wave's angle, even if it not
> a real reflection.. Am I right?

At any point in space, the total field is the sum of the original wave and the "reflected wave". This sum is different from the original wave, and the amount and way in which it's different depends on the point in space. If by "TO angle" you mean the elevation angle at which radiation is maximum, yes, that angle is often modified by the reflection because of the different magnitude and phase of the reflection at each elevation angle.

> Also, I read in a older version of the ARRL's Handbook that ''The
> effective ground plane, that is the plane from which ground
> reflections can be considered to take place, seldom is the actual
> surface of the ground, but a few feet below it, depending upon the
> characteristics of the soil.''

I hope that's not in the current versions of the Handbook.

> Considering what I said about re-routing with phase/amplitude
> modifications, how to interpret the text form the Handbook? How to
> determine the depth of that 'effective gorund plane'? Or is there any
> depth at all? As is, it could be interpreted as a optical reflection
> like occuring somewhere deep in the real ground..

I have no idea in what way an "effective ground plane" is "effective". You can't put a perfect ground plane at any depth and get the same reflection as you do from dirt.

Roy Lewallen, W7EL

1365. Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 21:50:09 UTC
From: Nick <a@b.com>
Message-ID: <l4%9i.16891$qD.2350@newsfe6-win.ntli.net>
Source record: 40466

I am wanting to experiment making vertical whips, end fed, for a number of frequencies
from HF through to UHF and was wondering if someone can point me to a link with
designs for constructing these.

I want to feed with 50 ohm co-ax for convenience, and I think it basically has to
resonate at the design frequency, tapped for 50 ohms to feed it and present a
"high impedance" to the end of the resonant element.

Naturally there will be different designs required for UHF frequencies compared
to HF frequencies for mechanical considerations and I guess different matching networks
with different Q's will have pros and cons too..

Anyone with some links / info would be greatly appreciated

Thanks

Nick

1366. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 22:07:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ulvg63ddkjervdtaomo26bq690deks80r4@4ax.com>
Source record: 40467

On Thu, 7 Jun 2007 20:38:00 +0100, "Mike Kaliski"
<michael.kaliski@tesco.net> wrote:

>> what do you mean by equilibrium?
>
>I am not certain that I have got it all completely straight in my head, but
>I have taken it to mean that all the elements making up the array and the
>array itself are designed to be resonant about a particular frequency.

Hi Mike,

Then I take it by that response that the term equilibrium has no
meaning known to you in the context of antennas.

>As
>this type of antenna is intended for use with spread spectrum
>communications,

Isn't that a bit of interpolation about spread spectrum? Arthur has,
to my knowledge, never used the term anywhere.

>control over directivity is probably more of a consideration
>than gain.

How do you distinguish directivity from gain?

73's
Richard Clark, KB7QHC

1367. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 22:23:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0v0h63t5m60h5g7r95ut2k6pa1i1mo8op1@4ax.com>
Source record: 40468

On Thu, 07 Jun 2007 13:11:38 -0700, Andrea <fuffa2k5@gmail.com> wrote:

>Thanks Richard.
>Do you know if there is a formula to calculare the max power that a
>wire can supports?

Hi Andrea,

No. Not off-hand. I use "wire tables" to reference what is called
"fuse current." This is the current that will burn a wire open. For
a 1mm wire, that would be around 50 to 80 Amperes. Your antenna would
have to be a very small loop to encounter that kind of current. Very
small means less than 0.1 wavelength in diameter. You would encounter
other problems long before the wire would melt.

73's
Richard Clark, KB7QHC

1368. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 23:35:19 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <vqydnUIXhJQEC_XbnZ2dnUVZ8turnZ2d@bt.com>
Source record: 40470

<snip>
> I did appreciate your comments and thank you for supplying them but
> caution is advised, this is America!
> You are either with us or against us.
> Cheers
> Art
>

Art,

I don't stand in judgement, I just say it as I see it.

I don't like to see an idea dismissed and ridiculed out of hand without a fair hearing. Ham radio is a hobby that is supposed to be about experimentation and self teaching, as much as contesting or chatting on the air. You cannot learn without making mistakes and when errors are discovered, a courteous explanation of the problem is somewhat better than descent into personal diatribe.

I do not consider myself to be an authority on antennas but I have spent years at college being taught the classical theory of how it all works. I am prepared to accept that from time to time that theory needs to be updated or adjusted in the light of new discoveries. I do not accept that any recent antenna developments are likely to require a new form of physics in order to explain their mode of operation. It is just that we haven't understood how to apply existing theory in the correct way yet.

My position is essentially that of a neutral observer who intervened only in order to restore some much needed balance to the debate.

Regards

Mike G0ULI

1369. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-07 23:37:28 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <4668890d$0$3254$4c368faf@roadrunner.com>
Source record: 40469

Thanks all
It looks like I can get my shack up and running long before my home will be ready (thanks to solar power) I own an acre of land next door to my parents, that's where we will be staying while the new home is in the works. It bytes but I need the money from selling this home to get moving on the new one.

Anyway, I have 90% of the hardware needed to get my shack up and running. I just need 3 more sections of tower (the shed itself, but I will build that)
I screw everything together except the shingles (no nails)
Glue it and screw it!
I also need a temporary, rf ground system (something that I can install fast and cheap. I will also have some kind of metal fence up, welded wire / chainlink, that I will tie into it....
The land is in NC near Jacksonville, I have no idea what the PH is but from the pine trees on the lot (they are being removed to let the hardwoods grow) I would say a slightly acidic soil.
There is nothing on the lot at this time so I get to start from scratch.

Family members also own 1 acre of land on each side of me (north to south with me in the middle) and also 5 acres behind me (north of me, right behind my lot and 5 acres wide north to south) so I have plenty of room for wire antennas etc. I just need to preplan everything possible. Once everything is in place that is where it will stay.

How would you lay out a ground system for both RF and lightning on a budget? Something that could start out with say, electric fence wire and be replaced with copper over time?

If I need to bond two dissimilar metal wires, I do it down and dirty. Lets say I want to bond a copper ground wire to a galvanized tower leg.
I tighten one Stainless steel hose clamp on the tower leg, place the wire over it and tighten up another SS hose clamp over it, so the connection has SS between the different metals. You can also do the same thing with SS nuts and bolts, just make sure the different metals have SS between them. Seems to work well for me.

Sorry for the long post...I will lose internet when I move for a while so I have a lot of questions....
"pdrahn@coinet.com" <co_farmer@yahoo.com> wrote in message news:1181232790.805682.234630@j4g2000prf.googlegroups.com...
> On Jun 6, 7:35 pm, "merlin-7" <merli...@sc.rr.com> wrote:
> > If I used electric fence wire for my RF ground radials, how long do you all
> > think it would last?
> >
> > I know the type of soil matters so lets go almost worst case, lets not

go
> > so far as to say it has a high salt content.
> > I am just looking for something fast and cheap that I can do when I
move to
> > my new QTH and will add proper copper wire, one by one as I can afford
or
> > find deals on something better.
> > Do you think it may last a year or so?
> >
> > Thanks Joe
> > KI4ILB
>
> Hi, Joe.
> There are several kinds of electric fence wire. I just bought a spool,
> 1300' or so, of aluminum wire. There is electro-galvanized steel,
> also. The electro gives a smooth coating, but doesn't last.
>
> What might be better is the stainless steel wire used to wrap
> telephone cable and cable TV cable to a messenger wire suspended from
> poles. If you examine such a line carefully, you will see the spiral
> wrap of wire holding is all together. The installers use a sliding
> wrapping tool with a spool of the wire spinning around the cables as
> they pull it along from the ground.
>
> Several years ago my neighbor gave me a spool of it he found along the
> road after the installation crew went through with new cable. The
> spool was a rats nest of wire. So, they must have discarded it rather
> than take the time to rewind it. Anyway, it is about the same diameter
> as fence wire.
>
> I suspect if you see either the telephone or cable TV installation
> crew, you might ask if they had any unusable wrap wire. Might get it
> for free!
>
> Good luck with the project.
> Paul, KD7HB
>

1370. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 00:35:43 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4668a458$0$12419$4c368faf@roadrunner.com>
Source record: 40471

"Nick" <a@b.com> wrote in message
news:l4%9i.16891$qD.2350@newsfe6-win.ntli.net...
>I am wanting to experiment making vertical whips, end fed, for a number of
>frequencies
> from HF through to UHF and was wondering if someone can point me to a link
> with
> designs for constructing these.
>
> I want to feed with 50 ohm co-ax for convenience, and I think it
> basically has to
> resonate at the design frequency, tapped for 50 ohms to feed it and
> present a
> "high impedance" to the end of the resonant element.
>
> Naturally there will be different designs required for UHF frequencies
> compared
> to HF frequencies for mechanical considerations and I guess different
> matching networks
> with different Q's will have pros and cons too..
>
> Anyone with some links / info would be greatly appreciated
>
> Thanks
>
> Nick
>

This would all depend a great deal on type of antenna you want to end feed,
1/4, 1/2, 5/8, ect.

Jimmie

1371. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 00:38:22 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <by1ai.24$TI.12@newsfe12.lga>
Source record: 40472

Now it's all clear!
Way to go Art da Troll of Goosie Antennas!
Mother Britannia is proud of you!

bada BUm

"art" <aunwin@insightbb.com> wrote in message
news:1181261634.935406.57080@h2g2000hsg.googlegroups.com...
> On 7 Jun, 16:35, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>> <snip>
>>
>> > I did appreciate your comments and thank you for supplying them but
>> > caution is advised, this is America!
>> > You are either with us or against us.
>> > Cheers
>> > Art
>>
>> Art,
>>
>> I don't stand in judgement, I just say it as I see it.
>>
>> I don't like to see an idea dismissed and ridiculed out of hand without a
>> fair hearing. Ham radio is a hobby that is supposed to be about
>> experimentation and self teaching, as much as contesting or chatting on
>> the
>> air. You cannot learn without making mistakes and when errors are
>> discovered, a courteous explanation of the problem is somewhat better
>> than
>> descent into personal diatribe.
>>
>> I do not consider myself to be an authority on antennas but I have spent
>> years at college being taught the classical theory of how it all works. I
>> am
>> prepared to accept that from time to time that theory needs to be updated
>> or
>> adjusted in the light of new discoveries. I do not accept that any recent
>> antenna developments are likely to require a new form of physics in order
>> to
>> explain their mode of operation. It is just that we haven't understood
>> how
>> to apply existing theory in the correct way yet.
>>
>> My position is essentially that of a neutral observer who intervened only
>> in
>> order to restore some much needed balance to the debate.

>>
>> Regards
>>
>> Mike G0ULI
>
> Spoken like a true Englishman I am proud of you.
>
> Just remember you now are a target.
>
> Judge the questions and answers given on the subject of antennas
> before you get to involved on the subject of antennas. It is quite
> easy to see who is knoweledgable but they usually are set ups
> for every body to chime in.
> For instance you have two questions already directed at you and
> neither
> is really looking for usefull information, both are easily
> recognisable
> as being set ups ,tho it is up to you in how you deal with them.
>
> I read QST and also subscribe to RADCOM both of
> which are hanging on to the old days with articles on how to make a
> morse code keyer or a practical way of connecting a PL259 to coax.
> Both
> of these magazines are catered to the like of the old guys on this
> newsgroup.
> Antenna articles? No, not anymore, both magazines stay away from
> conflict.
> I now know who you are and what you are and I am pleased that I have
> met you
> Regards
> Art
>

1372. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 00:44:06 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <XoKdnSED8LskO_XbRVnyigA@bt.com>
Source record: 40473

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ulvg63ddkjervdtaomo26bq690deks80r4@4ax.com...
> On Thu, 7 Jun 2007 20:38:00 +0100, "Mike Kaliski"
> <michael.kaliski@tesco.net> wrote:
>
> >> what do you mean by equilibrium?
> >
> >I am not certain that I have got it all completely straight in my head,
but
> >I have taken it to mean that all the elements making up the array and the
> >array itself are designed to be resonant about a particular frequency.
>
> Hi Mike,
>
> Then I take it by that response that the term equilibrium has no
> meaning known to you in the context of antennas.
>
> >As
> >this type of antenna is intended for use with spread spectrum
> >communications,
>
> Isn't that a bit of interpolation about spread spectrum? Arthur has,
> to my knowledge, never used the term anywhere.
>
> >control over directivity is probably more of a consideration
> >than gain.
>
> How do you distinguish directivity from gain?
>
> 73's
> Richard Clark, KB7QHC

Richard

As a result of searches into gaussian antennae, it quickly became apparent that commercial versions of these devices are being manufactured for use at GHz frequencies. These designs all seem to use modified horns as the transmitting element. I have not yet found a device made up of discrete elements. At these sorts of frequencies, discrete element lengths may well be all pretty much the same dimensions. I suspect equilibrium may not be the right term to use but resonance is obviously not quite right either. Arthur may be unwilling to give out too many details of his antenna, perhaps because he wants to protect any future patent application. I inferred the spread spectrum usage from the types of communication links that are being developed for wi-fi and other links at these super high frequencies. I do

not make a distinction between directivity and gain because I believe that the term 'gaussian' essentially implies a single transmission lobe. Gain may be obtained at the expense of breaking a transmitted signal into several highly directional lobes, which is not what is wanted from this antenna. I would consider the ability to provide a predictabe pattern of signal coverage more important than the outright range to which the signal could be broadcast, hence directivity rather than gain. A predictable pattern and field strength is a useful property in avoiding interference in congested urban areas with limited spectrum availability. Gaussian distribution may also be taken as applying to the way in which the antenna can deal with a range of frequencies, although this applies to pretty much any antenna, filter or other resonant circuit you might care to mention.

Arts' antenna may be built and may perform as he predicts. If it doesn't then we will all have learned from the experience whatever the outcome. That is the principle of scientific advancement. The way that patent law deals with prior disclosure of an invention, leads to a great deal of vague terminology and description being used when an inventor is sounding out new ideas. I'm sure we would all prefer to be given precise component values and dimensions, but it appears that this is just not possible or advisable until a patent is registered.

Regards

Mike G0ULI

1373. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 01:01:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4a9ps$vg1$1@nnrp.linuxfan.it>
Source record: 40474

Nick wrote:

> [stuff]

Here is a link to get you started:

http://www.aa5tb.com/efha.html

This deals with a 1/2 wave monopole. I have found that 1/2 or 5/8 is where it is at (antenna radiation pattern), and usually end up physically shortening the 1/2 wave ant with a loading coil or helically winding it over the entire shortened length of ant (fiberglass tube, etc., in the 10 meter band about 8 ft.)

Regards,
JS

1374. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 01:17:52 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4668ae37$0$16550$4c368faf@roadrunner.com>
Source record: 40475

"art" <aunwin@insightbb.com> wrote in message
news:1181155291.963963.188630@j4g2000prf.googlegroups.com...
>I have spent a considerable amount of time in researching the above
> subject
> as a result of some comments made regarding Gauss's law of Statics
> and its connection to the above Poynting's Vector. I have not yet
> found
> a description of an actual proof similar to described by the Gaussian
> Antenna
> and have found a number considerable number of " attempts" to provide
> such a proof on the internet. But as yet none have been found as
> substantial
> as a clustered radiated elements in equilibrium.
> What I did find was a indepth explanation of electro magnetism by
> Harvey
> on the net that discusses antenna radiation from it's beginnings
> together
> with past untruths that are put under the microscope. These papers may
> not
> be equal to what is presently understood by scholars but never the
> less
> I thought I would share it with the antenna and radiation minded
> people
> of this group.. If somebody knows of the existence of a real time
> proof
> of Poynting's Vector i.e by a bench experiment I would apreaciate a
> pointer to where it can be seen
> Ofcourse if there are some comments to be made on the Harvey papers
> this would be a good place to put them.
> Art
>

Please follow this trail Gauss, Maxwell/ Heavyside, Poynting/Heavyside.

Like all theories absolute proof may be unobtainable, gravity is a theory
but I am not worried about falling up when I get out of bed in the morning.

Jimmie

1375. FS: 300' Rohn 55G Communications Tower, Complete package

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 02:04:20 UTC
From: N4VBH <qns1@hotmail.com>
Message-ID: <1181268260.563624.216930@h2g2000hsg.googlegroups.com>
Source record: 40476

FOR SALE: 300' Rohn 55G Communications tower w/ NEW anchors, base plate, guy wire, and most hardware. Original beacon and clearance lights included. Tower was removed from service and de-erected in 2002. Sections (30 + 2 NEW sections actually) are in great, structural shape. Tower will need new paint and light wiring upon erection. Located in Eastern NC. Tower to be sold as complete package. Construction plans w/ Rohn Tower guide included. Engineered drawings available (if I can find them). Asking Price: $6000.00 obo, Email qns1 AT hotmail DOT com.

1376. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 02:51:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sqfh63lfqd0n1v5glnaq3famu565c8mhtk@4ax.com>
Source record: 40477

On Fri, 8 Jun 2007 01:44:06 +0100, "Mike Kaliski"
<michael.kaliski@tesco.net> wrote:

>As a result of searches into gaussian antennae, it quickly became apparent
>that commercial versions of these devices are being manufactured for use at
>GHz frequencies.

Hi Mike,

Your research would be evidence of substantial "prior art." However,
all previous contexts suggest otherwise and your research bears no
relation to the topic - as described to this point by Arthur.

>These designs all seem to use modified horns as the
>transmitting element.

This fairly cements the disconnect.

>I have not yet found a device made up of discrete
>elements. At these sorts of frequencies, discrete element lengths may well
>be all pretty much the same dimensions.

Well, I have a Radar background too, and horns are hardly resonant and
are more designed for a match without fringing effects. To accomplish
this they deliberately employ a sweep of dimensions, not one single
but replicated dimension as is suggested by Arthur's descriptions.

>I suspect equilibrium may not be the
>right term to use but resonance is obviously not quite right either.

Equilibrium has long been a term of vague parentage. Resonance is
hardly a tripping point until you come to phase relationships. As
phase is the name of the game in gain/directivity, and multiple phase
relationships even more; then resonance occurs for at least one
element. However, it is not always necessary as revealed with
Rhombics which are non-resonant but exceedingly directional. Resonance
is more a desirable attribute for feeding the antenna. The upshot of
it all is that your last statement reveals how nebulous the topic is.

>Arthur
>may be unwilling to give out too many details of his antenna, perhaps
>because he wants to protect any future patent application. I inferred the
>spread spectrum usage from the types of communication links that are being
>developed for wi-fi and other links at these super high frequencies.

As antenna design is scaleable, application defines what is needed,
not what is possible.

>I do
>not make a distinction between directivity and gain because I believe that
>the term 'gaussian' essentially implies a single transmission lobe.

This would suggest that your research (noted above) led you to
geometric descriptions of lobe attributes. Arthur has never used the
term Gaussian in that sense. If he had, it would be distinct from
Lambertian - another term unused which again draws the distinction
away from geometry.

>Arts' antenna may be built and may perform as he predicts. If it doesn't
>then we will all have learned from the experience whatever the outcome. That
>is the principle of scientific advancement.

Standard modeling programs have been proven robust in this regard. The
Status Quo has been maintained throughout. No surprises yet.

73's
Richard Clark, KB7QHC

1377. Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 04:00:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <136hl2blc9tc6b2@corp.supernews.com>
Source record: 40528

This newsgroup is truly educational. Just in the past few days, I've learned that:

"The law of conservation of energy is just another law awaiting to be "broken", i.e. a new "law" found which acts to the contrary ..."
-- "John Smith"

and

". . .gravity is a theory. . ."
-- "Jimmie D"

These, of course, are just the jewels among the semi-precious stones of Gaussian antennas and bouncing waves of average power.

Thanks, folks. A little more time on this newsgroup and I'll be ready to step out into the world of the 13th century!

Roy Lewallen, W7EL

1378. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 04:29:21 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <BW4ai.6472$xq1.1239@pd7urf1no>
Source record: 40529

Nick wrote:
> I am wanting to experiment making vertical whips, end fed,...
>
End fed whips? Is there some other way they are fed? In the middle?
At the other end? Am I missing something (and at my age that is likely)?

Irv VE6BP

1379. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 04:32:35 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <DZ4ai.5480$NV3.5112@pd7urf2no>
Source record: 40530

Roy Lewallen wrote:

> This newsgroup is truly educational. Just in the past few days, I've
> learned that:
>
> "The law of conservation of energy is just another law awaiting to be
> "broken", i.e. a new "law" found which acts to the contrary ..."
> -- "John Smith"
>
> and
>
> ". . .gravity is a theory. . ."
> -- "Jimmie D"
>
> These, of course, are just the jewels among the semi-precious stones of
> Gaussian antennas and bouncing waves of average power.
>
> Thanks, folks. A little more time on this newsgroup and I'll be ready to
> step out into the world of the 13th century!
>
> Roy Lewallen, W7EL

Everything comes to him who waits! In theory, of course!

Irv VE6BP

1380. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 04:52:33 UTC
From: richardharrison@webtv.net
Message-ID: <28667-4668E091-1272@storefull-3256.bay.webtv.net>
Source record: 40532

Richard Clark, KB7QHC quoted Mike Kalinski`s question: "What do you mean by equilibrium?"

Richard also asked: 'How do you distinguish directivity from gain?"

Only Art knows what he means by "equilibrium".

Gain, however, is well defined by common usage and defined by experts. Gain and directivity are close relatives. Terman wrote on page 870 of his 1955 opus:
"Directive gain depends entirely on the distribution in space of the radiated power. The power input to the antenna, the antenna losses, or the power consumed in a terminating resistance have nothing to do with directive gain. Such factors are taken into account in terms of power gain of the antenna which is defined as the ratio of the power input to the comparison antenna required to develop a particular field strength in the direction of maximum radiation, to the power that must be delivered to the directional antenna to produce the same field strength in the same direction. Unless otherwise specified the comparison antenna is a lossless isotropic radiator."

I`m no longer completely in the dark about Gaussian antennas since finding pages from St. Andrews University about them on the internet. It`s an extension of optical principles used at somewhat lower frequencies in the millimeter and microwave frequency wavebands. All antennas can be scaled but are not always practical when made larger or smaller. Until Art comes clean about his ideas, we probably won`t know the likelihood of his success.

Best regards, Richard Harrison, KB5WZI

1381. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 05:01:30 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <h4nh631svlfsusaj59fb6hlnoaeck008ja@4ax.com>
Source record: 40531

On 31 May 2007 08:58:09 -0700, art <aunwin@insightbb.com> wrote:

>
>I cringe at the idea of the news media filtering out the garbage!
>It is for the viewer to determine what is garbage and what is not.

Unfortunately very few viewers have either the education or experience to make that determination. It's like computer literacy. Now days much of the population has computers, but only a very small percentage is truly computer literate. As a grad assistant I taught the intro to computer science. The level of knowledge in those students was scary and that was at the university level.

>Many a multimillionaire owes his fortune to what others have
>considered garbage where others have deemed themselves as
>educated enough to detrmine what is garbage and what is treasure.

However they were working from sound scientific or business principles, not something that violates the laws of physics.

>Look at the good side of this picture instead of piling on ridicule.
>Here we have is a human being who is fighting for something new
>and beneficial to all with all the energy and education that he
>has within him so that he can hold on to life. The life he has
>is enjoyable because he believes he is on the brink of success,
>where his life is still usefull instead of lying on a hospital bed.
>For a human to be brought from sadness into happiness is a
>wonderfull thing that typifies the human race and encouragement
>is what a human needs instead of derision to enjoy a life that
>has been given him. It is not sad to see a life ending in enjoyment
>but it is sad to pile on derision on how a human carries on the
>fight for life even in the light of a meagre education.

What is more sad it when some one is encouraged to go on a "fool's errand" and gives the "man on the street" false hope, so in the end instead of one disappointed person, thousands have their false hopes dashed.

Realistically tinkerers, engineers, and scientists alike all know their individual searches may end up in failure and accept that as a fact of life.

>If he was my grandpa I would encourage him until the end and be
>very proud of him and not use my education to discourage him.
>Actually the news media should use that story for those people
>who are interested in what is good in life as well as those

Although this approach sounds charitable to create false hopes in the person doing the research and those who believe in it is very cruel.

To encourage research, experimentation, and to push the envelope is good, but to give false hope even in the name of charity is not.
I would far rather work under the sense of what I do has he odds against it rather than a false grandiose hope that would or could leave me and worse yet those who believed in me with dashed hopes.

To point out the failings in a piece of research is not derision, as long as it is done in a respectful manner. It is in fact an attempt to help the individual rather than to encourage them to pursue "junk science".

Mankind has been looking for perpetual motion since we had enough brain power to envision such a fallacy. Most any engineer can show the weakness behind this idea and prove them. Yet there are those who believe we can violate the laws of physics/nature with impunity and there are those who encourage it. There are many things far more practical and rewarding for the individual and society as a whole that are much more likely to succeed. Those are the things we should encourage.
>who only have derision for the efforts of others.
>Regards
>Art

1382. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 05:38:30 UTC
From: richardharrison@webtv.net
Message-ID: <28667-4668EB56-1276@storefull-3256.bay.webtv.net>
Source record: 40533

I apologize for adding an "n" to Mike Kaliski`s name in my previous posting. I`m bad, bad, bad,

Best regards, Richard Harrison, KB5WZI

1383. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 06:09:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qesh63tm6i4mb9acljt211evt1f451r00a@4ax.com>
Source record: 40534

On Thu, 7 Jun 2007 23:52:33 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>I`m no longer completely in the dark about Gaussian antennas since
>finding pages from St. Andrews University about them on the internet.
>It`s an extension of optical principles used at somewhat lower
>frequencies in the millimeter and microwave frequency wavebands.

Hi Richard,

We have all seen the capacity of many posters to tack terms to their inventions (in the past called appellation gain) that otherwise bear no relation to descriptions of operation. Is your research, like Mike's, bearing largely on lobe geometry? That is, Gaussian being wholly divorced from the matters of current and more related to shape distribution?

73's
Richard Clark, KB7QHC

1384. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 06:20:18 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <fnrh63t4jfqg5d5u68p36g8st16ujvruv9@4ax.com>
Source record: 40535

On Tue, 05 Jun 2007 18:34:19 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>John Smith I wrote:
>
>Change:
>
>I pointed out that with engineers and physicists (No, I didn't examine
>their degrees) it is worth a look, not a bunch of fools booing in the
>isles ...
>
>to:
>
>I pointed out that with engineers and physicists accepting that hydrogen

>is being generated (No, I didn't examine their degrees), it is worth a
Most of these things are physics and chemistry 111 and 112 that most
scienes students could argue.

I doubt any one is arguing that Hydrogen is generated, the problem is
it is a very inefficient process both from how much hydrogen is
generated compared to how much RF it takes to generate that Hydrogen.
Lots of power and little Hydrogen. Then you have the efficiency of the
RF generator which if efficient may develop about 75% of the input
power as RF. Just a plain old DC current is probably much more
efficient. Of course with the DC current it's easy to seperate the H2
and O2 which is a necessity. Using microwaves they come off mixed
which is not a good thing. Looks spectacular but not very useful.

For many years I worked in the semiconductor industry (over 26). I
believe NASA was the only larger user of liquid H2 than us. We had a
large tank farm of liquid H2 and the stuff was not the easiest stuff
to handle. It requires very low temperatures to maintain a liquid
state which means a *lot* of evaporation. You aren't going to make
much difference even increasing pressures. On top of that you get
liquid Oxygen condensing on pipe fittings and running off. Good
combination, liquid H2 AND O2. BTW that place is now the world's
largest producer of polycrystalline Silicon by a wide margin and is
starting a Billion dollar expansion program.

Trucking H2 is expensive and piping it much of any distance as a
liquid is out of the question.

Taken out of context it is true that a Hydrogen spill dissipates much
more quickly that a gasoline spill, BUT while it is dissipating it is
far more explosive. OTOH a given volume of H2 has far less energy/BTU

than gas. Put in perspetive both dynamite and TNT also have less
energy per unit volume than does gas. The problem is the speed of the
combustion front. In the end it's not quite true that a liquid H2
spill is safer than a gas spill.

>look--and not be deterred by a bunch of fools booing in the isles ...

A look, yes, but you can't violate the rules of physics.

BTW for whoever was arguing Quantum physics Vs classical physics, they
coexist wuite nicely without contradiction.

>
>JS

1385. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 06:27:13 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9949A761935A0nonenowhere@61.9.191.5>
Source record: 40536

Richard Clark <kb7qhc@comcast.net> wrote in
news:0v0h63t5m60h5g7r95ut2k6pa1i1mo8op1@4ax.com:

> On Thu, 07 Jun 2007 13:11:38 -0700, Andrea <fuffa2k5@gmail.com> wrote:
>
>>Thanks Richard.
>>Do you know if there is a formula to calculare the max power that a
>>wire can supports?
>
> Hi Andrea,
>
> No. Not off-hand. I use "wire tables" to reference what is called
> "fuse current." This is the current that will burn a wire open. For

Are those tables based on the DC resistance or low frequency AC resistance
of the wire?

If so, are they relevant to rating the wire for current handling capacity
at RF where for example skin effect increases the dissipation for a given
current?

Owen

1386. Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 07:26:18 UTC
From: Al Dalton <trash_can@dialtrax.com>
Message-ID: <21c78$466904bb$4f9ed0b$24879@DIALUPUSA.NET>
Source record: 40537

I an not a licensed radio amateur, but I couldn't think of a better group to ask about antennas. I like listening to shortwave broadcasts. I'd like to build a good antenna system that will work well. The long wire antennas are pretty much out of the question, although I have considered trying it. Space is somewhat limited. The broomstick antenna looks like it might be my best choice. What do you think? Can you make any suggestions. Thank you.

Al

1387. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 07:59:23 UTC
From: Nick <a@b.com>
Message-ID: <v%7ai.8692$J15.681@newsfe3-gui.ntli.net>
Source record: 40538

"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:BW4ai.6472$xq1.1239@pd7urf1no...
> Nick wrote:
>> I am wanting to experiment making vertical whips, end fed,...
>>
> End fed whips? Is there some other way they are fed? In the
> middle?
> At the other end? Am I missing something (and at my age that is
> likely)?
>
> Irv VE6BP

Good points guys...
(I guess a vertical dipole could be fed elsewhere (centre / 1/3rd
of the way up etc....)

I elaborate...

End fed half wave dipoles was the original intention, but as JS
remarked, an end fed 5/8ths
seems more interesting.....

One of my applications is for an aerial mounted on a motorcycle
windscreen, fed with
50 ohm co-ax for inter-bike comms... 70 cms (or possibly 2 mtrs)
but needs to be ground plane independent, hence the thought of a
half wave ...

Another is a 16 foot whip for 10 mtrs ..... probably mounted just
under the house gutter

I just want to make myself something for the interest rather than
buy something

Thanks,

Nick

1388. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 09:46:11 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1181295971.914413.146460@m36g2000hse.googlegroups.com>
Source record: 40539

On 7 jun, 20:20, ve2pid <ve2...@videotron.ca> wrote:
> Hi ot all
>
> It is well known that the real ground seems to ''reflects'' a radio
> wave. But I think that the term ''reflects'' is a bit confusing. My
> understanding of the phenomenon is that the ground absorbs the
> incident wave and, with that energy it re-radiates a new wave with a
> different phase/amplitude value.

>
> That new wave modifies the TO angle as a real optical-type reflection
> would do. Then, it seems that it is not a ''bending'' of the wave, but
> the production of a new one. With the value of the modification of the
> TO angle, one can deduces a ''reflected'' wave's angle, even if it not
> a real reflection.. Am I right?
>
> Also, I read in a older version of the ARRL's Handbook that ''The
> effective ground plane, that is the plane from which ground
> reflections can be considered to take place, seldom is the actual
> surface of the ground, but a few feet below it, depending upon the
> characteristics of the soil.''
>
> Considering what I said about re-routing with phase/amplitude
> modifications, how to interpret the text form the Handbook? How to
> determine the depth of that 'effective gorund plane'? Or is there any
> depth at all? As is, it could be interpreted as a optical reflection
> like occuring somewhere deep in the real ground..
>
> Thanks..
>
> Pierre ve2...@videotron.ca

Hello Pierre,

You are right, reflection is reradiation. The driving field causes charges to oscillate and oscillating charges radiate. When the change in direction of propagation changes over a volume far more then a wavelength, most people call it "bending" (as happens in the ionosphere).

The amplitude and phase of the reflected wave depends heavily on angle of incidence (AoI), frequency, soil properties and polarization. In case of vertical polarization, there is AoI where the reflection is minimal ([pseudo] Brewster angle). For vertical polarization, the phase of the reflected wave varies strongly with AoI. You might look

for the "Fresnel Equations". These equations covers reflection on all type of surfaces.

To avoid confusion, physicists define the Angle of Incidence with respect to the normal (so 0 degr elevation angle is 90 degr AoI). What radio engineers call "vertical polarization" is called "parallel polarization" in physics.

In real world (average soil and short wave communication), under very small elevation angle, reflection coefficient is almost 1 and the phase is 180 (so field cancellation above ground does occur). This is valid for both H en V polarization. That is why the antenna/ground combination cannot have its maximum of radiation at 0 degrees elevation. The simplified "two ray" model propagation formula also assumes RC=|1|/180degrees

Depth of reflection.
Reflection over a plane with infinite conductivity gives 0 degr or 180 degrees phase shift (even under 0 and 90 degrees elevation).

A real soil will not give 180 degrees phase shift for 90 degrees elevation angle (in this case polarization doesn't matter). One can convert this phase shift to a length extension, hence giving "effective ground plane depth".

There is also a physical argument for "effective ground depth". Because of the skin depth, the induced currents can have significant depth in soil with low conductivity (up to tens of feet). So the reradiation originates from below the surface. With the Phase/ amplitude approach, one can assume that reflection takes place at an infinite thin sheet at the air/ground interface. This eases calculation of real world radiation patterns.

When you calculate the elevation radiation pattern of, for example a vertical dipole over ground, assuming optical 100% reflection, the real world antenna will have some more low angle radiation then the calculated version.

Hope this will help you a bit.

Best regards,

Wim
PA3DJS

1389. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 10:33:53 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1181298833.321519.168430@q75g2000hsh.googlegroups.com>
Source record: 40540

On 7 jun, 23:50, "Nick" <a...@b.com> wrote:
> I am wanting to experiment making vertical whips, end fed, for a number of
> frequencies
> from HF through to UHF and was wondering if someone can point me to a link
> with
> designs for constructing these.
>
> I want to feed with 50 ohm co-ax for convenience, and I think it basically
> has to
> resonate at the design frequency, tapped for 50 ohms to feed it and present
> a
> "high impedance" to the end of the resonant element.
>
> Naturally there will be different designs required for UHF frequencies
> compared
> to HF frequencies for mechanical considerations and I guess different
> matching networks
> with different Q's will have pros and cons too..
>
> Anyone with some links / info would be greatly appreciated
>
> Thanks
>
> Nick

Hi nick,

When you want to be ground plane independent, a halve wave resonance is the best option. It does introduce ground currents, but far less with respect to 1/4 or 5/8 WL. Please note, that you still need some ground, but a motor cycle frame will be sufficient. When you want to have full benefit of the HW, you must assure that it resonates as a half wave (so it will be shorter then an physical half wave). I would recommend familiarizing yourself with an EM simulation program. It may save you a lot of experimenting (with negative results).

While the center fed impedance of a HW dipole is not strongly depending on thickness of radiator, the end fed impedance is. An HF whip (5m for 10m) will be somewhat below 1 kOhm, however a UHF thick whip (5mm/70cm band) over a small groundplane will be in the 500 Ohms range.

The disadvantage of the HW end-fed is his length. When you want to make it shorter (for example the coil or helix construction), its end-fed impedance increases significantly. When you halve the length (but

keep halve wave resonance), you may expect a factor 2...4 increase in impedance.

About matching.
Mechanically, end-fed matching is easiest, you can put the ground to the motor cycle frame. Elevated feeding gives low feed impedance, but you also have to include a common mode (balun) function.
For end-feed, you may use an LC section (L in series with coax, C parallel to antenna), wound transformer, or combination of both.

I assume that you have some means to measure VWSR and or impedance and don't touch the ends with there is relative high voltage....

Best regards,

Wim
PA3DJS

1390. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 11:41:59 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f4bfab$5cu$1@aioe.org>
Source record: 40541

"Wimpie" wrote
> In real world (average soil and short wave communication), under very
> small elevation angle, reflection coefficient is almost 1 and the
> phase is 180 (so field cancellation above ground does occur). This is
> valid for both H en V polarization. That is why the antenna/ground
> combination cannot have its maximum of radiation at 0 degrees
> elevation.

One exception being the typical MW broadcast monopole vertical used with 120 buried radials, each 1/4-wave or more in length. This configuration produces its maximum radiation in the horizontal plane (ie, zero degrees elevation). If this was not true, then AM broadcast stations would have very few daytime listeners.

The ground wave fields 0.3 mile from such antenna systems have been accurately measured as far back as 1937 by Brown, Lewis and Epstein of RCA Labs, and for a vertical radiator of 60 to 90 degrees in height shown to be within a few percent of the peak, free-space field produced by a 1/2-wave dipole, at the same tx power. The frequency used in this set of tests was 3 MHz.

Ground wave propagation loss including earth curvature will cause the h-plane field from these verticals to go to zero beyond some distance* from the transmit antenna site, but that does not mean that zero h-plane field was "launched" by this vertical radiator in the first place.

*and that distance can be over 200 miles for a high power AM station on a low frequency

RF http://rfry.org

1391. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 11:47:52 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <l0fi635b7sndvv8a7b1soad3c1bu55k5qn@4ax.com>
Source record: 40542

On Fri, 8 Jun 2007 03:26:18 -0400, "Al Dalton"
<trash_can@dialtrax.com> wrote:

>I an not a licensed radio amateur, but I couldn't think of a better group to
>ask about antennas. I like listening to shortwave broadcasts. I'd like to
>build a good antenna system that will work well. The long wire antennas are
>pretty much out of the question, although I have considered trying it. Space
>is somewhat limited. The broomstick antenna looks like it might be my best
>choice. What do you think? Can you make any suggestions. Thank you.
>
>
>Al
>

There are several things to consider. I don't know how much you know
about antennas, but I see you have done some research, so that's a
good sign. Hopefully you will understand what I am about to say.

My father, also an avid SWL, used to use a long wire antenna. Then
one day he bought an antenna tuner kit for $10 about 15 years ago. It
really wasn't much, just a couple of small capacitors and a piece of
laminated wire he had to wrap around a pill bottle. He added his own
bypass switch and was excited to show me the difference the tuner made
to his signals.

I wasn't as surprised at the results as I was his initiative to buy
and build the tuner kit.

Anyway, he moved and we ran a wire around his attic about four trips.
The wires were spaced about 3 inches apart and just looped the attic
from corner to corner. I don't know how long it was, but it turned
out to be much better than the long wire. He hooked up his tuner and
radio and used it until he moved out. It was extremely sensitive.

My suggestion, for SWL, is to run as much wire over as large an area
as possible. If you are limited to indoors, I suggest the attic idea
if possible.

If you don't have the room, look for the largest area possible to
spread wire. If you find the best you can do is the broomstick idea,
(I assume it is a dowel wrapped with wire) then you may have to use
that. The larger the diameter, the better.

Research the antenna tuners. You don't have to worry about power
levels, so any small capacitor will do. Make one, or buy a kit and
add it to your antenna. You won't regret it.

Dad's tuner consisted of a pair of tuning capacitors out of two small AM radio receivers with a piece of enameled wire wrapped around a large pill bottle. The wire was tapped twice the distance of the previous tap, for example, if the first tap was at the 4th wrap, 8 turns later, the third was 16 turns from the previous, etc.

There are several home-brew plans on the internet. I highly recommend it if you are wanting to pull out the weak signals.

Good luck, I hope you find what you need and enjoy your listening.

buck
N4PGW

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

1392. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 12:20:12 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181305212.259572.146550@p77g2000hsh.googlegroups.com>
Source record: 40543

Yup, that dinosaur dung has quite kick...

denny

and in the case of gasoline you can get back
> quite a bit more (owing to the fact that all you have to do is distill
> it).
>
> 73, ac6xg

1393. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 12:31:24 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <y_bai.11569$4Y.3624@newssvr19.news.prodigy.net>
Source record: 40544

Roy Lewallen wrote:
> These, of course, are just the jewels among the semi-precious stones of
> ... bouncing waves of average power.

One imagines Roy staring into a mirror while shaving telling
himself over and over that there are no ExB joules/second of
average power in the EM light waves *bouncing* off the mirror
into his eyes - at the same time while supporting a technically
impossible delay of 3 nS through a ten inch long, two inch
diameter, 100 turn 75m loading coil.
--
73, Cecil http://www.w5dxp.com

1394. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 12:44:02 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1181306642.749778.228030@n4g2000hsb.googlegroups.com>
Source record: 40545

Hi Richard,

On 8 jun, 13:41, "Richard Fry" <r...@adams.net> wrote:
> One exception being the typical MW broadcast monopole vertical used with
> 120 buried radials, each 1/4-wave or more in length. This configuration
> produces its maximum radiation in the horizontal plane (ie, zero degrees
> elevation). If this was not true, then AM broadcast stations would have
> very few daytime listeners.

Day-time listening does not require maximum radiation at 0 deg.
elevation, but does require radiation at 0 deg elevation. So at that
point I thing you should reconsider your statement.

> The ground wave fields 0.3 mile from such antenna systems have been
> accurately measured as far back as 1937 by Brown, Lewis and Epstein of RCA
> Labs, and for a vertical radiator of 60 to 90 degrees in height shown to be
> within a few percent of the peak, free-space field produced by a 1/2-wave
> dipole, at the same tx power. The frequency used in this set of tests was 3
> MHz.

I especially mentioned "short wave communication" and "average soil"
to exclude the AM an LW broadcast propagation. In that case the pseudo
Brewster angle can be that low, that (near) fields form the ground
current do not cancel the direct field from the vertical radiator.

> Ground wave propagation loss including earth curvature will cause the
> h-plane field from these verticals to go to zero beyond some distance* from
> the transmit antenna site, but that does not mean that zero h-plane field
> was "launched" by this vertical radiator in the first place.
>
> *and that distance can be over 200 miles for a high power AM station on a
> low frequency

I agree that vary close to the transmitter (you are in the transition
field zone), the field strength will behave as over a perfect
conducting ground plane.

There is another sign that even an AM broadcast station does not have
maximum radiation at 0 deg. elevation. When you check your field
strength (E or H) graphs up to 60 miles (where earth curvature can be
neglected) you will notice that the field strength falls of faster
then with 1/distance. That would not be the case when max radiation is
at 0 deg. elevation.

My information shows 20 dB below 1/r (1 MHz, 100km, "good ground"),
41dB below 1/r (1 MHz, 100km, "good ground"), source: "The services
textbook of radio, 1958, volume 5 page 442. For average soil, and

especially rocky like ground, the field strength will be significantly lower.

Probably your material does also treat "height gain factors" Then you will see that above a certain height, field strength increases with increasing height (indication of more gain under that elevation).

Best regards,

Wim
PA3DJS

1395. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 12:46:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7dcai.11570$4Y.3328@newssvr19.news.prodigy.net>
Source record: 40546

Roger (K8RI) wrote:
> A look, yes, but you can't violate the rules of physics.

A couple of centuries ago, one of those "rules of physics"
was that light always travels in a straight line. Do you
think that "rule of physics" has been violated? :-)
--
73, Cecil http://www.w5dxp.com

1396. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:05:41 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46695419$0$3253$4c368faf@roadrunner.com>
Source record: 40547

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:28667-4668E091-1272@storefull-3256.bay.webtv.net...
> Richard Clark, KB7QHC quoted Mike Kalinski`s question: "What do you mean
> by equilibrium?"
>
> Richard also asked: 'How do you distinguish directivity from gain?"
>
> Only Art knows what he means by "equilibrium".
>
> Gain, however, is well defined by common usage and defined by experts.
> Gain and directivity are close relatives. Terman wrote on page 870 of
> his 1955 opus:
> "Directive gain depends entirely on the distribution in space of the
> radiated power. The power input to the antenna, the antenna losses, or
> the power consumed in a terminating resistance have nothing to do with
> directive gain. Such factors are taken into account in terms of power
> gain of the antenna which is defined as the ratio of the power input to
> the comparison antenna required to develop a particular field strength
> in the direction of maximum radiation, to the power that must be
> delivered to the directional antenna to produce the same field strength
> in the same direction. Unless otherwise specified the comparison antenna
> is a lossless isotropic radiator."
>
> I`m no longer completely in the dark about Gaussian antennas since
> finding pages from St. Andrews University about them on the internet.
> It`s an extension of optical principles used at somewhat lower
> frequencies in the millimeter and microwave frequency wavebands. All
> antennas can be scaled but are not always practical when made larger or
> smaller. Until Art comes clean about his ideas, we probably won`t know
> the likelihood of his success.
>
> Best regards, Richard Harrison, KB5WZI
>
My first encounter with Gaussian antenna was with microwave relay paths and
"fly swatter" antennas.
A gaussian antenna is on top of the site building rof point straight up. the
beam is then reflected in the desired direction
by the fly swatter reflector that would be at about 300 ft up on a tower.
In this case gaussian antenna meant a parabolic reflector antenna whose
beam was further focused and cohered by a fresnel lens. No resemblence at
all to Arts definition.

Jimmie

1397. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:05:42 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Gucai.154088$_c5.150005@attbi_s22>
Source record: 40548

>
> Don't let this surprise you but, the alchemists dream was realized decades
> ago, turning a base metal into gold. Though bombardment in nuclear
> accelerators it is possible to turn mercury into gold--of course, the cost
> in energy is more than the resulting gold is worth ...
>
> Hold on to your shorts, if you are successful in not becoming SK before,
> you will see many of mankinds' dreams bear fruit--there are few things
> that a man has not dreamed which has not come true ...
>
> JS

I believe that religion, (Any religion) comes in very close to the top of
that list JS. I also believe that you have one too many "nots" in your last
sentence.

W4ZCB

1398. Need help designing Flag antenna EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:12:00 UTC
From: amdx <amdx@knology.net>
Message-ID: <ddb02$46695595$18d6b40c$13924@KNOLOGY.NET>
Source record: 40549

I'm trying to design a Flag antenna for 9 to 12 Mhz.
I have the standard 14ft by 29ft Flag. It seems to lose
it's front to back ratio as the frequency gets above 4Mhz or less.
So I suspect it needs to be reduced in size for higher frequencies.

Would I scale the size the same as the frequency ratio?

I'm using the demo version of EZNEC, the dimensions of length
to height seem quite forgiving.

Could this be the limited segments (20) of the demo, or are
the design dimensions just not that critical?

Your input is appreciated, I haven't found much info on higher
frequency Flag antennas.
Thanks,
Mike

1399. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:13:22 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4bkln$m42$1@nnrp.linuxfan.it>
Source record: 40550

Roger (K8RI) wrote:

> ...
> I doubt any one is arguing that Hydrogen is generated, the problem is
> it is a very inefficient process both from how much hydrogen is
> generated compared to how much RF it takes to generate that Hydrogen.
> ...

The most efficient solar cells are about 20% efficient, efficiency is in the eye of the beholder. With an, almost, never ending supply of sunlight--they suddenly begin to make sense ... a two fold increase in efficiency would change everything, yet still be only 40% efficient.

The replacement of batteries with storage tanks is an economic advantage of hydrogen over electric ... and an IMPORTANT one, well, until better and more efficient batteries come along.

> ...
> ... Using microwaves they come off mixed
> which is not a good thing. Looks spectacular but not very useful.

They come off in exactly the necessary ratio to burn at 100% efficiency. Now, a way make lemonade from that "lemon" is only necessary ...

> ...
> Trucking H2 is expensive and piping it much of any distance as a
> liquid is out of the question.

Yeah, I'd pipe it as a gas ... allowing its' own pressure to "pump" it.

>
> Taken out of context it is true that a Hydrogen spill dissipates much
> more quickly that a gasoline spill, BUT while it is dissipating it is
> far more explosive. OTOH a given volume of H2 has far less energy/BTU
> than gas. Put in perspetive both dynamite and TNT also have less
> energy per unit volume than does gas. The problem is the speed of the
> combustion front. In the end it's not quite true that a liquid H2
> spill is safer than a gas spill.

Depending on the speed of release/"moment of ignition", the bulk of the hydrogen burn/explosion is going to be well above your head ... hydrogen is impossible to keep at ground level in the wild and escapes RAPIDLY to the far upper atmosphere!

> A look, yes, but you can't violate the rules of physics.

A violation of the law of conservation of energy may be highly possible, or it may not, only idiots would say "never" at this date. Only a fool

would bypass this without a very hard look ...

Violations of the conservation of energy may be highly possible!

For example, a "gravity engine" could be possible if we only knew of a
way to "shield" things from gravity with little cost in energy. Already
with esoteric shielding materials we can, seemingly, "lighten" the pull
of gravity on objects--but only by nano-units. If possible to work out,
a "gravity engine" would be possible.

Another example, a "magnet motor" would be great (the poles of magnets
are just as real as the poles of electro-magnets which spin in our
electric motors--difference--magnets require no power to generate their
poles) and the problem, at least on the surface is a simple one, set up
a "sustained imbalance" such as the poles are always being pulled/pushed
at the proper times to result in continuous motion where more power is
realized from the motor than is applied in maintaining the imbalance,
your magnetic fields are being generated for "free" ...

>
> BTW for whoever was arguing Quantum physics Vs classical physics, they
> coexist wuite nicely without contradiction.

As I have pointed out, although we can exploit some of the properties of
quantum physics at this date, we are far from a complete understanding
of the quantum phenomenon and underlying physics--yes, we do have
theories. Is it real?; yes ... well, unless another underlying
phenomenon is really causing it, and we will discover this at a later
date ... but for now, we can use it--to some degree.

But, for the
I-am-a-genius-and-know-it-all-idiots-and-cheating-on-the-law-of-conservation-of-energy-is-impossible,
they can go back to screaming, "IMPOSSIBLE!" At least for a while ...

Warmest regards,
JS

1400. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:15:07 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4669564e$0$1350$4c368faf@roadrunner.com>
Source record: 40551

```
"Nick" <a@b.com> wrote in message
news:v%7ai.8692$J15.681@newsfe3-gui.ntli.net...
>
> "Irv Finkleman" <finkirv@shaw.ca> wrote in message
> news:BW4ai.6472$xq1.1239@pd7urf1no...
>> Nick wrote:
>>> I am wanting to experiment making vertical whips, end fed,...
>>>
>> End fed whips? Is there some other way they are fed? In the middle?
>> At the other end? Am I missing something (and at my age that is likely)?
>>
>> Irv VE6BP
>
> Good points guys...
> ( I guess a vertical dipole could be fed elsewhere ( centre / 1/3rd
> of the way up etc.... )
>
> I elaborate...
>
> End fed half wave dipoles was the original intention, but as JS remarked,
> an end fed 5/8ths
> seems more interesting.....
>
> One of my applications is for an aerial mounted on a motorcycle
> windscreen, fed with
> 50 ohm co-ax for inter-bike comms... 70 cms (or possibly 2 mtrs)
> but needs to be ground plane independent, hence the thought of a half wave
> ...
>
> Another is a 16 foot whip for 10 mtrs ....... probably mounted just under
> the house gutter
>
> I just want to make myself something for the interest rather than buy
> something
>
> Thanks,
>
> Nick
>

My trick for feeding a 5/8 is to wind the coil with an 1/8 wl of wire as a
starting point and then trim from there. Using the coil in seies with the
antenna with coax connected between the other end of the coil and the ground
plane(no taps, coil does not conect to ground). This provides a petty decent
```

match to 50 ohm coax that can be reined a bit by drooping your
counterpoise(radials).

1401. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:31:15 UTC
From: richardharrison@webtv.net
Message-ID: <8849-46695A23-1033@storefull-3257.bay.webtv.net>
Source record: 40556

Richard Clark, KB7QHC wrote:
"That is, Gaussian being wholly divorced from matters of current and more related to shape distribution?"

Yes. Put your search engine to work on: "Radio & Coherent Techniques". Probably the first item to pop up will be: Scots_Guide/RadCom/introhtml. Part 11 of this is "Designing Quasi Optical Circuits". First example in this is a free space "Gaussian Beam" radiated from the enf of a glass fiber. Lots of pages and lots of stuff in those pages.

Best regards, Richard Harrison, KB5WZI

1402. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:31:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4blof$s28$1@nnrp.linuxfan.it>
Source record: 40552

Cecil Moore wrote:
> Roy Lewallen wrote:
>> These, of course, are just the jewels among the semi-precious stones
>> of ... bouncing waves of average power.
>
> One imagines Roy staring into a mirror while shaving telling
> himself over and over that there are no ExB joules/second of
> *average power* in the EM light waves *bouncing* off the mirror
> into his eyes - at the same time while supporting a technically
> impossible delay of 3 nS through a ten inch long, two inch
> diameter, 100 turn 75m loading coil.

Cecil:

Quit! Early in the moring, I am prone to uncontrolled fits of laughter,
WITHOUT your provocations! :-)

Regards,
JS

1403. MI5 Persecution: Watch Out, Forger About 27/9/95 (4295)

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:35:54 UTC
From: MI5Victim@mi5.gov.uk
Message-ID: <m07050813354630@4ax.com>
Source record: 40553
Cross-posted to:
rec.puzzles.crosswords,rec.pyrotechnics,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

From: ray@ultimate-tech.com (Ray Dunn)
Newsgroups: uk.misc,soc.culture.british
Subject: Re: An apology from Mike Corley
Date: Wed Sep 27 14:20:36 1995

In referenced article, David Wooding says...
>Well, Mike Corley might or might not have written the apologies, but I
>think not. I thought the following line both witty and imaginative.
>
>>>It was the razor blades stuffed down between the keys that told me.

Corley himself denies posting this "apology", but I'm impressed if it
is a forgery.

Here's the header of my received email. It looks very genuine except
for the fact that postings to newsgroups are directed through demon's
mail to news gateway, which is strange.

Also the message id is <m0sxbx2-000JEeC@bloor.torfree.net> which seems
to be in a different format from previous Corley postings, e.g.
<DFJJB3.6Ft.0.bloor@torfree.net

The mail seems to have been received directly from mail.torfree.net.

One way of telling for sure would be if anyone on the recipient list
contacted torfree, but did not publish any complaints on the newsgroups
- he would not have had access to their address in that case.

>Received: from SpoolDir by ULTIMATE (Mercury 1.20); 26 Sep 95 12:00:14
+0500
>Return-path: <bu765@torfree.net>
>Received: from mail.torfree.net by smtp.ultimate-tech.com (Mercury
1.20);
> 26 Sep 95 12:00:04 +0500
>Received: from bloor.torfree.net ([199.71.188.18]) by mail.torfree.net
> (/\==/\ Smail3.1.28.1 #28.6; 16-jun-94)
> via sendmail with smtp id <m0sxbyy-000LXSC@mail.torfree.net>
> for <ray@ultimate-tech.com>; Tue, 26 Sep 95 11:31 EDT
>Received: from torfree.net by bloor.torfree.net with smtp
> (Smail3.1.28.1 #6) id m0sxbx2-000JEeC; Tue, 26 Sep 95 11:29 EDT
>Message-Id: <m0sxbx2-000JEeC@bloor.torfree.net>
>Apparently-To: bu765@torfree.net, snail@objmedia.demon.co.uk,
> ray@ultimate-tech.com, Frank@acclaim.demon.co.uk,
> p.marshall@axion.bt.co.uk, me93jrb@brunel.ac.uk, >

mikeh@mordor.com,
> michael@everyman.demon.co.uk, tim@xara.co.uk,
> Alan.Holmes@brunel.ac.uk, uk.misc@news.demon.co.uk,
> uk-misc@news.demon.co.uk, uk-media@news.demon.co.uk,
> uk.media@news.demon.co.uk, uk.legal@news.demon.co.uk,
> uk-legal@news.demon.co.uk, alt-conspiracy@news.demon.co.uk,
> alt.conspiracy@news.demon.co.uk,
> soc.culture.british@news.demon.co.uk,
> soc-culture-british@news.demon.co.uk,
> soc-culture-canada@news.demon.co.uk,
> soc.culture.canada@news.demon.co.uk
>Newsgroups: uk.misc, uk.media, soc.culture.british,
soc.culture.canada, uk.legal, alt.conspiracy
>From: bu765@torfree.net (Mike Corley)
>Subject: Oops! Sorry!
>Organization: Toronto Free-Net
>X-Newsreader: TIN [version 1.2 PL2]
>Date: Thu, 26 Sep 1995 01:23:45 GMT
>Lines: 27
>X-PMFLAGS: 33554560

--
Ray Dunn (opinions are my own) | Phone: (514) 938 9050
Montreal | Phax : (514) 938 5225
ray@ultimate-tech.com | Home : (514) 630 3749

4295

1404. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:37:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3Ycai.24816$YL5.20189@newssvr29.news.prodigy.net>
Source record: 40554

John Smith I wrote:
> For example, a "gravity engine" could be possible if we only knew of a
> way to "shield" things from gravity with little cost in energy.

Don't forget zero point energy. http://www.calphysics.org/zpe.html.

More than half a century ago, I remember the conservation
of energy principle being modified to: "Energy cannot be
created or destroyed *by ordinary chemical means*" - right
after WWII. It took some time for the meaning of e = mc^2
to soak in. :-)
--
73, Cecil http://www.w5dxp.com

1405. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:39:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4bm6m$s28$2@nnrp.linuxfan.it>
Source record: 40555

Harold E. Johnson wrote:

> ...
> I believe that religion, (Any religion) comes in very close to the top of
> that list JS. I also believe that you have one too many "nots" in your last
> sentence.
>
> W4ZCB

Harold:

Correct on the "nots", I missed that extra one, thanks!

Yes, what one believes does tend to take one in that particular direction ... optimistic/pessimistic--yin/yang thing ...

However, mankind has a good "batting average", what he tends to work/strive/imagine to, he tends to achieve--one only needs to examine science though the past-to-date to find this proof (or God if your particular religion is science!) ;-)

Regards,
JS

1406. Re: Electric fence wire for rf ground radials

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 13:54:26 UTC
From: richardharrison@webtv.net
Message-ID: <8849-46695F92-1035@storefull-3257.bay.webtv.net>
Source record: 40558

Merlin-7 wrote:
"How would you lay out a ground system for both RF and lightning on a budget?"

A good system of ground radials serves both purposes well.

Lay off the fence wire. Magnesium, aluminum, and zinc are likely to deteriorate papidly in the soil. Copper is likely to last forever.

Best regards, Richard Harrison, KB5WZI

1407. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 14:03:34 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1181311414.802730.265790@e65g2000hsc.googlegroups.com>
Source record: 40557

On Jun 5, 11:40 am, Cecil Moore <w...@hotmail.com> wrote:
> On Jun 4, 5:39 pm, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
>
> > Maybe you'll tell me who you think thinks waves of any sort can't
> > be reflected. I haven't run into anyone who thinks EM waves can't be
> > reflected, refracted, etc. Maybe there's a misunderstanding somewhere.
>
> I don't want to get personal but if you have followed the reflected
> wave arguments, you know who they are. Some simple true/false
> questions will highlight the argument.
>
> 1. Do reflected EM waves actually exist in reality?
> 2. Is the reflected EM wave a traveling wave?
> 3. Does a reflected EM wave obey the rules for traveling waves?
> 4. Do reflected EM waves contain ExB joules/second?
> 5. Do reflected EM waves have any effect on forward waves in a
> constant Z0 environment?
> 6. Do standing EM waves superceed and obsolete the component traveling
> waves?
> 7. Does reflected EM energy violate the laws of physics by standing
> still within the standing wave?
> 8. Does reflected EM energy violate the laws of physics by just
> "sloshing" around?
> 9. Does reflected EM energy travel in the reverse direction at VF(c)
> until it encounters an impedance discontinuity?
> 10. Is it valid to consider the forward EM traveling wave and the
> reflected EM traveling wave separately and then superpose the
> resulting fields (voltages, currents)?
> 11. Are the decades-old EM wave intensity equations from the field of
> optics valid for an RF EM wave analysis?
> 12. Can standing wave current be used to determine the delay through a
> 75m mobile loading coil?
> 13. Is the current "drop" through that loading coil just an illusion
> caused by superposition of forward and reflected currents?
> 14. Would the delay be different if only a forward traveling wave was
> used for measurement purposes?
> --
> 73, Cecil, w5dxp.com

An excellent list of questions, but you left out a few:

15. Can superposition be used in the analysis of linear
time invariant circuits?
16. Does P equal E times I?
17. Can source (or output) impedance be used to compute the

reflection occuring at the generator?
18. Does a directional wattmeter MEASURE power?
19. Do reflections occur at places other than physical
impedance discontinuities?

...Keith

1408. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 14:25:29 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f4bost$6e1$1@aioe.org>
Source record: 40559

"Wimpie" wrote
> There is another sign that even an AM broadcast station does not have
> maximum radiation at 0 deg. elevation. When you check your field
> strength (E or H) graphs up to 60 miles (where earth curvature can be
> neglected) you will notice that the field strength falls of faster
> then with 1/distance. That would not be the case when max radiation is
> at 0 deg. elevation.

No matter the relative value of its h-plane radiation, the resulting ground wave field from an AM broadcast station is subject to losses not only by 1/distance, but also as a function of earth conductivity and the frequency. Only for free space paths does the field decay by 1/distance, alone.

If the h-plane ERP of an AM monopole did not match the peak ERP of a 1/2-wave dipole when driven with the same tx power, then the monopole could not generate the same field as the peak, free-space field of that dipole, when the monopole is measured in its far field, but close enough to it for groundwave propagation loss due to the conductivity of the path to be small.

This was proven in the Brown, Lewis and Epstein study in 1937, where at 0.3 miles for 60-90 degree verticals they measured an equivalent field strength of better than 190 mV/m at 1 mile for 1 kW of radiated power. The peak, free-space field from a 1/2-wave dipole for those conditions is about 195 mV/m.

RF

1409. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 14:45:24 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4bq2a$vg4$1@nnrp.linuxfan.it>
Source record: 40560

Cecil Moore wrote:

> ...
> Don't forget zero point energy. http://www.calphysics.org/zpe.html.
>
> More than half a century ago, I remember the conservation
> of energy principle being modified to: "Energy cannot be
> created or destroyed *by ordinary chemical means*" - right
> after WWII. It took some time for the meaning of e = mc^2
> to soak in. :-)

Cecil:

You need another lifetime man! If you don't petition God yourself for such, I will by proxy!

Exactly correct, and that is NOT the only time "laws" have been rewritten, nor will it be the last ... one only has to realize the quaint old phrase, "Laws were meant to be broken" to advance into the dark and unknown ...

An open mind and willingness to look "under-the-rocks" which others avoid is all that is necessary for advancement and discovery. The only problem is, there are a H*LL of a lot of rocks with nothing under em'!

Keep on truckin'!

Warmest regards,
JS

1410. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 15:21:06 UTC
From: richardharrison@webtv.net
Message-ID: <28567-466973E2-1172@storefull-3258.bay.webtv.net>
Source record: 40562

Jimmie D wrote:
"My first encounter with Gaussian antenna was with microwave relay paths and "flyswatter" antennas."

We called them periscope systems. Nice because instead of a waveguide loss, the periscope gave a gain over the dish alone. The reflector at the tower top has a cupping adjustment to refocus the energy thus boosting the gain.

When satellite systems appeared, the FCC started to lean on private microwave users to replace existing periscopes with "high-performance" dishes at tower tops. Long after we complied, I noticed FAA relay systems still using periscopes.

Part of the problem with periscopes, I believe, is the common practice to use tower top reflectoers that are too small, for economy and performance. Part of the would-be illumination is allowed to fall outside the surface of the reflector. This boosts gain of the periscope as the outside ring of the illumination is out-of-phase with that in the center. I don`t know about Gaussian dishes, but maybe they concentrate in-phase energy in a narrow beam and eliminate the out-of-phase energy.

Best regards, Richard Harrison, KB5WZI

1411. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 15:33:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <QAeai.16724$C96.7264@newssvr23.news.prodigy.net>
Source record: 40561

John Smith I wrote:
> You need another lifetime man!

Reincarnation?
--
73, Cecil, w5dxp.com

1412. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:10:18 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181319018.292990.61920@h2g2000hsg.googlegroups.com>
Source record: 40563

On 7 Jun, 22:01, "Roger (K8RI)" <validaddr...@my.com> wrote:
> On 31 May 2007 08:58:09 -0700, art <aun...@insightbb.com> wrote:
>
>
>
> >I cringe at the idea of the news media filtering out the garbage!
> >It is for the viewer to determine what is garbage and what is not.
>
> Unfortunately very few viewers have either the education or experience
> to make that determination.

My O my. I know that America is a big Country but I never realised
that Communist ideals were lying secretly under some rocks waiting
for an opportunity to broadcast its ideals. When does America
start burning all books and pick up the refrain of the resident
couch experts? Does this reflect the ideals of the antenna experts
on this newsgroup? Obviously they are not having success when
it comes to suppression with respect to antennas
Art

1413. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:32:23 UTC
From: richardharrison@webtv.net
Message-ID: <27321-46698497-1062@storefull-3252.bay.webtv.net>
Source record: 40564

Art wrote:
"Without the understanding of the meaning of "equilibrium" how does one interpret "comservative" or non conservative fields?"

Equilibrium: Synonym=balance

We know balanced antennas have the same impedance between each side of the antenna and the earth or some other chosen groundpoint.

Best regards, Richard Harrison, KB5WZI

1414. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:33:45 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <w--dnUkE3K1iG_TbnZ2dnUVZ8v6dnZ2d@bt.com>
Source record: 40566

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:sqfh63lfqd0n1v5glnaq3famu565c8mhtk@4ax.com...
> On Fri, 8 Jun 2007 01:44:06 +0100, "Mike Kaliski"
> <michael.kaliski@tesco.net> wrote:
>
> >As a result of searches into gaussian antennae, it quickly became
apparent
> >that commercial versions of these devices are being manufactured for use
at
> >GHz frequencies.
>
> Hi Mike,
>
> Your research would be evidence of substantial "prior art." However,
> all previous contexts suggest otherwise and your research bears no
> relation to the topic - as described to this point by Arthur.
>
> >These designs all seem to use modified horns as the
> >transmitting element.
>
> This fairly cements the disconnect.
>
> >I have not yet found a device made up of discrete
> >elements. At these sorts of frequencies, discrete element lengths may
well
> >be all pretty much the same dimensions.
>
> Well, I have a Radar background too, and horns are hardly resonant and
> are more designed for a match without fringing effects. To accomplish
> this they deliberately employ a sweep of dimensions, not one single
> but replicated dimension as is suggested by Arthur's descriptions.
>
> >I suspect equilibrium may not be the
> >right term to use but resonance is obviously not quite right either.
>
> Equilibrium has long been a term of vague parentage. Resonance is
> hardly a tripping point until you come to phase relationships. As
> phase is the name of the game in gain/directivity, and multiple phase
> relationships even more; then resonance occurs for at least one
> element. However, it is not always necessary as revealed with
> Rhombics which are non-resonant but exceedingly directional. Resonance
> is more a desirable attribute for feeding the antenna. The upshot of
> it all is that your last statement reveals how nebulous the topic is.
>

> >Arthur
> >may be unwilling to give out too many details of his antenna, perhaps
> >because he wants to protect any future patent application. I inferred the
> >spread spectrum usage from the types of communication links that are
being
> >developed for wi-fi and other links at these super high frequencies.
>
> As antenna design is scaleable, application defines what is needed,
> not what is possible.
>
> >I do
> >not make a distinction between directivity and gain because I believe
that
> >the term 'gaussian' essentially implies a single transmission lobe.
>
> This would suggest that your research (noted above) led you to
> geometric descriptions of lobe attributes. Arthur has never used the
> term Gaussian in that sense. If he had, it would be distinct from
> Lambertian - another term unused which again draws the distinction
> away from geometry.
>
> >Arts' antenna may be built and may perform as he predicts. If it doesn't
> >then we will all have learned from the experience whatever the outcome.
That
> >is the principle of scientific advancement.
>
> Standard modeling programs have been proven robust in this regard. The
> Status Quo has been maintained throughout. No surprises yet.
>
> 73's
> Richard Clark, KB7QHC

Richard,

Don't disagree with any of the above and of course the radar horn acts primarily as an impedence match. Radar 101. Whatever was I thinking - the brain does silly things at times.

Mike G0ULI

1415. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:35:41 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <w--dnUgE3K1iG_TbnZ2dnUVZ8v6dnZ2d@bt.com>
Source record: 40565

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:28667-4668EB56-1276@storefull-3256.bay.webtv.net...
> I apologize for adding an "n" to Mike Kaliski`s name in my previous
> posting. I`m bad, bad, bad,
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

You are just very naughty. Useful post though and thanks for the apology.

Mike G0ULI

1416. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:50:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c1a1$q4b$1@nnrp.linuxfan.it>
Source record: 40567

Cecil Moore wrote:
> John Smith I wrote:
>> You need another lifetime man!
>
> Reincarnation?
> --
> 73, Cecil, w5dxp.com

Well, it is found in the "Dead Sea Scrolls", however, I believe an ancient convention of bishops decided that reincarnation was too complicated for the commoners and removed the/those book(s) from the bible. (this was mentioned to me by an devote acquaintance, I can't claim it to be valid)

Regards,
JS

1417. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 16:56:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c1ki$q4b$2@nnrp.linuxfan.it>
Source record: 40568

Roger (K8RI) wrote:

> ...
> Unfortunately very few viewers have either the education or experience
> to make that determination. It's like computer literacy. Now days
> ...

Unfortunately, very few people have the where-with-all to determine what others can or cannot determine and are unjustified it attempting to do so ...

Yanno, you kinda look like one of 'em ... ahhh, perhaps it is just the lighting ...

JS

1418. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 17:21:39 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46699011$0$1351$4c368faf@roadrunner.com>
Source record: 40569

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:28567-466973E2-1172@storefull-3258.bay.webtv.net...
> Jimmie D wrote:
> "My first encounter with Gaussian antenna was with microwave relay paths
> and "flyswatter" antennas."
>
> We called them periscope systems. Nice because instead of a waveguide
> loss, the periscope gave a gain over the dish alone. The reflector at
> the tower top has a cupping adjustment to refocus the energy thus
> boosting the gain.
>
> When satellite systems appeared, the FCC started to lean on private
> microwave users to replace existing periscopes with "high-performance"
> dishes at tower tops. Long after we complied, I noticed FAA relay
> systems still using periscopes.
>
> Part of the problem with periscopes, I believe, is the common practice
> to use tower top reflectoers that are too small, for economy and
> performance.

You believe correctly, especially the ones the FAA used.

Part of the would-be illumination is allowed to fall
> outside the surface of the reflector. This boosts gain of the periscope
> as the outside ring of the illumination is out-of-phase with that in the
> center. I don`t know about Gaussian dishes, but maybe they concentrate
> in-phase energy in a narrow beam and eliminate the out-of-phase energy.
>
> Best regards, Richard Harrison, KB5WZI
>

1419. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 17:42:01 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466994d9$0$9900$4c368faf@roadrunner.com>
Source record: 40570

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:136hl2blc9tc6b2@corp.supernews.com...
> This newsgroup is truly educational. Just in the past few days, I've
> learned that:
>
> "The law of conservation of energy is just another law awaiting to be
> "broken", i.e. a new "law" found which acts to the contrary ..."
> -- "John Smith"
>
> and
>
> ". . .gravity is a theory. . ."
> -- "Jimmie D"
>
> These, of course, are just the jewels among the semi-precious stones of
> Gaussian antennas and bouncing waves of average power.
>
> Thanks, folks. A little more time on this newsgroup and I'll be ready to
> step out into the world of the 13th century!
>
> Roy Lewallen, W7EL

In 1978 while attending the University of Miami is was considered a theory,
if it has changed since then I am sorry for not keeping abreast.
I will make sure I put "Review Newton's Theory of Gravity" in my to do list.

1420. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:20:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2a7j63h81enm7oa2jqe45uedk5uvs22amt@4ax.com>
Source record: 40571

On Fri, 08 Jun 2007 06:27:13 GMT, Owen Duffy <none@no.where> wrote:

>If so, are they relevant to rating the wire for current handling capacity
>at RF where for example skin effect increases the dissipation for a given
>current?

Hi Owen,

Really, a 1mm wire is sufficient for a 100W transmitter in a long wire
antenna application. There is no need to elaborate.

73's
Richard Clark, KB7QHC

1421. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:26:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mo7j63tuv7f139ukbjchv8sqnrnr10g3o2@4ax.com>
Source record: 40572

On Fri, 08 Jun 2007 07:47:52 -0400, Buck <usenet01@lumpuckeroo.com>
wrote:

>Research the antenna tuners. You don't have to worry about power
>levels, so any small capacitor will do. Make one, or buy a kit and
>add it to your antenna. You won't regret it.

Probably the single best piece of advice irrespective of antenna
choice (or forced choice).

73's
Richard Clark, KB7QHC

1422. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:34:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c7f0$8ei$1@nnrp.linuxfan.it>
Source record: 40573

Richard Clark wrote:

> ...

> Richard Clark, KB7QHC

Richard:

I should think I could probably power a 100 watt light bulb though a 1mm wire. Perhaps a 150 watt one?

At 200 watts, I'd more than expect the wire to be getting rather warm, even with enamel insulation and in free space ...

At a KW, I'd expect to be breathing some copper ions/particles!

JS

1423. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:40:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c7s0$8ei$2@nnrp.linuxfan.it>
Source record: 40574

John Smith I wrote:

> [stuff]

In the previous post, 1 mm wire is #18 gauge AWG. (#12 = ~2 mm)

And, every 6 gauge decrease results in a doubling of the wires diameter,
every 3 gauge decrease results in a doubling of the wires cross
section--just as for db in signal levels ...

JS

1424. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:44:09 UTC
From: Al Dalton <trash_can@dialtrax.com>
Message-ID: <dc60b$4669a389$4f9b12f$28923@DIALUPUSA.NET>
Source record: 40575

> There are several things to consider. I don't know how much you know
> about antennas, but I see you have done some research, so that's a
> good sign. Hopefully you will understand what I am about to say.
>
> My father, also an avid SWL, used to use a long wire antenna. Then
> one day he bought an antenna tuner kit for $10 about 15 years ago. It
> really wasn't much, just a couple of small capacitors and a piece of
> laminated wire he had to wrap around a pill bottle. He added his own
> bypass switch and was excited to show me the difference the tuner made
> to his signals.
>
> I wasn't as surprised at the results as I was his initiative to buy
> and build the tuner kit.
>
> Anyway, he moved and we ran a wire around his attic about four trips.
> The wires were spaced about 3 inches apart and just looped the attic
> from corner to corner. I don't know how long it was, but it turned
> out to be much better than the long wire. He hooked up his tuner and
> radio and used it until he moved out. It was extremely sensitive.
>
> My suggestion, for SWL, is to run as much wire over as large an area
> as possible. If you are limited to indoors, I suggest the attic idea
> if possible.
>
> If you don't have the room, look for the largest area possible to
> spread wire. If you find the best you can do is the broomstick idea,
> (I assume it is a dowel wrapped with wire) then you may have to use
> that. The larger the diameter, the better.
>
> Research the antenna tuners. You don't have to worry about power
> levels, so any small capacitor will do. Make one, or buy a kit and
> add it to your antenna. You won't regret it.
>
> Dad's tuner consisted of a pair of tuning capacitors out of two small
> AM radio receivers with a piece of enameled wire wrapped around a
> large pill bottle. The wire was tapped twice the distance of the
> previous tap, for example, if the first tap was at the 4th wrap, 8
> turns later, the third was 16 turns from the previous, etc.
>
> There are several home-brew plans on the internet. I highly recommend
> it if you are wanting to pull out the weak signals.
>
> Good luck, I hope you find what you need and enjoy your listening.
>

> buck
> N4PGW
>
I do know a fair amount about antennas and tuners. I'd have the no code tech license if I could remember the stuff you really don't need to know (for the test). My memory just isn't good enough, and memorizing some of that stuff isn't even relevant to whether or not we know what we're doing.

As I understand it, an antenna tuner is the single most important thing involved? That makes sense. A tuner adjusts the overall resistance of the circuit (impedance). Right? I have looked up everything I could find and found a tuner for 60 bucks. I can't spend that on a tuner right now. I should probably make one.

Are there any plans (w/parts list) on the Internet? Where might I find them? Thank you.

Al

1425. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:49:02 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c8b3$8ei$3@nnrp.linuxfan.it>
Source record: 40576

John Smith I wrote:

Further, I meant to point out that 100% skin depth only occurs to
~17Khz. And, while #18 may be ok for a max of 16 amps when used in
chassis wiring, it is only rated at ~2.3 amps for power transmission ...

Anyone know how many amps commonly flow through a current node on a 1/4
or 1/2 wave ant? Now, that's the real question, isn't it? And, if all
that power is all concentrated in just the skin of the copper, wouldn't
there be a degradation of power handling directly related to frequency?

Regards,
JS

1426. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 18:51:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4c8es$8ei$4@nnrp.linuxfan.it>
Source record: 40478

Al Dalton wrote:

> [stuff]

Google L-Match, T-Match, PI-Match, etc.

JS

1427. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:00:19 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181329219.102789.311250@k79g2000hse.googlegroups.com>
Source record: 40479

On 8 Jun, 11:20, Richard Clark <kb7...@comcast.net> wrote:
> On Fri, 08 Jun 2007 06:27:13 GMT, Owen Duffy <n...@no.where> wrote:
> >If so, are they relevant to rating the wire for current handling capacity
> >at RF where for example skin effect increases the dissipation for a given
> >current?
>
> Hi Owen,
>
> Really, a 1mm wire is sufficient for a 100W transmitter in a long wire
> antenna application. There is no need to elaborate.
>
> 73's
> Richard Clark, KB7QHC

Sorry Owen, you have been censored.

1428. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:01:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <IIhai.7206$u56.937@newssvr22.news.prodigy.net>
Source record: 40480

John Smith I wrote:
> Anyone know how many amps commonly flow through a current node on a 1/4
> or 1/2 wave ant? Now, that's the real question, isn't it?

John, you should be talking about the current anti-node,
i.e. the current maximum, not the current node (minimum).
For a 1/2WL center-fed dipole or a 1/4WL monopole, the
current is maximum at the feedpoint which is easy to
calculate, e.g. 1.414 amps for 100 watts into 50 ohms.
--
73, Cecil http://www.w5dxp.com

1429. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:25:58 UTC
From: Al Dalton <trash_can@dialtrax.com>
Message-ID: <5d277$4669ad60$4f9b12f$29127@DIALUPUSA.NET>
Source record: 40481

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4c8es$8ei$4@nnrp.linuxfan.it...
>
> > [stuff]
>
> Google L-Match, T-Match, PI-Match, etc.
>
> JS
>
That goes to show how easy things can be when you are using the right
keywords in a search. This one looks like what I need.
http://www.brainz90.karoo.net/bastuner.htm
Thanks.

Al

1430. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:29:22 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4camofff1@nnrp.linuxfan.it>
Source record: 40482

Cecil Moore wrote:

> ...
> calculate, e.g. 1.414 amps for 100 watts into 50 ohms.

Cecil:

Then, since E = I*R, 70.7 volts ... thanks.

Still, I like my 1/4 copper tubing, silver would be better ...

Regards,
JS

1431. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:36:13 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181331373.961005.179250@w5g2000hsg.googlegroups.com>
Source record: 40483

On 7 Jun, 03:23, n...@wt.net wrote:
> On Jun 6, 6:04 pm, art <aun...@insightbb.com> wrote:
>
> > On 6 Jun, 15:57, "Dave" <n...@nowhere.com> wrote:
>
> > But David, you reject the basics of a Gaussian antenna which is why I
> > have reservations about your logic tho granted others appear to
> > agree with you, so I want to read up on it for myself.
>
> Shame on his mess...
>
> > When reseaching the net I see numorous attempts to
> > provide a real time proof for it but nothing as factual as the
> > Gaussian antenna.
>
> What is a "gaussian" antenna as you consider it?
> All the hints I've seen so far point to some kind of array with
> all elements the same length.
> Fed in equilibrium so you say... :/
> What makes that special? Sounds like a perverted driven array
> to me.. Something anyone with a crayon, or modeling program
> could conjer up various versions till the cows come home.
> Why would you need to rewrite proven theory to explain a driven
> array?
> Seems the performance of driven arrays is already fairly well
> known. Even fairly perverted ones... :/
>
> >So contrary to what you say there is a lot going on
> > in trying to find a proof for it even tho you at the same time reject
> > the Gaussian connection.
>
> A proof for what? Gaussian connection to what?
> Who is doing all this whole lot of going on? Enquiring
> minds wanna know...
>
> >After seeing the automatic rejection of
>
> > ANY ideas that represent new ideas in the amateur community I am
> > beginning to wonder if the E/H antennas is a victim of the same
> > syndrome .
>
> The only ideas that seem to be rejected are the ones that distort
> and mangle fairly well known principals.
> Yes, I do compare your "gaussian" antenna to be about in

> the same league as the E/H antenna because you both use
> doo-doo bafflegab to try to "invent" yourselves some kind of new
> antenna, which is really just a perverted version of an
> existing known antenna.
> Your's will actually perform a bit better though, since I
> assume the feedline won't do the majority of the radiating,
> as is the case with the E/H antenna.
> But to me, both of you use what I consider as "doo-doo"
> science to try to have some kind of explanation for whatever it
> is you are trying to achieve.
>
> >I am coming across many papers that suggest that there
> > is more to radiation than scholars presently believe so it is
> > natural to me that amateurs would automatically reject any new
> > aproach by derisive comments such as junk science or similar.
>
> It's not your antenna that is junk science.. It's just a perverted
> driven array as far as I can tell.
> It's the bafflegab you come up with to give it some kind of
> divine level of performance that is junk science..
> Just the way you constantly tweak the usual application of the
> word "efficiency" is enough to scare many away.
> And this "equilibrium" jibber jabber... Wouldn't it be easier to say
> they are all fed in phase? Although some of our roving reporters
> say you aren't actually feeding all the elements, in phase or not..
> Seems to vary from day to day according to what kind of feedback
> you get from the previous days posts..
> I still wonder why in the heck you care what anyone here thinks
> anyway.. I would just build the silly thing if it means that much
> to you.
> MK

I suppose a request for help is in order to respond in a fair way
to this particular posting. The poster is complaining that I have
only give hints with respect to this antenna. Harrison says the same.
Others say the Poynting vector does not have a need a "proof"
Another knows enough so as to say that it has already been invented
but refuses to amplify. Also one states that the computor programs
prove there is nothing new. Another states that there must be coupling
of some sort what ever he was trying to say. Another questions what
is new when all elements in the array are resonant. Another says
that it is really a messed up Yagi. Another advocates that elements
should be put in line. On top of that many question the meaning
of the word " equilibrium. What on earth can one do to placate
the baying of the wolves and the procedure back to infancy.
Are these people credible in their comments? Is the definition
not clear enough that it is to be requested time and time again?
What is it that the amateur radio community really want and is
the knoweledge base shown on this newsgroup a reflection of the
amateur

radio co0mmunity as a whole. I invite anybody to respond to this
poster
to give him some satisfaction as to what the ham community is wanting
to know.
Please provide a sample response on how one should reply to the many
statements
and questions provided. Should I go thru the whole scenario of
describing
the underlying basics of this antenna when I know some cannot or want
to read
postings other than their own. Lots of the experts state they do
not understand this or that but do know enough that the whole thing
is rediculous. Is ham radio just all about old men, morse code
and protection of the past? I do suspect that the silent majority
is getting larger by the day as the grim reaper becomes closer and
closer?
Art
Art

1432. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:40:35 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181331635.529232.84820@k79g2000hse.googlegroups.com>
Source record: 40484

On 8 Jun, 10:42, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> "Roy Lewallen" <w...@eznec.com> wrote in message
>
> news:136hl2blc9tc6b2@corp.supernews.com...
>
>
>
>
>
> > This newsgroup is truly educational. Just in the past few days, I've
> > learned that:
>
> > "The law of conservation of energy is just another law awaiting to be
> > "broken", i.e. a new "law" found which acts to the contrary ..."
> > -- "John Smith"
>
> > and
>
> > ". . .gravity is a theory. . ."
> > -- "Jimmie D"
>
> > These, of course, are just the jewels among the semi-precious stones of
> > Gaussian antennas and bouncing waves of average power.
>
> > Thanks, folks. A little more time on this newsgroup and I'll be ready to
> > step out into the world of the 13th century!
>
> > Roy Lewallen, W7EL
>
> In 1978 while attending the University of Miami is was considered a theory,
> if it has changed since then I am sorry for not keeping abreast.
> I will make sure I put "Review Newton's Theory of Gravity" in my to do list.- Hide quoted
text -
>
> - Show quoted text -

No. Go back there and ask for your money back.It is their fault that
they didn't ensure
that you did understand what they were saying

1433. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:45:28 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <ibWdnU9f2NBFLPTbRVnytQA@pipex.net>
Source record: 40485

Al Dalton wrote:
<SNIP>
> Are there any plans (w/parts list) on the Internet? Where might I find them?
> Thank you.
>
> Al
>
>

Al,

You will find some useful ATU links at the top of my links page
here: http://www.radiowymsey.org/links/links.htm

Charlie.

--
M0WYM
www.radiowymsey.org

1434. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 19:59:32 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4669b518$0$16692$4c368faf@roadrunner.com>
Source record: 40486

"art" <aunwin@insightbb.com> wrote in message
news:1181331373.961005.179250@w5g2000hsg.googlegroups.com...
> On 7 Jun, 03:23, n...@wt.net wrote:
>> On Jun 6, 6:04 pm, art <aun...@insightbb.com> wrote:
>>
>> > On 6 Jun, 15:57, "Dave" <n...@nowhere.com> wrote:
>>
>> > But David, you reject the basics of a Gaussian antenna which is why I
>> > have reservations about your logic tho granted others appear to
>> > agree with you, so I want to read up on it for myself.
>>
>> Shame on his mess...
>>
>> > When reseaching the net I see numorous attempts to
>> > provide a real time proof for it but nothing as factual as the
>> > Gaussian antenna.
>>
>> What is a "gaussian" antenna as you consider it?
>> All the hints I've seen so far point to some kind of array with
>> all elements the same length.
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>> to me.. Something anyone with a crayon, or modeling program
>> could conjer up various versions till the cows come home.
>> Why would you need to rewrite proven theory to explain a driven
>> array?
>> Seems the performance of driven arrays is already fairly well
>> known. Even fairly perverted ones... :/
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>> >So contrary to what you say there is a lot going on
>> > in trying to find a proof for it even tho you at the same time reject
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>> minds wanna know...
>>
>> >After seeing the automatic rejection of
>>
>> > ANY ideas that represent new ideas in the amateur community I am
>> > beginning to wonder if the E/H antennas is a victim of the same
>> > syndrome .
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>> The only ideas that seem to be rejected are the ones that distort

>> and mangle fairly well known principals.
>> Yes, I do compare your "gaussian" antenna to be about in
>> the same league as the E/H antenna because you both use
>> doo-doo bafflegab to try to "invent" yourselves some kind of new
>> antenna, which is really just a perverted version of an
>> existing known antenna.
>> Your's will actually perform a bit better though, since I
>> assume the feedline won't do the majority of the radiating,
>> as is the case with the E/H antenna.
>> But to me, both of you use what I consider as "doo-doo"
>> science to try to have some kind of explanation for whatever it
>> is you are trying to achieve.
>>
>> >I am coming across many papers that suggest that there
>> > is more to radiation than scholars presently believe so it is
>> > natural to me that amateurs would automatically reject any new
>> > aproach by derisive comments such as junk science or similar.
>>
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>> driven array as far as I can tell.
>> It's the bafflegab you come up with to give it some kind of
>> divine level of performance that is junk science..
>> Just the way you constantly tweak the usual application of the
>> word "efficiency" is enough to scare many away.
>> And this "equilibrium" jibber jabber... Wouldn't it be easier to say
>> they are all fed in phase? Although some of our roving reporters
>> say you aren't actually feeding all the elements, in phase or not..
>> Seems to vary from day to day according to what kind of feedback
>> you get from the previous days posts..
>> I still wonder why in the heck you care what anyone here thinks
>> anyway.. I would just build the silly thing if it means that much
>> to you.
>> MK
>
> I suppose a request for help is in order to respond in a fair way
> to this particular posting. The poster is complaining that I have
> only give hints with respect to this antenna. Harrison says the same.
> Others say the Poynting vector does not have a need a "proof"
> Another knows enough so as to say that it has already been invented
> but refuses to amplify. Also one states that the computor programs
> prove there is nothing new. Another states that there must be coupling
> of some sort what ever he was trying to say. Another questions what
> is new when all elements in the array are resonant. Another says
> that it is really a messed up Yagi. Another advocates that elements
> should be put in line. On top of that many question the meaning
> of the word " equilibrium. What on earth can one do to placate
> the baying of the wolves and the procedure back to infancy.

Answer reasonable questions with reasonable answers.

When you make references to someone elses work that you think proves your point reference where you found them so that others may review them.

Do Not try to redefine existing words. You have miss used words so foten no one knows if you are talking about the classical meaning of the word or your own definition.

When you tell how superior your antenna to an XYZ antenna show comparisons of both. No one should have to do this for you.

Try these for starters, I and others can come up with a few more.

1435. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 20:10:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4cd4n$i9j$1@nnrp.linuxfan.it>
Source record: 40487

art wrote:

> ...
> is getting larger by the day as the grim reaper becomes closer and
> closer?
> Art

When he gets here, I am going to kick his bony "bott!"

Regards,
JS

1436. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 20:14:22 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1181333712_27891@sp12lax.superfeed.net>
Source record: 40488

Jimmie D wrote:

>
> In 1978 while attending the University of Miami is was considered a theory,
> if it has changed since then I am sorry for not keeping abreast.
> I will make sure I put "Review Newton's Theory of Gravity" in my to do list.
>
>

You have some company: a Google search
on "gravitational theory" yielded
164,000 hits!

Only 18,000 hits from searching on
"Newton's theory of gravity". ;-)

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1437. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 20:26:48 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181334408.984433.38660@q75g2000hsh.googlegroups.com>
Source record: 40489

On 8 Jun, 12:59, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1181331373.961005.179250@w5g2000hsg.googlegroups.com...
>
>
>
>
>
> > On 7 Jun, 03:23, n...@wt.net wrote:
> >> On Jun 6, 6:04 pm, art <aun...@insightbb.com> wrote:
>
> >> > On 6 Jun, 15:57, "Dave" <n...@nowhere.com> wrote:
>
> >> > But David, you reject the basics of a Gaussian antenna which is why I
> >> > have reservations about your logic tho granted others appear to
> >> > agree with you, so I want to read up on it for myself.
>
> >> Shame on his mess...
>
> >> > When reseaching the net I see numorous attempts to
> >> > provide a real time proof for it but nothing as factual as the
> >> > Gaussian antenna.
>
> >> What is a "gaussian" antenna as you consider it?
> >> All the hints I've seen so far point to some kind of array with
> >> all elements the same length.
> >> Fed in equilibrium so you say... :/
> >> What makes that special? Sounds like a perverted driven array
> >> to me.. Something anyone with a crayon, or modeling program
> >> could conjer up various versions till the cows come home.
> >> Why would you need to rewrite proven theory to explain a driven
> >> array?
> >> Seems the performance of driven arrays is already fairly well
> >> known. Even fairly perverted ones... :/
>
> >> >So contrary to what you say there is a lot going on
> >> > in trying to find a proof for it even tho you at the same time reject
> >> > the Gaussian connection.
>
> >> A proof for what? Gaussian connection to what?
> >> Who is doing all this whole lot of going on? Enquiring
> >> minds wanna know...
>

> >> >After seeing the automatic rejection of
>
> >> > ANY ideas that represent new ideas in the amateur community I am
> >> > beginning to wonder if the E/H antennas is a victim of the same
> >> > syndrome .
>
> >> The only ideas that seem to be rejected are the ones that distort
> >> and mangle fairly well known principals.
> >> Yes, I do compare your "gaussian" antenna to be about in
> >> the same league as the E/H antenna because you both use
> >> doo-doo bafflegab to try to "invent" yourselves some kind of new
> >> antenna, which is really just a perverted version of an
> >> existing known antenna.
> >> Your's will actually perform a bit better though, since I
> >> assume the feedline won't do the majority of the radiating,
> >> as is the case with the E/H antenna.
> >> But to me, both of you use what I consider as "doo-doo"
> >> science to try to have some kind of explanation for whatever it
> >> is you are trying to achieve.
>
> >> >I am coming across many papers that suggest that there
> >> > is more to radiation than scholars presently believe so it is
> >> > natural to me that amateurs would automatically reject any new
> >> > aproach by derisive comments such as junk science or similar.
>
> >> It's not your antenna that is junk science.. It's just a perverted
> >> driven array as far as I can tell.
> >> It's the bafflegab you come up with to give it some kind of
> >> divine level of performance that is junk science..
> >> Just the way you constantly tweak the usual application of the
> >> word "efficiency" is enough to scare many away.
> >> And this "equilibrium" jibber jabber... Wouldn't it be easier to say
> >> they are all fed in phase? Although some of our roving reporters
> >> say you aren't actually feeding all the elements, in phase or not..
> >> Seems to vary from day to day according to what kind of feedback
> >> you get from the previous days posts..
> >> I still wonder why in the heck you care what anyone here thinks
> >> anyway.. I would just build the silly thing if it means that much
> >> to you.
> >> MK
>
> > I suppose a request for help is in order to respond in a fair way
> > to this particular posting. The poster is complaining that I have
> > only give hints with respect to this antenna. Harrison says the same.
> > Others say the Poynting vector does not have a need a "proof"
> > Another knows enough so as to say that it has already been invented
> > but refuses to amplify. Also one states that the computor programs
> > prove there is nothing new. Another states that there must be coupling
> > of some sort what ever he was trying to say. Another questions what
> > is new when all elements in the array are resonant. Another says

> > that it is really a messed up Yagi. Another advocates that elements
> > should be put in line. On top of that many question the meaning
> > of the word " equilibrium. What on earth can one do to placate
> > the baying of the wolves and the procedure back to infancy.
>
> Answer reasonable questions with reasonable answers.
>
> When you make references to someone elses work that you think proves your
> point reference where you found them so that others may review them.
>
> Do Not try to redefine existing words. You have miss used words so foten no
> one knows if you are talking about the classical meaning of the word or your
> own definition.
>
> When you tell how superior your antenna to an XYZ antenna show comparisons
> of both. No one should have to do this for you.
>
> Try these for starters, I and others can come up with a few more.- Hide quoted text -
>
> - Show quoted text -

Can you show me how you define gravity as a theory that was taught in
Florida?
I think that would be a good example for me to follow.
Any other comments from other members as how I can satisfy the
learning problems
of this person? A discussion regarding gravity by those who know
something about it
would be enlightning. I would like to know when a theory becomes a law
as an
amateur radio operator sees it.
Richard asks for no over elabaration.
One liners please and try to follow his example.
Some body could also what materials can be turned into gold
(With references ofcourse)with definition of words and sources used.
I know you have to assume that others have some intelligence.
Most know how to change a light bulb on a tower as they have had
that experience over and over in their respective tower maintenance
careers.

1438. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 20:45:01 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4cf4j$i9j$2@nnrp.linuxfan.it>
Source record: 40490

art wrote:

> ...

Many "laws" are still only theories, probably because no one knows the real workings behind the scenes. (the guy behind the curtain ... or, don't look now, but we ain't in kansas!)

But, with gravity, I don't have an interest, anyway, I have my own law: "Objects close to the earth tend to stay close to the earth, unless extraordinary means/forces are used to remove them ..."

You can bank on "Smiths' Law!"

Anyway, unless you have a "gravity antenna" you are introducing, this is boring ... gravity can be that way, yanno?

JS

1439. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 21:38:56 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4cihr$9ql$1@news.service.uci.edu>
Source record: 40491

Chuck wrote:

> Jimmie D wrote:
>
>>
>> In 1978 while attending the University of Miami is was considered a
>> theory, if it has changed since then I am sorry for not keeping abreast.
>> I will make sure I put "Review Newton's Theory of Gravity" in my to do
>> list.
>>
>
> You have some company: a Google search on "gravitational theory" yielded
> 164,000 hits!
> Only 18,000 hits from searching on "Newton's theory of gravity". ;-)
>
> Chuck

Yes, but one should also consider:

'UFO' produces 37,800,000 hits on Google.

'Elvis is Alive' gets 1,510,000 hits.

'George Bush is a genius' comes in a close third at 1,250,000

:-)

ac6xg

1440. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:03:15 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <Dmkai.8804$nx3.4422@edtnps89>
Source record: 40492

> Can you show me how you define gravity as a theory that was taught in
> Florida?
> I think that would be a good example for me to follow.
> Any other comments from other members as how I can satisfy the
> learning problems
> of this person? A discussion regarding gravity by those who know
> something about it
> would be enlightning. I would like to know when a theory becomes a law
> as an
> amateur radio operator sees it.
> Richard asks for no over elabaration.
> One liners please and try to follow his example.
> Some body could also what materials can be turned into gold
> (With references ofcourse)with definition of words and sources used.
> I know you have to assume that others have some intelligence.
> Most know how to change a light bulb on a tower as they have had
> that experience over and over in their respective tower maintenance
> careers.

The word "Theory" has several meanings, and should not be taken
out of context. As examples from www.dictionary.com:
1.. A set of statements or principles devised to explain a group of facts
or phenomena, especially one that has been repeatedly tested or is widely
accepted and can be used to make predictions about natural phenomena.
2.. contemplation or speculation.
Many theories at taken to mean "2", when "1" should be used.
The theory of gravitation falls into the first class, stated as follows:
"Every object attracts every other object with a force proportional
to the masses of the objects, and inversely proportional to the
square of the distance between the objects".

--
Frank

1441. Re: Design for matching network for end fed whips?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:11:11 UTC
From: Nick <a@b.com>
Message-ID: <3ukai.128$F77.61@newsfe4-gui.ntli.net>
Source record: 40493

Thanks for the last two very useful replies...

The desired location for the bike aerial is lower part stuck to the inside of the screen with as much as high and above the screen as possible.
The reasons for this are obviously its good to have it as high as reasonably possible, but also to get it away from the QRM generated by the electronics around the dash area.

Also, as we ride as a pair, one is always in front or behind the other, so immediately there is the body mass in the way, screening the signal. Now this doesn't generally matter as we are usually withing 200 metres of each other and 1/2 watt at UHF is still full strength signal, but when we get perhaps a few miles apart and are in front / behind situation, the body is definitely attenuating the signal significantly.

Generally one rides in front much of the time, so a rear aerial gets round this, and a front aerial on the following bike is not shielded by the riders body - I have both front and rear aerials and I guess it would be good to have an antenna switch to select, but BNCs and swopping is no trouble.

The other thing is that everything has to be waterproof where it matters. I have been experimenting with hot melt glue to pot up connections - anyone have experience of this as a good potting agent ? I will put out a separate thread about this as its a bit hidden in this thread..

Thanks again all - much appreciated

Nick

1442. Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:15:47 UTC
From: Nick <a@b.com>
Message-ID: <nykai.131$F77.82@newsfe4-gui.ntli.net>
Source record: 40494

I am experimenting with some aerial designs and wondered if anyone had used / knows whether
hot melt glue is good to seal and waterproof connections and its electrical characteristics ?

(I will just go and stick some in the microwave with a glass of water and see if it melts !)

Thanks,

Nick

1443. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:22:06 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181341326.658444.285230@n4g2000hsb.googlegroups.com>
Source record: 40495

On 8 Jun, 15:03, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> > Can you show me how you define gravity as a theory that was taught in
> > Florida?
> > I think that would be a good example for me to follow.
> > Any other comments from other members as how I can satisfy the
> > learning problems
> > of this person? A discussion regarding gravity by those who know
> > something about it
> > would be enlightning. I would like to know when a theory becomes a law
> > as an
> > amateur radio operator sees it.
> > Richard asks for no over elabaration.
> > One liners please and try to follow his example.
> > Some body could also what materials can be turned into gold
> > (With references ofcourse)with definition of words and sources used.
> > I know you have to assume that others have some intelligence.
> > Most know how to change a light bulb on a tower as they have had
> > that experience over and over in their respective tower maintenance
> > careers.
>
> The word "Theory" has several meanings, and should not be taken
> out of context. As examples fromwww.dictionary.com:
> 1.. A set of statements or principles devised to explain a group of facts
> or phenomena, especially one that has been repeatedly tested or is widely
> accepted and can be used to make predictions about natural phenomena.
> 2.. contemplation or speculation.
> Many theories at taken to mean "2", when "1" should be used.
> The theory of gravitation falls into the first class, stated as follows:
> "Every object attracts every other object with a force proportional
> to the masses of the objects, and inversely proportional to the
> square of the distance between the objects".
>
> --
> Frank- Hide quoted text -
>
> - Show quoted text -

Oh my. Gravity, theory and equilibrium is way to much to foist on
amateur radio operators. Most are so old and have little time
to sleep or live that they wouldn't be around at the end even
if we could get there because of constant opposition to the use
of the words.
I thimk Frank, a start on another attenna aproach such as the

concentration of time and computor work by Cebik and Antennex
in efforts to get an antenna that can be matched over a wide band.
I don't think they got anywhere but maybe a review would be in order
of making the driven element really thick which they say is the way to
go.
Maybe making the driven element thicker than the length of the element
is the way to go to prove this concept that they are trying to prove.
Perhaps the old timers can give us hints about a similar aproach that
they invented years ago that nobody took notice of. After all every
thing is really known except how to put a PL259 connector
on a coax that hasbeen ill treated by being stepped on.
I will have to rethink all this after I have found out what
Paris Hilton would say.

1444. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:24:22 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <4669d7d5$0$20298$9b4e6d93@newsspool3.arcor-online.net>
Source record: 40497

It won't melt easy in the microwave.

It is relatively good performance for shortwave. But be aware there are several different substances in sell as hot melt glue.
You cannot easely extrapolate to other frequencies other than 2.45GHz !

regards -
Henry

--
www.ehydra.dyndns.info

"Nick" <a@b.com> schrieb im Newsbeitrag news:nykai.131$F77.82@newsfe4-gui.ntli.net...
| I am experimenting with some aerial designs and wondered if anyone
| had used / knows whether
| hot melt glue is good to seal and waterproof connections and its
| electrical characteristics ?
|
| (I will just go and stick some in the microwave with a glass of
| water and see if it melts !)
|
| Thanks,
|
| Nick
|
|

1445. Re: Old ferrite rod antenna article

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:28:08 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <4669d7d5$1$20298$9b4e6d93@newsspool3.arcor-online.net>
Source record: 40496

"John Smith I" <assemblywizard@gmail.com> schrieb im Newsbeitrag
news:f49smlqdc1@nnrp.linuxfan.it...
| Henry wrote:
|
| > ...
| > I already use th idea of tabs on the coil on my ferrite rod antenna.
| >
| > regards -
| > Henry
|
| Henry:
|
| What does your ferrite rod antenna look like?
|
| Got a schematic? Circuit diagram? Picture?

Hello John -

Send me a private message and I will mail you a picture. I don't have a schematic. It is all in memory. Basically a NE612 - MK484
combo with a IF LC-coil and a class-E transmitter amp. The baseband is a FSK modem built with a DSP.

You're interested in ferrite antennas?

- Henry

--
www.ehydra.dyndns.info

1446. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:32:31 UTC
From: herbert.don@gmail.com
Message-ID: <1181341951.540515.69250@i13g2000prf.googlegroups.com>
Source record: 40498

On Jun 8, 11:44 am, "Al Dalton" <trash_...@dialtrax.com> wrote:
> > There are several things to consider. I don't know how much you know
> > about antennas, but I see you have done some research, so that's a
> > good sign. Hopefully you will understand what I am about to say.
>
> > My father, also an avid SWL, used to use a long wire antenna. Then
> > one day he bought an antenna tuner kit for $10 about 15 years ago. It
> > really wasn't much, just a couple of small capacitors and a piece of
> > laminated wire he had to wrap around a pill bottle. He added his own
> > bypass switch and was excited to show me the difference the tuner made
> > to his signals.
>
> > I wasn't as surprised at the results as I was his initiative to buy
> > and build the tuner kit.
>
> > Anyway, he moved and we ran a wire around his attic about four trips.
> > The wires were spaced about 3 inches apart and just looped the attic
> > from corner to corner. I don't know how long it was, but it turned
> > out to be much better than the long wire. He hooked up his tuner and
> > radio and used it until he moved out. It was extremely sensitive.
>
> > My suggestion, for SWL, is to run as much wire over as large an area
> > as possible. If you are limited to indoors, I suggest the attic idea
> > if possible.
>
> > If you don't have the room, look for the largest area possible to
> > spread wire. If you find the best you can do is the broomstick idea,
> > (I assume it is a dowel wrapped with wire) then you may have to use
> > that. The larger the diameter, the better.
>
> > Research the antenna tuners. You don't have to worry about power
> > levels, so any small capacitor will do. Make one, or buy a kit and
> > add it to your antenna. You won't regret it.
>
> > Dad's tuner consisted of a pair of tuning capacitors out of two small
> > AM radio receivers with a piece of enameled wire wrapped around a
> > large pill bottle. The wire was tapped twice the distance of the
> > previous tap, for example, if the first tap was at the 4th wrap, 8
> > turns later, the third was 16 turns from the previous, etc.
>
> > There are several home-brew plans on the internet. I highly recommend
> > it if you are wanting to pull out the weak signals.
>
> > Good luck, I hope you find what you need and enjoy your listening.

>
> > buck
> > N4PGW
>
> I do know a fair amount about antennas and tuners. I'd have the no code tech
> license if I could remember the stuff you really don't need to know (for the
> test). My memory just isn't good enough, and memorizing some of that stuff
> isn't even relevant to whether or not we know what we're doing.
Hi Al, I made mine out of an old tube radio. less tubes and every
thing but the tuner part and a coil and a swithc i added. Found the
dead radio at a charity shop.
>
> As I understand it, an antenna tuner is the single most important thing
> involved? That makes sense. A tuner adjusts the overall resistance of the
> circuit (impedance). Right? I have looked up everything I could find and
> found a tuner for 60 bucks. I can't spend that on a tuner right now. I
> should probably make one.
>
> Are there any plans (w/parts list) on the Internet? Where might I find them?
> Thank you.
>
> Al- Hide quoted text -
>
> - Show quoted text -

1447. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:35:12 UTC
From: herbert.don@gmail.com
Message-ID: <1181342112.944733.241480@n15g2000prd.googlegroups.com>
Source record: 40499

finally someone who can answer a straight question with a straight
answer.

So what makes it new and important when so many antennas already
have it?

On Jun 8, 9:32 am, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "Without the understanding of the meaning of "equilibrium" how does one
> interpret "comservative" or non conservative fields?"
>
> Equilibrium: Synonym=balance
>
> We know balanced antennas have the same impedance between each side of
> the antenna and the earth or some other chosen groundpoint.
>
> Best regards, Richard Harrison, KB5WZI

1448. Re: Flag Ant. reduced size, higher freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:38:41 UTC
From: herbert.don@gmail.com
Message-ID: <1181342321.523970.118070@j4g2000prf.googlegroups.com>
Source record: 40500

for shortwave you use what you have. anyway the flagpole can't be so
big for those bands to matter unless you are on an army base.

On Jun 6, 12:10 pm, "amdx" <a...@knology.net> wrote:
> I'm looking for info on reducing the size of a Flag antenna
> to use it between 7 and 12 Mhz. Any design pages available?
> For SW reception.
> Mike

1449. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 22:46:05 UTC
From: Nick <a@b.com>
Message-ID: <N_kai.17237$I55.8963@newsfe2-gui.ntli.net>
Source record: 40501

Hi Henry,

Thanks for that - I will see if it affects the signal / SWR if I
place it next to the aerial as well then.

Cheers

Nick

1450. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 23:00:00 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4669df5f$0$19445$4c368faf@roadrunner.com>
Source record: 40502

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in message
news:Dmkai.8804$nx3.4422@edtnps89...
>> Can you show me how you define gravity as a theory that was taught in
>> Florida?
>> I think that would be a good example for me to follow.
>> Any other comments from other members as how I can satisfy the
>> learning problems
>> of this person? A discussion regarding gravity by those who know
>> something about it
>> would be enlightning. I would like to know when a theory becomes a law
>> as an
>> amateur radio operator sees it.
>> Richard asks for no over elabaration.
>> One liners please and try to follow his example.
>> Some body could also what materials can be turned into gold
>> (With references ofcourse)with definition of words and sources used.
>> I know you have to assume that others have some intelligence.
>> Most know how to change a light bulb on a tower as they have had
>> that experience over and over in their respective tower maintenance
>> careers.
>
> The word "Theory" has several meanings, and should not be taken
> out of context. As examples from www.dictionary.com:
> 1.. A set of statements or principles devised to explain a group of facts
> or phenomena, especially one that has been repeatedly tested or is widely
> accepted and can be used to make predictions about natural phenomena.
> 2.. contemplation or speculation.
> Many theories at taken to mean "2", when "1" should be used.
> The theory of gravitation falls into the first class, stated as follows:
> "Every object attracts every other object with a force proportional
> to the masses of the objects, and inversely proportional to the
> square of the distance between the objects".
>
> --
> Frank
>
Yes but we dont know why. and we may never know if this applies to every
object. Perhaps there are some that repel.

Jimmie

1451. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-08 23:40:21 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181346021.538767.313620@w5g2000hsg.googlegroups.com>
Source record: 40503

On 8 Jun, 15:35, herbert....@gmail.com wrote:
> finally someone who can answer a straight question with a straight
> answer.
>
> So what makes it new and important when so many antennas already
> have it?
>
> On Jun 8, 9:32 am, richardharri...@webtv.net (Richard Harrison) wrote:
>
>
>
> > Art wrote:
>
> > "Without the understanding of the meaning of "equilibrium" how does one
> > interpret "comservative" or non conservative fields?"
>
> > Equilibrium: Synonym=balance
>
> > We know balanced antennas have the same impedance between each side of
> > the antenna and the earth or some other chosen groundpoint.
>
> > Best regards, Richard Harrison, KB5WZI- Hide quoted text -
>
> - Show quoted text -

And the book and corresponding page that you copied it from?
Seems like you missed a couple of lines.

1452. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 00:24:30 UTC
From: herbert.don@gmail.com
Message-ID: <1181348670.004684.100980@n15g2000prd.googlegroups.com>
Source record: 40504

On Jun 8, 4:40 pm, art <aun...@insightbb.com> wrote:
> On 8 Jun, 15:35, herbert....@gmail.com wrote:
>
>
>
>
>
> > finally someone who can answer a straight question with a straight
> > answer.
>
> > So what makes it new and important when so many antennas already
> > have it?
>
> > On Jun 8, 9:32 am, richardharri...@webtv.net (Richard Harrison) wrote:
>
> > > Art wrote:
>
> > > "Without the understanding of the meaning of "equilibrium" how does one
> > > interpret "comservative" or non conservative fields?"
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> > > the antenna and the earth or some other chosen groundpoint.
>
> > > Best regards, Richard Harrison, KB5WZI- Hide quoted text -
>
> > - Show quoted text -
>
> And the book and corresponding page that you copied it from?
> Seems like you missed a couple of lines.- Hide quoted text -
>
> - Show quoted text -

what in the worl d are you talking about? Really this is to simple.
richards' answer makes enuff sense not to have to ask a proffesor

1453. Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 00:25:36 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <CtydnT0vK_11bvTbRVnysAA@bt.com>
Source record: 40505

http://news.bbc.co.uk/1/hi/technology/6725955.stm

Gives details of power transmission without wires. This story first seems to have broken in November last year, but they have moved up from charging mobile phones to lighting a 60 watt light bulb.

Apparently the system works with efficiencies of up to 40%. Wow! The power companies must be getting desperate, with low wattage lighting and LCD displays using so much less power than before. Makes me wonder what the other 60% is going to be cooking, me or the ozone layer.

Looks like an opportunity for some enterprising entrepreneur types to invent a more efficient transmission and receiving system - I suggest straightening out the wire coils and connecting the light bulb directly. That should improve power transfer efficiency to over 95%.

Mike G0ULI

1454. Re: Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 00:41:00 UTC
From: herbert.don@gmail.com
Message-ID: <1181349660.318970.223050@q19g2000prn.googlegroups.com>
Source record: 40506

On Jun 8, 5:25 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> http://news.bbc.co.uk/1/hi/technology/6725955.stm
>
> Gives details of power transmission without wires. This story first seems to
> have broken in November last year, but they have moved up from charging
> mobile phones to lighting a 60 watt light bulb.
>
> Apparently the system works with efficiencies of up to 40%. Wow! The power
> companies must be getting desperate, with low wattage lighting and LCD
> displays using so much less power than before. Makes me wonder what the
> other 60% is going to be cooking, me or the ozone layer.
>
> Looks like an opportunity for some enterprising entrepreneur types to invent
> a more efficient transmission and receiving system - I suggest straightening
> out the wire coils and connecting the light bulb directly. That should
> improve power transfer efficiency to over 95%.
>
> Mike G0ULI

the 60 percent rest is burning water

1455. Re: Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 00:56:54 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181350614.834198.289370@p77g2000hsh.googlegroups.com>
Source record: 40507

On 8 Jun, 17:25, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> http://news.bbc.co.uk/1/hi/technology/6725955.stm
>
> Gives details of power transmission without wires. This story first seems to
> have broken in November last year, but they have moved up from charging
> mobile phones to lighting a 60 watt light bulb.
>
> Apparently the system works with efficiencies of up to 40%. Wow! The power
> companies must be getting desperate, with low wattage lighting and LCD
> displays using so much less power than before. Makes me wonder what the
> other 60% is going to be cooking, me or the ozone layer.
>
> Looks like an opportunity for some enterprising entrepreneur types to invent
> a more efficient transmission and receiving system - I suggest straightening
> out the wire coils and connecting the light bulb directly. That should
> improve power transfer efficiency to over 95%.
>
> Mike G0ULI

Mike,
I think that has some sort of connection to a Poyntings vector where
the vector
does not escape to the outside area but is consumed by an energy sink
that is part
of the field within the enclosing loop that is in equilibrium. It is
difficult
to see how they managed to get the laptop resonant such that its
energy sink capacity
balanced with the internal electromagnetic field but they did say
there was some EMI
Those guys at MIT are really clever people. Next project is to get
water to ignite
and simulate what that guy in Florida is pursueing.
Art

1456. Re: Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:14:24 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <pqidnUOp4ev8YvTbnZ2dnUVZ8qKvnZ2d@bt.com>
Source record: 40509

"art" <aunwin@insightbb.com> wrote in message
news:1181350614.834198.289370@p77g2000hsh.googlegroups.com...
> On 8 Jun, 17:25, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> > http://news.bbc.co.uk/1/hi/technology/6725955.stm
> >
> > Gives details of power transmission without wires. This story first
seems to
> > have broken in November last year, but they have moved up from charging
> > mobile phones to lighting a 60 watt light bulb.
> >
> > Apparently the system works with efficiencies of up to 40%. Wow! The
power
> > companies must be getting desperate, with low wattage lighting and LCD
> > displays using so much less power than before. Makes me wonder what the
> > other 60% is going to be cooking, me or the ozone layer.
> >
> > Looks like an opportunity for some enterprising entrepreneur types to
invent
> > a more efficient transmission and receiving system - I suggest
straightening
> > out the wire coils and connecting the light bulb directly. That should
> > improve power transfer efficiency to over 95%.
> >
> > Mike G0ULI
>
> Mike,
> I think that has some sort of connection to a Poyntings vector where
> the vector
> does not escape to the outside area but is consumed by an energy sink
> that is part
> of the field within the enclosing loop that is in equilibrium. It is
> difficult
> to see how they managed to get the laptop resonant such that its
> energy sink capacity
> balanced with the internal electromagnetic field but they did say
> there was some EMI
> Those guys at MIT are really clever people. Next project is to get
> water to ignite
> and simulate what that guy in Florida is pursueing.
> Art
>

Very droll.

Space shuttle launch on NASA TV was good though. Now that IS what I call rocket science.

Mike G0ULI

1457. Re: Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:15:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <kgbpj4-s5q.ln1@mail.specsol.com>
Source record: 40508

Mike Kaliski <michael.kaliski@tesco.net> wrote:
> http://news.bbc.co.uk/1/hi/technology/6725955.stm

> Gives details of power transmission without wires. This story first seems to
> have broken in November last year, but they have moved up from charging
> mobile phones to lighting a 60 watt light bulb.

> Apparently the system works with efficiencies of up to 40%. Wow! The power
> companies must be getting desperate, with low wattage lighting and LCD
> displays using so much less power than before. Makes me wonder what the
> other 60% is going to be cooking, me or the ozone layer.

Most likely the front end of your reciever if this idiotic idea ever
gets implemented.

Most of the charger thingies I have around the house are in the 2-5 W
range.

2 W at 40% means they have to radiate 5 W.

> Looks like an opportunity for some enterprising entrepreneur types to invent
> a more efficient transmission and receiving system - I suggest straightening
> out the wire coils and connecting the light bulb directly. That should
> improve power transfer efficiency to over 95%.

> Mike G0ULI

--
Jim Pennino

Remove .spam.sux to reply.

1458. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:38:00 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <Yvnai.12288$vT6.4440@edtnps90>
Source record: 40510

It should have read:

> "Every object attracts every other object with a force proportional
> to the product of the masses, and inversely proportional to the
> square of the distance between the objects".

or F = G*((M1*M2)/R^2),

Where G is the constant of proportionality.

--
Frank

1459. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:47:11 UTC
From: Al Dalton <trash_can@dialtrax.com>
Message-ID: <b9b8$466a084e$4f9b164$31121@DIALUPUSA.NET>
Source record: 40512

> Hi Al, I made mine out of an old tube radio. less tubes and every
> thing but the tuner part and a coil and a swithc i added. Found the
> dead radio at a charity shop.
I may be able to dig up an old radio around here somewhere. The variable capacitor is likely the most difficult part to find thse days. Thanks for your suggestion.

Al

1460. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:52:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lm1k63dqo4fsl0sn4l6plh5nbms61p5770@4ax.com>
Source record: 40511

On Fri, 08 Jun 2007 13:26:48 -0700, art <aunwin@insightbb.com> wrote:

>Richard asks for no over elabaration.

Hi Arthur,

And you answer about antennas using gravity?

THAT is over elaborate.

73's
Richard Clark, KB7QHC

1461. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 01:59:03 UTC
From: Al Dalton <trash_can@dialtrax.com>
Message-ID: <ec8b$466a0970$4f9b164$31141@DIALUPUSA.NET>
Source record: 40513

Thanks for that link. There is a lot of information linked from that page.

Al

"charlie" <wehatespam@wymsey.co.uk> wrote in message
news:ibWdnU9f2NBFLPTbRVnytQA@pipex.net...
> Al Dalton wrote:
> <SNIP>
>> Are there any plans (w/parts list) on the Internet? Where might I find
>> them?
>> Thank you.
>>
>> Al
>>
>>
>
> Al,
>
> You will find some useful ATU links at the top of my links page
> here: http://www.radiowymsey.org/links/links.htm
>
>
> Charlie.
>
>
> --
> M0WYM
> www.radiowymsey.org

1462. Re: Real time proof of Poyntings vector

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 02:03:30 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466a0a5f$0$1403$4c368faf@roadrunner.com>
Source record: 40514

"Frank's" <frank599@nojunkmailplease.telus.net> wrote in message
news:Yvnai.12288$vT6.4440@edtnps90...
> It should have read:
>
>> "Every object attracts every other object with a force proportional
>> to the product of the masses, and inversely proportional to the
>> square of the distance between the objects".
>
> or F = G*((M1*M2)/R^2),
>
> Where G is the constant of proportionality.
>
> --
> Frank
>

As far as we know.
This is also analagous to electrostatic and magnetic forces where F can be attractive or repelent. I wouldnt write of the posibility that this may be also true for gravity just yet.

Jimmie

1463. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 02:52:12 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <g7qj6359og6pp582opq0nphpuqlm95s802@4ax.com>
Source record: 40515

On Fri, 08 Jun 2007 06:13:22 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Roger (K8RI) wrote:
>
> > ...
>> I doubt any one is arguing that Hydrogen is generated, the problem is
>> it is a very inefficient process both from how much hydrogen is
>> generated compared to how much RF it takes to generate that Hydrogen.
> > ...
>
>The most efficient solar cells are about 20% efficient, efficiency is in
>the eye of the beholder. With an, almost, never ending supply of
>sunlight--they suddenly begin to make sense ... a two fold increase in
>efficiency would change everything, yet still be only 40% efficient.
>
>The replacement of batteries with storage tanks is an economic advantage
>of hydrogen over electric ... and an IMPORTANT one, well, until better
>and more efficient batteries come along.
>
> > ...
>> ... Using microwaves they come off mixed
>> which is not a good thing. Looks spectacular but not very useful.
>
>They come off in exactly the necessary ratio to burn at 100% efficiency.

Unfortunately they are mixed in that ratio and there is no safe way to
store much comprised of that ratio. They need to be separated to be
stored safely. Hydrogen can be stored in a metal sponge (Metal
Hydride) which is quite efficient. Expensive, but efficient.

> Now, a way make lemonade from that "lemon" is only necessary ...
>
> > ...
>> Trucking H2 is expensive and piping it much of any distance as a
>> liquid is out of the question.
>
>Yeah, I'd pipe it as a gas ... allowing its' own pressure to "pump" it.

The problem with piping it as a gas is transferring sufficient volume
and then it'd have to be liquefied at the receiving end. Another
problem is keeping it liquid. You really can't carry a lot as a gas
under pressure and it takes a lot to develop much energy/power as the
stuff is so low in BTU content.
>

>>
>> Taken out of context it is true that a Hydrogen spill dissipates much
>> more quickly that a gasoline spill, BUT while it is dissipating it is
>> far more explosive. OTOH a given volume of H2 has far less energy/BTU
>> than gas. Put in perspetive both dynamite and TNT also have less
>> energy per unit volume than does gas. The problem is the speed of the
>> combustion front. In the end it's not quite true that a liquid H2
>> spill is safer than a gas spill.
>
>Depending on the speed of release/"moment of ignition", the bulk of the
>hydrogen burn/explosion is going to be well above your head ... hydrogen

I've been around a couple of H2/air explosions. H2 by itself does rise rapidly, but it is so active physically it mixes with the air and the rise is not nearly as fast although it does dissipate relatively quick. OTOH you have to get rid of almost all of it before it is no longer dangerous from an explosive point. The lower explosive limit (LEL) is only 4% while the Upper Explosive Limit (UEL) is 96% meaning if it's present it's probably within the explosive range.

Another problem with H2 is it doesn't take much flow to create a substantial electrostatic charge resulting in a spark and ignition. In both cases I'm familiar that was the cause of the explosion. In the one case a worker was standing within a couple of feet of the large container which was at low pressure. Just a couple inches of water pressure above atmosphere. He was looking at it when it blew. You could see the imprint of his goggles and shape of his face in the Aluminum. He did survive, but it was a couple of days before he could hear again. Pretty amazing as it basically blew him through the equivalent of a wall. In the other case it blew a worker through the "blow out panels" in a wall plus about 30 to 50 feet. He was back to work the next day.

In both cases there was enough air movement that the bulk of the force was within a few feet of the floor.

<snip>

1464. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 04:42:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4db46$g3i$1@nnrp.linuxfan.it>
Source record: 40516

Roger (K8RI) wrote:

> [a lot of stuff]

Here is a link on the safety and desirability of hydrogen vs. gasoline:

http://www.hydrogenhighway.ca.gov/facts/einsafety.pdf

Hydrogen can be separated from oxygen with a simple plastic membrane, the pores in this membrane are engineered to a size which will allow hydrogen atoms to pass freely while blocking the oxygen atoms. The oxygen "byproduct" is a sale-able one.

The only REAL concern is efficiency ... and as I have pointed out, an over-unity or even a unity condition is not necessary for this method (if it stands up to close scrutiny) to be an economically feasible venture ...

Hydrogen is probably here to stay, it is only how we will produce it that is in question. Pollution alone is enough to make us take its' path. While "evil" smoking is in decline and been so for some time, lung cancer continues to rise at an alarming rate. A search of the web will convince you that all respiratory diseases are on the rise. While they have done wonderful things to make exhaust odorless and invisible, we are still breathing great quantities of it 24 hours a day, 7 days a week, 4 weeks a month, 12 months a year, for our whole lives, with china coming on line we are about to see real pollution rolling in on our west coast, we then add our pollution to it and by the time it hits the east coast--I pity the poor air breathers there ...

Monday, as you cruise to work, contemplate the river of vehicle exhaust you are submerged in, the tens of thousands/hundreds-of-thousands/millions/tens-of-millions/etc. of cubic feet of toxic exhaust which is being spewed out before your path, for miles and miles ahead ... you will begin to grasp the need and importance of hydrogen ...

JS

1465. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 06:27:31 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <hgHg30AThkaGFAkB@ifwtech.co.uk>
Source record: 40517

Nick wrote:
>I am experimenting with some aerial designs and wondered if anyone
>had used / knows whether
>hot melt glue is good to seal and waterproof connections and its
>electrical characteristics ?
>
Ordinary semi-translucent HMG is excellent for electrical sealing, both indoors and outdoors, and has very good insulating and RF properties.

>(I will just go and stick some in the microwave with a glass of
>water and see if it melts !)

HMG is chemically very similar to polyethylene, so it has very low losses at 2.45GHz and all lower frequencies. That means you can use it in almost any RF application where moulded polyethylene would be OK.

The only significant differences are mechanical. HMG is softer and more flexible, and has a lower softening temperature, but those properties also make it a better adhesive and sealant.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

1466. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 08:07:33 UTC
From: Tehrasha Darkon <darkon@netins.net>
Message-ID: <f4dn45$487$1@news.netins.net>
Source record: 40518

On Fri, 08 Jun 2007 14:38:56 -0700, Jim Kelley wrote:

> Chuck wrote:
>
>> Jimmie D wrote:
>>
>>
>>> In 1978 while attending the University of Miami is was considered a
>>> theory, if it has changed since then I am sorry for not keeping
>>> abreast. I will make sure I put "Review Newton's Theory of Gravity" in
>>> my to do list.
>>>
>>>
>> You have some company: a Google search on "gravitational theory"
>> yielded 164,000 hits!
>> Only 18,000 hits from searching on "Newton's theory of gravity". ;-)
>>
>> Chuck
>
> Yes, but one should also consider:
>
> 'UFO' produces 37,800,000 hits on Google.
>
> 'Elvis is Alive' gets 1,510,000 hits.
>
> 'George Bush is a genius' comes in a close third at 1,250,000
>

'Sex' scores 401,000,000, so you can see where the priorities are.

1467. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 10:34:55 UTC
From: Nick <a@b.com>
Message-ID: <jnvai.21716$zL6.16451@newsfe7-gui.ntli.net>
Source record: 40519

"Ian White GM3SEK" <gm3sek@ifwtech.co.uk> wrote in message
news:hgHg30AThkaGFAkB@ifwtech.co.uk...
> Nick wrote:
>>I am experimenting with some aerial designs and wondered if
>>anyone
>>had used / knows whether
>>hot melt glue is good to seal and waterproof connections and its
>>electrical characteristics ?
>>
> Ordinary semi-translucent HMG is excellent for electrical
> sealing, both indoors and outdoors, and has very good insulating
> and RF properties.
>
>>(I will just go and stick some in the microwave with a glass of
>>water and see if it melts !)
>
> HMG is chemically very similar to polyethylene, so it has very
> low losses at 2.45GHz and all lower frequencies. That means you
> can use it in almost any RF application where moulded
> polyethylene would be OK.
>
> The only significant differences are mechanical. HMG is softer
> and more flexible, and has a lower softening temperature, but
> those properties also make it a better adhesive and sealant.
>
>
> --
>
> 73 from Ian GM3SEK 'In Practice' columnist for RadCom
> (RSGB)
> http://www.ifwtech.co.uk/g3sek

Hi Ian,

Thanks for that input - I did put some in the microwave and it was
fine as you said, and I have wrapped / smeared
some around some 14 gauge Cu wire and bent it around and it adheres
remarkably well ! Any idea how it suffers UV ?

It only really needs to last a year or so as by then I am re-doing
aerials and things...

Thanks again,

Nick

1468. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 12:03:53 UTC
From: Henry <ehydra_news_20070423@arcor.de>
Message-ID: <466a9bbf$0$6405$9b4e6d93@newsspool2.arcor-online.net>
Source record: 40520

"Nick" <a@b.com> schrieb im Newsbeitrag news:jnvai.21716$zL6.16451@newsfe7-gui.ntli.net...
| Thanks for that input - I did put some in the microwave and it was
| fine as you said, and I have wrapped / smeared
| some around some 14 gauge Cu wire and bent it around and it adheres
| remarkably well ! Any idea how it suffers UV ?
|
| It only really needs to last a year or so as by then I am re-doing
| aerials and things...

All plastics suffer from UV if they do not mixed with chemical stabilizers. Often that is ordinary carbon.
For a year lasting that should be of no problem.
Be aware, that the material will considerable soften above 80°C celsius.

I use it often. Cheap and of good value for money.

regards -
Henry

1469. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 13:14:03 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <2$mKUgBbeqaGFAmf@ifwtech.co.uk>
Source record: 40522

Nick wrote:
>
>Thanks for that input - I did put some in the microwave and it was fine
>as you said, and I have wrapped / smeared some around some 14 gauge Cu
>wire and bent it around and it adheres remarkably well ! Any idea how
>it suffers UV ?
>
Not bad at all - much better than epoxy, for example. It turns slightly
more opaque, but doesn't crack or peel.

>It only really needs to last a year or so as by then I am re-doing
>aerials and things...
>
You don't say where you are in the world, but in these latitudes (low
and mid-50s) I've used it for several years without problems. For a year
or two, I'd guess it would be fine almost anywhere.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

1470. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 13:14:06 UTC
From: Andrea <fuffa2k5@gmail.com>
Message-ID: <1181394846.390221.30080@c77g2000hse.googlegroups.com>
Source record: 40521

> Then, since E = I*R, 70.7 volts ... thanks.

But on the other ends where there could be 6000 ohms the current is
low (0.13 A) but the voltage is around 775 V.

Andrea
IZ2LSC

1471. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 13:29:11 UTC
From: Nick <a@b.com>
Message-ID: <HWxai.182$F77.1@newsfe4-gui.ntli.net>
Source record: 40523

"Ian White GM3SEK" <gm3sek@ifwtech.co.uk> wrote in message
news:2$mKUgBbeqaGFAmf@ifwtech.co.uk...
> Nick wrote:
>>
>>Thanks for that input - I did put some in the microwave and it
>>was fine as you said, and I have wrapped / smeared some around
>>some 14 gauge Cu wire and bent it around and it adheres
>>remarkably well ! Any idea how it suffers UV ?
>>
> Not bad at all - much better than epoxy, for example. It turns
> slightly more opaque, but doesn't crack or peel.
>
>>It only really needs to last a year or so as by then I am
>>re-doing aerials and things...
>>
> You don't say where you are in the world, but in these latitudes
> (low and mid-50s) I've used it for several years without
> problems. For a year or two, I'd guess it would be fine almost
> anywhere.
>
Southern UK - Hampshire, and much of the time it is locked up in
the garage in the dark - so maybe a century ???

The other product I have found to work extremely well is Evo-Stick
impact adhesive... it seems to tolerate sun forever and is still a
little flexible
after years too - but as more fluid only really any good for thin
films / coatings...

Thanks,

Nick

1472. Re: Teslas Ideas Resurrected

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 13:56:53 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ab191$0$1394$4c368faf@roadrunner.com>
Source record: 40524

<jimp@specsol.spam.sux.com> wrote in message
news:kgbpj4-s5q.ln1@mail.specsol.com...
> Mike Kaliski <michael.kaliski@tesco.net> wrote:
>> http://news.bbc.co.uk/1/hi/technology/6725955.stm
>
>> Gives details of power transmission without wires. This story first seems
>> to
>> have broken in November last year, but they have moved up from charging
>> mobile phones to lighting a 60 watt light bulb.
>
>> Apparently the system works with efficiencies of up to 40%. Wow! The
>> power
>> companies must be getting desperate, with low wattage lighting and LCD
>> displays using so much less power than before. Makes me wonder what the
>> other 60% is going to be cooking, me or the ozone layer.
>
> Most likely the front end of your reciever if this idiotic idea ever
> gets implemented.
>
> Most of the charger thingies I have around the house are in the 2-5 W
> range.
>
> 2 W at 40% means they have to radiate 5 W.
>
>> Looks like an opportunity for some enterprising entrepreneur types to
>> invent
>> a more efficient transmission and receiving system - I suggest
>> straightening
>> out the wire coils and connecting the light bulb directly. That should
>> improve power transfer efficiency to over 95%.
>
>> Mike G0ULI
>
> --
> Jim Pennino
>
Perhaps a grazzing antenna would improve the efficency.

1473. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:01:08 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ab293$0$4892$4c368faf@roadrunner.com>
Source record: 40525

"Nick" <a@b.com> wrote in message
news:nykai.131$F77.82@newsfe4-gui.ntli.net...
>I am experimenting with some aerial designs and wondered if anyone had used
>/ knows whether
> hot melt glue is good to seal and waterproof connections and its
> electrical characteristics ?
>
> (I will just go and stick some in the microwave with a glass of water and
> see if it melts !)
>
> Thanks,
>
> Nick
>

I built a solidstste amp one time using isolated pad construction. The pads were held in placing using guess what, hot glue. Upon appying drive to the amp a lot of the hot glue melted because it was acting as the dielectic of a capacitor.

Jimmie

1474. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:45:59 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466abd15$0$9967$4c368faf@roadrunner.com>
Source record: 40526

"Roger (K8RI)" <validaddress@my.com> wrote in message
news:g7qj6359og6pp582opq0nphpuqlm95s802@4ax.com...
> On Fri, 08 Jun 2007 06:13:22 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>
>>Roger (K8RI) wrote:
>>
>> > ...
>>> I doubt any one is arguing that Hydrogen is generated, the problem is
>>> it is a very inefficient process both from how much hydrogen is
>>> generated compared to how much RF it takes to generate that Hydrogen.
>> > ...
>>
>>The most efficient solar cells are about 20% efficient, efficiency is in
>>the eye of the beholder. With an, almost, never ending supply of
>>sunlight--they suddenly begin to make sense ... a two fold increase in
>>efficiency would change everything, yet still be only 40% efficient.
>>
>>The replacement of batteries with storage tanks is an economic advantage
>>of hydrogen over electric ... and an IMPORTANT one, well, until better
>>and more efficient batteries come along.
>>
>> > ...
>>> ... Using microwaves they come off mixed
>>> which is not a good thing. Looks spectacular but not very useful.
>>
>>They come off in exactly the necessary ratio to burn at 100% efficiency.
>
> Unfortunately they are mixed in that ratio and there is no safe way to
> store much comprised of that ratio. They need to be separated to be
> stored safely. Hydrogen can be stored in a metal sponge (Metal
> Hydride) which is quite efficient. Expensive, but efficient.
>
>> Now, a way make lemonade from that "lemon" is only necessary ...
>>
>> > ...
>>> Trucking H2 is expensive and piping it much of any distance as a
>>> liquid is out of the question.
>>
>>Yeah, I'd pipe it as a gas ... allowing its' own pressure to "pump" it.
>
> The problem with piping it as a gas is transferring sufficient volume
> and then it'd have to be liquefied at the receiving end. Another
> problem is keeping it liquid. You really can't carry a lot as a gas

> under pressure and it takes a lot to develop much energy/power as the
> stuff is so low in BTU content.
>>
>>>
>>> Taken out of context it is true that a Hydrogen spill dissipates much
>>> more quickly that a gasoline spill, BUT while it is dissipating it is
>>> far more explosive. OTOH a given volume of H2 has far less energy/BTU
>>> than gas. Put in perspetive both dynamite and TNT also have less
>>> energy per unit volume than does gas. The problem is the speed of the
>>> combustion front. In the end it's not quite true that a liquid H2
>>> spill is safer than a gas spill.
>>
>>Depending on the speed of release/"moment of ignition", the bulk of the
>>hydrogen burn/explosion is going to be well above your head ... hydrogen
>
> I've been around a couple of H2/air explosions. H2 by itself does rise
> rapidly, but it is so active physically it mixes with the air and the
> rise is not nearly as fast although it does dissipate relatively
> quick. OTOH you have to get rid of almost all of it before it is no
> longer dangerous from an explosive point. The lower explosive limit
> (LEL) is only 4% while the Upper Explosive Limit (UEL) is 96% meaning
> if it's present it's probably within the explosive range.
>
> Another problem with H2 is it doesn't take much flow to create a
> substantial electrostatic charge resulting in a spark and ignition. In
> both cases I'm familiar that was the cause of the explosion. In the
> one case a worker was standing within a couple of feet of the large
> container which was at low pressure. Just a couple inches of water
> pressure above atmosphere. He was looking at it when it blew. You
> could see the imprint of his goggles and shape of his face in the
> Aluminum. He did survive, but it was a couple of days before he could
> hear again. Pretty amazing as it basically blew him through the
> equivalent of a wall. In the other case it blew a worker through the
> "blow out panels" in a wall plus about 30 to 50 feet. He was back to
> work the next day.
>
> In both cases there was enough air movement that the bulk of the force
> was within a few feet of the floor.
>
> <snip>
>

When I was a teenager a truck caarying H2 came into town and the driver decided to eat at a local restaraunt. Unknown to him his tank had a leak. I saw the heat disortion above the flame and called the fire department. When they got there they started chewing my butt because it want on fire, then one of the firemen walked into the flame.

Jimmie

1475. Re: Need help designing Flag antenna EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:46:26 UTC
From: bob <bob-baldwin@tamu.edu>
Message-ID: <23zai.176020$mJ1.59350@newsfe22.lga>
Source record: 40527

amdx wrote:
> I'm trying to design a Flag antenna for 9 to 12 Mhz.
> I have the standard 14ft by 29ft Flag. It seems to lose
> it's front to back ratio as the frequency gets above 4Mhz or less.
> So I suspect it needs to be reduced in size for higher frequencies.
>
> Would I scale the size the same as the frequency ratio?
>
> I'm using the demo version of EZNEC, the dimensions of length
> to height seem quite forgiving.
>
> Could this be the limited segments (20) of the demo, or are
> the design dimensions just not that critical?
>
> Your input is appreciated, I haven't found much info on higher
> frequency Flag antennas.
> Thanks,
> Mike

Mike,
The flag will need to be scaled down, but I don't remember the details. I just scaled down an old .EZ model I made for 160 years ago, and reduced the segments to 20. The bottom wire is 5' above ground and the top is 13' above ground. The length is 16'. This shows a f/b of 26.21 for 7, and 22.78 for 12. With many segments I get a f/b of 27 for 7, and 32.55 for 12. This model can be improved with some tweaking, and will complain when using just 20 segments. E-mail me if you want me to send you this .EZ file, or I can investigate further with my full version of EZNEC.

73,
bob WA5JOT
bob-baldwin@tamu.edu

1476. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:54:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4eeuvqvj1@nnrp.linuxfan.it>
Source record: 40379

Jimmie D wrote:

> [stuff removed]
> When I was a teenager a truck caarying H2 came into town and the driver
> decided to eat at a local restaraunt. Unknown to him his tank had a leak. I
> saw the heat disortion above the flame and called the fire department. When
> they got there they started chewing my butt because it want on fire, then
> one of the firemen walked into the flame.
>
> Jimmie
>
>

Hmmm, aliens having a hot-dog roast, or just stupid firemen, possibly an
urban myth?

JS

1477. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:55:21 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4ef0vqvj2@nnrp.linuxfan.it>
Source record: 40380

Andrea wrote:
>> Then, since E = I*R, 70.7 volts ... thanks.
>
> But on the other ends where there could be 6000 ohms the current is
> low (0.13 A) but the voltage is around 775 V.
>
> Andrea
> IZ2LSC
>

Exactly, tape a ne-2 bulb on the antenna, will light when you xmit ...

JS

1478. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:57:15 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4ef4hqvj3@nnrp.linuxfan.it>
Source record: 40382

Tehrasha Darkon wrote:

>
> 'Sex' scores 401,000,000, so you can see where the priorities are.

"Idiot"--41,600,000. Wouldn't 'ya know it, the idiots are right on up
there! :-(

JS

1479. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 14:57:38 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1181401109_30997@sp12lax.superfeed.net>
Source record: 40381

Scott wrote:
> I think I might have found a modern alternative...a very small surface
> mount device that looks like it will do exactly what the HP doubler does
> AND only $5.95 in SINGLE quantities (The AMK-2-13+)!!

Not "exactly".

Guaranteed F1 in the output is only -20
dBc. Not nearly as good as a DBM.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1480. Long wire help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 16:27:49 UTC
From: Ron <ron@abilene.com>
Message-ID: <1181406469.383859.65830@k79g2000hse.googlegroups.com>
Source record: 40383

Need help. I live in the the country with room for longwire or looped antenna. The tower
(50 feet w/15' mast) is in rear of house (eastside) . Electric transformer for house is approx. 125 feet east of tower and is on the pole. Power from transformer to the house is underground.
Transmission lines come from east. The house sits on a small butte and there is a steep 30-40 foot drop off in all directions. There is very little soil, just limestone rock.
Questions 1 Is one antenna better than other?
2 Is there going to be alot of noise because
of the transformer?
3 I understand lack of soil depth is an
advantage. Is this true for both
transmit and receive?
4 Is there any advantage in running part of the
wire off the top of the hill?
I would appreciate any help.
Thanking you in advance,
Ron Ingram

1481. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 17:01:16 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1181408523_31491@sp12lax.superfeed.net>
Source record: 40384

John Smith I wrote:
> Tehrasha Darkon wrote:
>
>>
>> 'Sex' scores 401,000,000, so you can see where the priorities are.
>
> "Idiot"--41,600,000. Wouldn't 'ya know it, the idiots are right on up
> there! :-(
>
> JS

This may come as a surprise, John, but
"genius" gives 64,000,000. Must be the
Lake Woebegone influence, where the
children are all above average.

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1482. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 17:40:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4eong$i2e$1@nnrp.linuxfan.it>
Source record: 40385

Chuck wrote:

> ...
> This may come as a surprise, John, but "genius" gives 64,000,000. Must
> be the Lake Woebegone influence, where the children are all above average.
>
> Chuck

No surprise, wishful thinking, most likely ...

Regards,
JS

1483. Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:00:45 UTC
From: gsm@mendelson.com
Message-ID: <slrnf6lqi5.vri.gsm@cable.mendelson.com>
Source record: 40386

I have Cushraft 2m vertical antenna made out of aluminum. It has been
sitting out in the weather for 10 years and could use a good cleaning.

Anyone have any suggestions for common household products that would
do the job?

Thanks,

Geoff.
--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

1484. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:04:12 UTC
From: You <You@shadow.orgs>
Message-ID: <You-4837D3.10045609062007@netnews.worldnet.att.net>
Source record: 40387

In article <f4db46$g3i$1@nnrp.linuxfan.it>,
John Smith I <assemblywizard@gmail.com> wrote:

> Hydrogen can be separated from oxygen with a simple plastic membrane,
> the pores in this membrane are engineered to a size which will allow
> hydrogen atoms to pass freely while blocking the oxygen atoms. The
> oxygen "byproduct" is a sale-able one.

You need to go back to High School Chemistry Class and relearn all
you missed about Hydrogen Oxygen Bonding, and the Energy required
to break those specific Chemical Bonds. It isn't going to happen
in a simple Plastic Membrane, especially without some form of external
energy input. Where do you guys come up with this stuff???
Idiots R Us???

1485. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:23:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4er80$uc8$1@nnrp.linuxfan.it>
Source record: 40388

You wrote:

> ...
> You need to go back to High School Chemistry Class and relearn all
> you missed about Hydrogen Oxygen Bonding, and the Energy required
> to break those specific Chemical Bonds. It isn't going to happen
> in a simple Plastic Membrane, especially without some form of external
> energy input. Where do you guys come up with this stuff???
> Idiots R Us???

You need to learn how to focus and digest written material in a sane,
logical and meaningful way.

Hydrogen gas can be separated from oxygen gas with the plastic membrane,
as stated.

What? Did you sudden get thirsty and focus on water, idiot!

JS

1486. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:29:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4erhlufv1@nnrp.linuxfan.it>
Source record: 40389

Geoffrey S. Mendelson wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.

Lye; use great caution!

I would get some wet and dry (emery cloth type stuff), 600 grit or so
and apply a generous supply of "elbow grease."

End up with a very nice and SHINY antenna!

JS

1487. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:45:05 UTC
From: Dave <noone@nowhere.com>
Message-ID: <RyCai.268$Nz5.42@trndny09>
Source record: 40390

"You" <You@shadow.orgs> wrote in message
news:You-4837D3.10045609062007@netnews.worldnet.att.net...
> In article <f4db46$g3i$1@nnrp.linuxfan.it>,
> John Smith I <assemblywizard@gmail.com> wrote:
>
>> Hydrogen can be separated from oxygen with a simple plastic membrane,
>> the pores in this membrane are engineered to a size which will allow
>> hydrogen atoms to pass freely while blocking the oxygen atoms. The
>> oxygen "byproduct" is a sale-able one.
>
> You need to go back to High School Chemistry Class and relearn all
> you missed about Hydrogen Oxygen Bonding, and the Energy required
> to break those specific Chemical Bonds. It isn't going to happen
> in a simple Plastic Membrane, especially without some form of external
> energy input. Where do you guys come up with this stuff???
> Idiots R Us???

actually with what you quoted it is perfectly correct... in that quote he
isn't saying he's breaking down water into hydrogen and oxygen, just
separating the atoms. a gaseous mixture of hydrogen and oxygen could be
separated this way.

1488. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 18:51:12 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <hitl63djpgoip0e44nlln0nsa00ku6hhrg@4ax.com>
Source record: 40391

On Sat, 09 Jun 2007 07:54:16 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Jimmie D wrote:
>
> > [stuff removed]
>> When I was a teenager a truck caarying H2 came into town and the driver
>> decided to eat at a local restaraunt. Unknown to him his tank had a leak. I
>> saw the heat disortion above the flame and called the fire department. When
>> they got there they started chewing my butt because it want on fire, then
>> one of the firemen walked into the flame.
>>
>> Jimmie
>>
>>
>
>Hmmm, aliens having a hot-dog roast, or just stupid firemen, possibly an
>urban myth?

Typically the Hydrogen flame is quite difficult to see unless
contaminants make it visible. It's a very pale blue that is almost
invisible.
>
>JS

1489. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:00:25 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466af8b7$0$4909$4c368faf@roadrunner.com>
Source record: 40392

"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in message
news:slrnf6lqi5.vri.gsm@cable.mendelson.com...
>I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.
> --
> Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
> IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
> Visit my 'blog at http://geoffstechno.livejournal.com/

Mag wheel cleaner does a pretty good job. Wipe it on ,hose it off.

1490. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:05:45 UTC
From: gsm@mendelson.com
Message-ID: <slrnf6lufb.1fk.gsm@cable.mendelson.com>
Source record: 40393

John Smith I wrote:
> Lye; use great caution!
>
> I would get some wet and dry (emery cloth type stuff), 600 grit or so
> and apply a generous supply of "elbow grease."
>
> End up with a very nice and SHINY antenna!

Thanks. Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

1491. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:10:47 UTC
From: gsm@mendelson.com
Message-ID: <slrnf6lugb.1fk.gsm@cable.mendelson.com>
Source record: 40394

Jimmie D wrote:
> Mag wheel cleaner does a pretty good job. Wipe it on ,hose it off.

Thanks, Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

1492. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:18:10 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4eudp$7m3$1@nnrp.linuxfan.it>
Source record: 40395

Dave wrote:

> ...
> actually with what you quoted it is perfectly correct... in that quote he
> ...

Yeah, it is always wise to pay attention to the previous post, that the post in question is responding too ... that way you will appear as an idiot less frequently ... you live, you learn ...

JS

1493. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:19:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4eugj$7u9$1@nnrp.linuxfan.it>
Source record: 40396

Roger (K8RI) wrote:

> ...
> Typically the Hydrogen flame is quite difficult to see unless
> contaminants make it visible. It's a very pale blue that is almost
> invisible.
>> JS

Absolutely, a real danger to those with no sensitivity to heat ...

JS

1494. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 19:46:18 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <QbCdncr9yOvpnvbbnZ2dnUVZ_rWnnZ2d@giganews.com>
Source record: 40397

Geoffrey S. Mendelson wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.

John suggests lye (caustic soda). Jimmie suggests mag wheel cleaner (diluted phosphoric acid). Both should be handled with appropriate gloves and eye protection. I suggest you use Scotchbrite (or other scouring implement) with soap & water... it works well for me.

Bryan WA7PRC

1495. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 20:28:25 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b0d58$0$4713$4c368faf@roadrunner.com>
Source record: 40398

"Buck" <usenet01@lumpuckeroo.com> wrote in message
news:l0fi635b7sndvv8a7b1soad3c1bu55k5qn@4ax.com...
> On Fri, 8 Jun 2007 03:26:18 -0400, "Al Dalton"
> <trash_can@dialtrax.com> wrote:
>
>>I an not a licensed radio amateur, but I couldn't think of a better group
>>to
>>ask about antennas. I like listening to shortwave broadcasts. I'd like to
>>build a good antenna system that will work well. The long wire antennas
>>are
>>pretty much out of the question, although I have considered trying it.
>>Space
>>is somewhat limited. The broomstick antenna looks like it might be my best
>>choice. What do you think? Can you make any suggestions. Thank you.
>>
>>
>>Al
>>
>
> There are several things to consider. I don't know how much you know
> about antennas, but I see you have done some research, so that's a
> good sign. Hopefully you will understand what I am about to say.
>
> My father, also an avid SWL, used to use a long wire antenna. Then
> one day he bought an antenna tuner kit for $10 about 15 years ago. It
> really wasn't much, just a couple of small capacitors and a piece of
> laminated wire he had to wrap around a pill bottle. He added his own
> bypass switch and was excited to show me the difference the tuner made
> to his signals.
>
> I wasn't as surprised at the results as I was his initiative to buy
> and build the tuner kit.
>
> Anyway, he moved and we ran a wire around his attic about four trips.
> The wires were spaced about 3 inches apart and just looped the attic
> from corner to corner. I don't know how long it was, but it turned
> out to be much better than the long wire. He hooked up his tuner and
> radio and used it until he moved out. It was extremely sensitive.
>
> My suggestion, for SWL, is to run as much wire over as large an area
> as possible. If you are limited to indoors, I suggest the attic idea
> if possible.
>
> If you don't have the room, look for the largest area possible to

> spread wire. If you find the best you can do is the broomstick idea,
> (I assume it is a dowel wrapped with wire) then you may have to use
> that. The larger the diameter, the better.
>
> Research the antenna tuners. You don't have to worry about power
> levels, so any small capacitor will do. Make one, or buy a kit and
> add it to your antenna. You won't regret it.
>
> Dad's tuner consisted of a pair of tuning capacitors out of two small
> AM radio receivers with a piece of enameled wire wrapped around a
> large pill bottle. The wire was tapped twice the distance of the
> previous tap, for example, if the first tap was at the 4th wrap, 8
> turns later, the third was 16 turns from the previous, etc.
>
> There are several home-brew plans on the internet. I highly recommend
> it if you are wanting to pull out the weak signals.
>
> Good luck, I hope you find what you need and enjoy your listening.

When I was a kid I was into AM swling, finding obsure AM BCB radio stations. It was really great because if you sent these stations a letter saying you heard them and enough about what you heard, when you heard it they would send you the equivalent of a QSL card. Radio was a Halicrafter S40-B with a wire aound the eve of the house for an antenna. One of the books in the school library had plans for a tuner and a one tube pre-amp. Boy did this make a difference . I built the tuner first but I think it helped the most. The preamps help was most noticable up on the shortwave and ham bands, especially arounf 15,10 and 11 meters.

Jimmie

1496. Re: Shortwave Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 20:33:53 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b0ea0$0$9912$4c368faf@roadrunner.com>
Source record: 40399

"Al Dalton" <trash_can@dialtrax.com> wrote in message
news:dc60b$4669a389$4f9b12f$28923@DIALUPUSA.NET...
>> There are several things to consider. I don't know how much you know
>> about antennas, but I see you have done some research, so that's a
>> good sign. Hopefully you will understand what I am about to say.
>>
>> My father, also an avid SWL, used to use a long wire antenna. Then
>> one day he bought an antenna tuner kit for $10 about 15 years ago. It
>> really wasn't much, just a couple of small capacitors and a piece of
>> laminated wire he had to wrap around a pill bottle. He added his own
>> bypass switch and was excited to show me the difference the tuner made
>> to his signals.
>>
>> I wasn't as surprised at the results as I was his initiative to buy
>> and build the tuner kit.
>>
>> Anyway, he moved and we ran a wire around his attic about four trips.
>> The wires were spaced about 3 inches apart and just looped the attic
>> from corner to corner. I don't know how long it was, but it turned
>> out to be much better than the long wire. He hooked up his tuner and
>> radio and used it until he moved out. It was extremely sensitive.
>>
>> My suggestion, for SWL, is to run as much wire over as large an area
>> as possible. If you are limited to indoors, I suggest the attic idea
>> if possible.
>>
>> If you don't have the room, look for the largest area possible to
>> spread wire. If you find the best you can do is the broomstick idea,
>> (I assume it is a dowel wrapped with wire) then you may have to use
>> that. The larger the diameter, the better.
>>
>> Research the antenna tuners. You don't have to worry about power
>> levels, so any small capacitor will do. Make one, or buy a kit and
>> add it to your antenna. You won't regret it.
>>
>> Dad's tuner consisted of a pair of tuning capacitors out of two small
>> AM radio receivers with a piece of enameled wire wrapped around a
>> large pill bottle. The wire was tapped twice the distance of the
>> previous tap, for example, if the first tap was at the 4th wrap, 8
>> turns later, the third was 16 turns from the previous, etc.
>>
>> There are several home-brew plans on the internet. I highly recommend
>> it if you are wanting to pull out the weak signals.
>>

>> Good luck, I hope you find what you need and enjoy your listening.
>>
>> buck
>> N4PGW
>>
> I do know a fair amount about antennas and tuners. I'd have the no code
> tech license if I could remember the stuff you really don't need to know
> (for the test). My memory just isn't good enough, and memorizing some of
> that stuff isn't even relevant to whether or not we know what we're doing.
>
> As I understand it, an antenna tuner is the single most important thing
> involved? That makes sense. A tuner adjusts the overall resistance of the
> circuit (impedance). Right? I have looked up everything I could find and
> found a tuner for 60 bucks. I can't spend that on a tuner right now. I
> should probably make one.
>
> Are there any plans (w/parts list) on the Internet? Where might I find
> them? Thank you.
>
> Al
>

Just abot any decent book on ham radio has plans. My older tuner was very
similar to the big KW tuners but the coild used a sling tap instead of a
roller inductor and he caps were small receiver typed instead of vaccum
variables. This made it very cheap.

1497. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 20:45:07 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b1142$0$12445$4c368faf@roadrunner.com>
Source record: 40400

"Bryan" <bryan.swadenerNOSPAM@comcast.net> wrote in message
news:QbCdncr9yOvpnvbbnZ2dnUVZ_rWnnZ2d@giganews.com...
> Geoffrey S. Mendelson wrote:
>> I have Cushraft 2m vertical antenna made out of aluminum. It has been
>> sitting out in the weather for 10 years and could use a good cleaning.
>>
>> Anyone have any suggestions for common household products that would
>> do the job?
>>
>> Thanks,
>>
>> Geoff.
>
> John suggests lye (caustic soda). Jimmie suggests mag wheel cleaner
> (diluted phosphoric acid). Both should be handled with appropriate gloves
> and eye protection. I suggest you use Scotchbrite (or other scouring
> implement) with soap & water... it works well for me.
>
> Bryan WA7PRC
>
>

I agree, probably a better approach than the chemical methods. Just the last
time I did it I had a can o fwheel cleaner laying around and had to try it

Jimmie

1498. Re: Long wire help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 20:51:14 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b12b2$0$19526$4c368faf@roadrunner.com>
Source record: 40401

"Ron" <ron@abilene.com> wrote in message
news:1181406469.383859.65830@k79g2000hse.googlegroups.com...
> Need help. I live in the the country with room for longwire or looped
> antenna. The tower
> (50 feet w/15' mast) is in rear of house (eastside) . Electric
> transformer for house is approx. 125 feet east of tower and is on the
> pole. Power from transformer to the house is underground.
> Transmission lines come from east. The house sits on a small butte and
> there is a steep 30-40 foot drop off in all directions. There is very
> little soil, just limestone rock.
> Questions 1 Is one antenna better than other?
> 2 Is there going to be alot of noise because
> of the transformer?
> 3 I understand lack of soil depth is an
> advantage. Is this true for both
> transmit and receive?
> 4 Is there any advantage in running part of the
> wire off the top of the hill?
> I would appreciate any help.
> Thanking you in advance,
> Ron Ingram
>

The biggest promlem I have found with a longwire antenna is that you can
find frequencies that dont tune up vey well or makes your tuner arc. This is
because the length turns out to be such as to cause the feedpoint to have a
very high impedance.

Jimmie

1499. Re: Need help designing Flag antenna EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 20:56:51 UTC
From: bob <bob-baldwin@tamu.edu>
Message-ID: <kuEai.24181$gM1.13705@newsfe21.lga>
Source record: 40402

bob wrote:
> amdx wrote:
>> I'm trying to design a Flag antenna for 9 to 12 Mhz.
>> I have the standard 14ft by 29ft Flag. It seems to lose
>> it's front to back ratio as the frequency gets above 4Mhz or less.
>> So I suspect it needs to be reduced in size for higher frequencies.
>>
>> Would I scale the size the same as the frequency ratio?
>>
>> I'm using the demo version of EZNEC, the dimensions of length
>> to height seem quite forgiving.
>>
>> Could this be the limited segments (20) of the demo, or are
>> the design dimensions just not that critical?
>>
>> Your input is appreciated, I haven't found much info on higher
>> frequency Flag antennas.
>> Thanks,
>> Mike
>
>
> Mike,
> The flag will need to be scaled down, but I don't remember the details.
> I just scaled down an old .EZ model I made for 160 years ago, and
> reduced the segments to 20. The bottom wire is 5' above ground and the
> top is 13' above ground. The length is 16'. This shows a f/b of 26.21
> for 7, and 22.78 for 12. With many segments I get a f/b of 27 for 7, and
> 32.55 for 12. This model can be improved with some tweaking, and will
> complain when using just 20 segments. E-mail me if you want me to send
> you this .EZ file, or I can investigate further with my full version of
> EZNEC.
>
> 73,
> bob WA5JOT
> bob-baldwin@tamu.edu
Mike,
After more experimenting, about the best I can do with the f/b @ 25
degrees takeoff, and freq = 7-12 is 8' X 17' with the bottom wire about
13' above ground. If you are thinking of getting the full EZNEC from
Roy, Version 5 is out, and worth every penny.

73,
bob

1500. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 21:04:14 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b15c0$0$12446$4c368faf@roadrunner.com>
Source record: 40403

"Roger (K8RI)" <validaddress@my.com> wrote in message
news:hitl63djpgoip0e44nlln0nsa00ku6hhrg@4ax.com...
> On Sat, 09 Jun 2007 07:54:16 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>
>>Jimmie D wrote:
>>
>> > [stuff removed]
>>> When I was a teenager a truck caarying H2 came into town and the driver
>>> decided to eat at a local restaraunt. Unknown to him his tank had a
>>> leak. I
>>> saw the heat disortion above the flame and called the fire department.
>>> When
>>> they got there they started chewing my butt because it want on fire,
>>> then
>>> one of the firemen walked into the flame.
>>>
>>> Jimmie
>>>
>>>
>>
>>Hmmm, aliens having a hot-dog roast, or just stupid firemen, possibly an
>>urban myth?
>
> Typically the Hydrogen flame is quite difficult to see unless
> contaminants make it visible. It's a very pale blue that is almost
> invisible.
>>
>>JS

Definately not an urban myth and the firmen wernt stupid. They just didnt know much about fighting fires especially something like this. Just your typical small town volunteer fire department of the 60s. 40s vintage fire truck, no special clothing or protective equipment. Siren goes off, drive to the one red light in town and wait to see which way the firetruck goes.

Jimmie

1501. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 21:17:12 UTC
From: herbert.don@gmail.com
Message-ID: <1181423832.481448.296940@q19g2000prn.googlegroups.com>
Source record: 40404

no fear
vinegar and baking soda

On Jun 9, 11:00 am, g...@mendelson.com (Geoffrey S. Mendelson) wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
> IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
> Visit my 'blog athttp://geoffstechno.livejournal.com/

1502. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 21:25:39 UTC
From: herbert.don@gmail.com
Message-ID: <1181424339.680224.139630@i38g2000prf.googlegroups.com>
Source record: 40405

i thougt this was a joke listing until I was asked for refrences for
gravity equilibrium for dipole antennas.

Guassian antennas must be one of those other joke listings when simple
questions to the lister go on for hundreds of listings with only joke
anwers.
He writes more in burning water another joke list.

On Jun 7, 9:00 pm, Roy Lewallen <w...@eznec.com> wrote:
> This newsgroup is truly educational. Just in the past few days, I've
> learned that:
>
> "The law of conservation of energy is just another law awaiting to be
> "broken", i.e. a new "law" found which acts to the contrary ..."
> -- "John Smith"
>
> and
>
> ". . .gravity is a theory. . ."
> -- "Jimmie D"
>
> These, of course, are just the jewels among the semi-precious stones of
> Gaussian antennas and bouncing waves of average power.
>
> Thanks, folks. A little more time on this newsgroup and I'll be ready to
> step out into the world of the 13th century!
>
> Roy Lewallen, W7EL

1503. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 21:28:16 UTC
From: herbert.don@gmail.com
Message-ID: <1181424496.469138.156920@d30g2000prg.googlegroups.com>
Source record: 40406

the answer makes prefect sense professor!

On Jun 8, 12:00 pm, art <aun...@insightbb.com> wrote:
> On 8 Jun, 11:20, Richard Clark <kb7...@comcast.net> wrote:
>
> > On Fri, 08 Jun 2007 06:27:13 GMT, Owen Duffy <n...@no.where> wrote:
> > >If so, are they relevant to rating the wire for current handling capacity
> > >at RF where for example skin effect increases the dissipation for a given
> > >current?
>
> > Hi Owen,
>
> > Really, a 1mm wire is sufficient for a 100W transmitter in a long wire
> > antenna application. There is no need to elaborate.
>
> > 73's
> > Richard Clark, KB7QHC
>
> Sorry Owen, you have been censored.

1504. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 21:44:09 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns994AB47AB544Dmcoslocomcastnet@216.196.97.136>
Source record: 40407

Andrea <fuffa2k5@gmail.com> wrote in news:1181394846.390221.30080
@c77g2000hse.googlegroups.com:

>
>> Then, since E = I*R, 70.7 volts ... thanks.
>
> But on the other ends where there could be 6000 ohms the current is
> low (0.13 A) but the voltage is around 775 V.

Something tells me we're going to end up with tapered wires here
pretty soon... ;^)

1505. Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 22:54:46 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <1YCdnc9-z7ApsvbbnZ2dnUVZ_uejnZ2d@comcast.com>
Source record: 40408

Is it possible to use a dryer vent as a place to bring in my coax? It doesn't seem like the air coming out is too hot for the coax... Does anyone have any experience with this?

Thanks.

1506. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-09 23:32:57 UTC
From: "Paul E. Cater" <paulcater@roadrunner.com>
Message-ID: <466b3863$0$3264$4c368faf@roadrunner.com>
Source record: 40409

NotMe wrote:
> Is it possible to use a dryer vent as a place to bring in my coax? It
> doesn't seem like the air coming out is too hot for the coax... Does anyone
> have any experience with this?
>
> Thanks.
>
>
I would be more concerned with the humidity then temperature, unless you
are sticking the line right in back of the dryer, don't do, and there
are no connectors in the vent, no problem.

Paul
WD8OSU

1507. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 00:26:49 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <QqmdndvqWKkz2PbbnZ2dnUVZ8vudnZ2d@bt.com>
Source record: 40410

"NotMe" <NotMe@Oops.edu> wrote in message
news:1YCdnc9-z7ApsvbbnZ2dnUVZ_uejnZ2d@comcast.com...
> Is it possible to use a dryer vent as a place to bring in my coax? It
> doesn't seem like the air coming out is too hot for the coax... Does
anyone
> have any experience with this?
>
> Thanks.
>
>
It's an ideal solution if you can't or don't want to drill holes in the
wall. Make sure you leave enough cable to make a drip loop outside the house
and if possible angle the cable slightly upwards as it comes through the
vent. This ensures any water or condensation runs back outside and drips of
onto the ground where it won't do any harm.

I use the same method myself.

Mike G0ULI

1508. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 00:47:33 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <04im63dtl9p516j3h1gkn99drblot390gg@4ax.com>
Source record: 40411

On Sat, 9 Jun 2007 17:54:46 -0500, "NotMe" <NotMe@Oops.edu> wrote:

>Is it possible to use a dryer vent as a place to bring in my coax? It
>doesn't seem like the air coming out is too hot for the coax... Does anyone
>have any experience with this?
>
>Thanks.
>

If you can do it without kinking the coax too much, which could cause
the center conductor to touch the braid, especially with hot air
softening the foam-or-whatever insulation, it could be workable.

Of couse, in loosening the air tube from the vent, you may end up with
hot air in the house, unless you seal everything over.

bob
k5qwg

1509. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 01:10:49 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b4f87$0$9910$4c368faf@roadrunner.com>
Source record: 40412

"Bob Miller" <NOSPAM@neosoft.com> wrote in message
news:04im63dtl9p516j3h1gkn99drblot390gg@4ax.com...
> On Sat, 9 Jun 2007 17:54:46 -0500, "NotMe" <NotMe@Oops.edu> wrote:
>
>>Is it possible to use a dryer vent as a place to bring in my coax? It
>>doesn't seem like the air coming out is too hot for the coax... Does
>>anyone
>>have any experience with this?
>>
>>Thanks.
>>
>
> If you can do it without kinking the coax too much, which could cause
> the center conductor to touch the braid, especially with hot air
> softening the foam-or-whatever insulation, it could be workable.
>
> Of couse, in loosening the air tube from the vent, you may end up with
> hot air in the house, unless you seal everything over.
>
> bob
> k5qwg

Never done it with a dryer vent but I have done it with a plumbing vent. I installed a T in an attic and ran the coax up through the roof. Make sure you seal where the coax goes into the T or you will get some funky odors in your house.

Jimmie

1510. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 01:32:56 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-9ADEF8.21325609062007@nntp.aioe.org>
Source record: 40413

In article <1181401109_30997@sp12lax.superfeed.net>,
Chuck <no.spam@no.spam.at.all> wrote:

> Scott wrote:
> > I think I might have found a modern alternative...a very small surface
> > mount device that looks like it will do exactly what the HP doubler does
> > AND only $5.95 in SINGLE quantities (The AMK-2-13+)!!
>
> Not "exactly".
>
> Guaranteed F1 in the output is only -20
> dBc. Not nearly as good as a DBM.

Scott-

I've read past postings that discussed Minicircuits.com and the 8640B doubler. Why not contact them and ask if they have a better alternative? They may be familiar with the 8640B, and have addressed the question before.

Regarding Jeff's comment, I was of the impression that the signal was generated at a high level prior to the attenuator, and attenuator settings were correct for the 512-1024 band as well as the others. Since your "8640B in a can" has the 512-1024 switch position, it should be possible to install a home-made doubler in the same space where the HP doubler would go, prior to the attenuator.

Fred
K4DII

1511. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 01:47:07 UTC
From: Hank Zoeller <bogusaddress@dontbothernotvalid.com>
Message-ID: <466b5955$0$23115$c3e8da3@news.astraweb.com>
Source record: 40414

Jimmie D wrote:
> Never done it with a dryer vent but I have done it with a plumbing vent. I
> installed a T in an attic and ran the coax up through the roof. Make sure
> you seal where the coax goes into the T or you will get some funky odors in
> your house.

Anyone ever tell you that your signal STINKS?!
BWAHAHAHAHAHAHAHAAAAA!

73 OM,
--
HZ

1512. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 02:21:20 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466b600e$0$19529$4c368faf@roadrunner.com>
Source record: 40415

"Hank Zoeller" <bogusaddress@dontbothernotvalid.com> wrote in message
news:466b5955$0$23115$c3e8da3@news.astraweb.com...
> Jimmie D wrote:
>> Never done it with a dryer vent but I have done it with a plumbing vent.
>> I installed a T in an attic and ran the coax up through the roof. Make
>> sure you seal where the coax goes into the T or you will get some funky
>> odors in your house.
>
> Anyone ever tell you that your signal STINKS?!
> BWAHAHAHAHAHAHAHAAAAA!
>
> 73 OM,
> --
> HZ

All the time when I told then what I had done.

Jimmie

1513. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 07:00:43 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns994BAD0FE681Anonenowhere@61.9.191.5>
Source record: 40416

"NotMe" <NotMe@Oops.edu> wrote in
news:1YCdnc9-z7ApsvbbnZ2dnUVZ_uejnZ2d@comcast.com:

> Is it possible to use a dryer vent as a place to bring in my coax?
> It doesn't seem like the air coming out is too hot for the coax...
> Does anyone have any experience with this?

You need to check the maximum temperature at the end of a drying cycle when the clothes have no water left in them and the temperature of the exhause air is highest.

If it is less than the maximum temperature for the coax (typically around 60 deg C, then you can set about derating the power handling capability for the coax in the higher ambient temperature.

Owen

1514. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 07:06:57 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns994BAE1E6316Enonenowhere@61.9.191.5>
Source record: 40417

Owen Duffy <none@no.where> wrote in
news:Xns994BAD0FE681Anonenowhere@61.9.191.5:

> If it is less than the maximum temperature for the coax (typically
> around 60 deg C, then you can set about derating the power handling
> capability for the coax in the higher ambient temperature.

That was supposed to read

If it is less than the maximum temperature for the coax (typically
around 60 - 80 deg C, then you can set about derating the power handling
capability for the coax in the higher ambient temperature.

Owen

1515. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 08:17:54 UTC
From: Jeff <jeff@local.host>
Message-ID: <466bb3e1$0$1348$834e42db@reader.greatnowhere.com>
Source record: 40418

> Regarding Jeff's comment, I was of the impression that the signal was
> generated at a high level prior to the attenuator, and attenuator
> settings were correct for the 512-1024 band as well as the others.
> Since your "8640B in a can" has the 512-1024 switch position, it should
> be possible to install a home-made doubler in the same space where the
> HP doubler would go, prior to the attenuator.
>
> Fred
> K4DII

The doubler is an external device that screws onto the front panel output socket, there is no provision for putting it internally prior to the attenuator. The 512-1024 switch position merely changes the displayed frequency.

Jeff

1516. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 10:43:24 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1181472204.066716.106600@m36g2000hse.googlegroups.com>
Source record: 40419

Hi Richard,

My previous posting didn't reach the group, so I made a new one.
On 8 jun, 16:25, "Richard Fry" <r...@adams.net> wrote:
[deleted}
>
> No matter the relative value of its h-plane radiation, the resulting ground
> wave field from an AM broadcast station is subject to losses not only by
> 1/distance, but also as a function of earth conductivity and the frequency.
> Only for free space paths does the field decay by 1/distance, alone.

I fully agree with this. It is the reason that an AM broadcast
transmitter has its main lobe (Take of Angle) at non zero elevation.
When you would measure the field strength at, for example, 30 degr
elevation, you would find the 1/distance decay.

When you would measure the field strength of an AM broadcast
transmitter over seawater, the 1/distance decay holds to about 100km.
Above that you have to correct for earth curvature.

> If the h-plane ERP of an AM monopole did not match the peak ERP of a
> 1/2-wave dipole when driven with the same tx power, then the monopole could
> not generate the same field as the peak, free-space field of that dipole,
> when the monopole is measured in its far field, but close enough to it for
> groundwave propagation loss due to the conductivity of the path to be small.

You should distinguish between transition region and far field
(Fraunhofer) region. Close to the transmitter the field generated by
the ground current coincide with the field from the vertical radiator
therefore 3 dB gain increase in field strength occurs. Further away
from the antenna, both amplitude and phase of ground current will
change with respect to the field from the radiator, partly destructive
interference occurs.

Only a surface with infinite conductivity will support the surface
wave up to infinity, hence giving main lobe at zero elevation (for
vertical radiators up to 5/8 lambda). Even a vertical radiator (for
example 1/2 wave dipole) not touching ground will show max radiation
at zero elevation for perfect conducting ground plane (there is no
(pseudo)Brewster angle for surface with infinite conductivity).
>
> This was proven in the Brown, Lewis and Epstein study in 1937, where at 0.3
> miles for 60-90 degree verticals they measured an equivalent field strength
> of better than 190 mV/m at 1 mile for 1 kW of radiated power. The peak,
> free-space field from a 1/2-wave dipole for those conditions is about 195
> mV/m.

>
The objective of the Brown, Lewis and Epstein study was to get as much as power radiated instead of dissipated in the ground, especially with relative small antennas (financial aspect). They did not investigate Take of Angle.

BTW, they did a good job as the field strength from a 1/2-wave dipole, free space, 1kW input is about 138mV/m (rms) at 1 mile. Their measurements show 190mV/m (almost 3 dB gain).

If you have access to a full wave EM simulator that supports dielectric layers, you could run a simulation of the far field pattern for a vertical radiator.

Best regards,

Wim
PA3DJS

1517. Mystery Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 14:56:58 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4h3g1$9p0$1@nnrp.linuxfan.it>
Source record: 40420

Somehow, this particular antenna has never come to my attention.

Anyone ever construct/operate one? Performance?

http://www.w5gi.com/mysteryantenna.htm

Regards,
JS

1518. Re: Mystery Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 15:30:09 UTC
From: Edwin Johnson <edwinljohnson@bellsouth.net>
Message-ID: <5OUai.22694$dy1.8623@bigfe9>
Source record: 40421

On 2007-06-10, John Smith I <assemblywizard@gmail.com> wrote:
> Somehow, this particular antenna has never come to my attention.
>
> Anyone ever construct/operate one? Performance?
>
> http://www.w5gi.com/mysteryantenna.htm

John, I built one several years ago, mostly out of curiosity, primarily to use as a portable antenna when I went to state parks and that sort of thing. I've used it at field day with success. It tunes nicely on all bands 80m-10m with my MFJ tuner. I did put a ferrite bead balun between the ladder line feed and the coax to the rig. Apparently John (W5GI) touts this as having 6 lobes on 20m instead of the g5rv 4. I've never tried to model it.

It was never actually used any length of time here at the home and have no A/B comparisons so will not make any claims, which are generally meaningless anyway. hi I was talking to a ham the other night who built one and had two other regular dipoles he compared it with and said the 'mystery' was much better except in one circumstance, probably a null in the lobes in that direction. Obviously, I can't verify his claim.

Anyway was fun to build, but may not perform any better than a good dipole fed with ladder line and a good transmatch. :) I use mine for multiband operation when camping, etc. so fullfills that need.

73 ...Edwin, KD5ZLB
--
_____
"Once you have flown, you will walk the earth with your eyes
turned skyward, for there you have been, there you long to
return."-da Vinci http://bellsouthpwp2.net/e/d/edwinljohnson

1519. Re: HP 8640B External Freq. Doubler?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 19:07:45 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-BF1ACA.15074510062007@nntp.aioe.org>
Source record: 40422

In article <466bb3e1$0$1348$834e42db@reader.greatnowhere.com>,
"Jeff" <jeff@local.host> wrote:

> The doubler is an external device that screws onto the front panel output
> socket, there is no provision for putting it internally prior to the
> attenuator. The 512-1024 switch position merely changes the displayed
> frequency.

Jeff-

I understand about the HP 11690A Scott mentioned. Are you saying that
it is not possible to retrofit an 8640B with the internal doubler, or
just not possible with the military version Scott has?

I have two 8640Bs. One has the doubler option, the other doesn't. I
would like to upgrade the second one if possible.

Fred
K4DII

1520. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 19:43:33 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <FvYai.14485$rO7.11507@newssvr25.news.prodigy.net>
Source record: 40423

One other posibility , tho never tried it, is the
repair kit (fiberglass), for boat hulls, kind of
an epoxy resin, might also work, tho obviously
more expensive. Just a suggestion-- Jim NN7k

Nick wrote:
> Hi Henry,
>
> Thanks for that - I will see if it affects the signal / SWR if I
> place it next to the aerial as well then.
>
> Cheers
>

1521. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 20:54:32 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <oeqdnXw3WLef-PHbnZ2dnUVZ_u2mnZ2d@comcast.com>
Source record: 40425

"NotMe" <NotMe@Oops.edu> wrote in message
news:1YCdnc9-z7ApsvbbnZ2dnUVZ_uejnZ2d@comcast.com...
> Is it possible to use a dryer vent as a place to bring in my coax? It
> doesn't seem like the air coming out is too hot for the coax... Does
> anyone have any experience with this?
>
> Thanks.
>
>
Why not drill the hole through the metal plate that is part of the dryer
vent. That way the coax is not actually in the air flow.

Tam/WB2TT

1522. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 20:57:48 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <hpoo63djst504cvmd6dnjf20eu2tjaoskv@4ax.com>
Source record: 40426

On Sun, 10 Jun 2007 17:23:40 -0400, "merlin-7" <merlin-7@sc.rr.com>
wrote:

>One problem, maybe....
>
> The hardener for fiberglass resin is methyl ethyl keytone peroxide it
>reacts with the cobalt in the resin.

I use a lot of MEKP and Cobalt with Vinyl Ester Resin (Dow Derakane)
in building an airplane,
http://www.rogerhalstead.com/G3_files/GIII_Diary.htm but I've not seem
"or smelled" it in epoxies. Once mixed it has a very sharp smell. The
Cobalt is a "promoter" and the MEKP is a catalyst. Nasty stuff on bare
skin. MEKP and Cobalt have a bad disposition if they get together.
Keep well apart. Derakane has a much lower viscosity than most
epoxies.

OTOH the West System Epoxy sure does get hot when it decides its time
to cure and you don't need to wear a mask for organic fumes.

> I have no idea of what that would do on a circuit board. I do know however,

Both work just fine, but while you can change your mind with the hot
melt glue it's difficult to do with the resin and epoxy.

Sand and fill, sand and fill...fill and sand, fill and sand...

>that fiberglass panels work well as insulators.
>, Having built boats for 18 years , I have some large panels (cutouts from
>building boats) that I use at the feed point, for (multi wire) parallel
>dipoles.
> FRP- fiberglass reinforced plastic ..makes a good insulator and it
>extremely strong.

And very sensitive to UV light unless protected.

1523. Re: Holt melt glue as potting agent ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 21:23:40 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <466c5e32$0$16655$4c368faf@roadrunner.com>
Source record: 40424

One problem, maybe....

The hardener for fiberglass resin is methyl ethyl keytone peroxide it
reacts with the cobalt in the resin.
I have no idea of what that would do on a circuit board. I do know however,
that fiberglass panels work well as insulators.
, Having built boats for 18 years , I have some large panels (cutouts from
building boats) that I use at the feed point, for (multi wire) parallel
dipoles.
FRP- fiberglass reinforced plastic ..makes a good insulator and it
extremely strong.

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:FvYai.14485$rO7.11507@newssvr25.news.prodigy.net...
> One other posibility , tho never tried it, is the
> repair kit (fiberglass), for boat hulls, kind of
> an epoxy resin, might also work, tho obviously
> more expensive. Just a suggestion-- Jim NN7k
>
> Nick wrote:
> > Hi Henry,
> >
> > Thanks for that - I will see if it affects the signal / SWR if I
> > place it next to the aerial as well then.
> >
> > Cheers
> >

1524. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-10 23:36:08 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466c8af9$0$17206$39cecf19@news.twtelecom.net>
Source record: 40427

Geoffrey S. Mendelson wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.

Cameo Aluminum and Stainless Steel Cleaner. Available in many grocery
stores. Used with Scotchbrite pads it does an amazing job.

tom
K0TAR

1525. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 00:27:48 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466c96f5$0$21259$39cecf19@news.twtelecom.net>
Source record: 40329

Chuck wrote:
> John Smith I wrote:
>> Tehrasha Darkon wrote:
>>
>>>
>>> 'Sex' scores 401,000,000, so you can see where the priorities are.
>>
>> "Idiot"--41,600,000. Wouldn't 'ya know it, the idiots are right on up
>> there! :-(
>>
>> JS
>
> This may come as a surprise, John, but "genius" gives 64,000,000. Must
> be the Lake Woebegone influence, where the children are all above average.
>
> Chuck
>

The Lake Wobegon influence is that that overblown a--hole makes fun of
his fellow Minnesotans at our expense, and many of us do not appreciate
it. It is well known that he looks down on us from a very great height
with his infinite comedic wisdom on hand, or at least he thinks it a
great height.

tom
K0TAR

1526. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 00:55:43 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <j41bi.10102$ya1.5485@news02.roc.ny>
Source record: 40330

Tom Ring wrote:
> ...
> The Lake Wobegon influence is that that overblown a--hole makes fun of
> his fellow Minnesotans at our expense, and many of us do not appreciate
> it. It is well known that he looks down on us from a very great height
> with his infinite comedic wisdom on hand, or at least he thinks it a
> great height.

Look at it this way: You could be living in West Virginia.

- W8LNA

1527. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 01:58:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4ia7ddem1@nnrp.linuxfan.it>
Source record: 40331

gwatts wrote:

> ...
> Look at it this way: You could be living in West Virginia.
>
> - W8LNA

Hey, it is much worse than any of that here in California!

We can't even find a decent governor. Twice now, we have had to pay an actor to act the part! :-(

JS

1528. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 02:08:13 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466cae9e$0$17209$39cecf19@news.twtelecom.net>
Source record: 40332

Cecil Moore wrote:
> Roger (K8RI) wrote:
>> A look, yes, but you can't violate the rules of physics.
>
> A couple of centuries ago, one of those "rules of physics"
> was that light always travels in a straight line. Do you
> think that "rule of physics" has been violated? :-)

No violation Cecil, space bends, not light.

tom
K0TAR

1529. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 02:32:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gv2bi.12265$4Y.2677@newssvr19.news.prodigy.net>
Source record: 40333

Tom Ring wrote:
> No violation Cecil, space bends, not light.

Is a straight line through bent space still a
straight line? :-)
--
73, Cecil http://www.w5dxp.com

1530. a good rthing to remember

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 02:52:24 UTC
From: Mark@kb9rqz.org
Message-ID: <83ep63580o1m9mkav1vu3d3bu3c999u4t6@4ax.com>
Source record: 40334
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
but dloyd et al forgets

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1531. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 08:34:06 UTC
From: Andrea <fuffa2k5@gmail.com>
Message-ID: <1181550846.846262.75560@m36g2000hse.googlegroups.com>
Source record: 40335

One more thing is not clear to me:
If I use a 1/4 wave wire, where are the 6000 ohms?
Near the feed point or on the far end?

Thanks

Andrea
IZ2LSC

On Jun 9, 11:44 pm, Mike Coslo <mco...@youknow.comcast.net> wrote:
> Andrea <fuffa...@gmail.com> wrote in news:1181394846.390221.30080
> @c77g2000hse.googlegroups.com:
>
>
>
> >> Then, since E = I*R, 70.7 volts ... thanks.
>
> > But on the other ends where there could be 6000 ohms the current is
> > low (0.13 A) but the voltage is around 775 V.
>
> Something tells me we're going to end up with tapered wires here
> pretty soon... ;^)

1532. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 09:27:20 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4j4hpuh1@nnrp.linuxfan.it>
Source record: 40336

Cecil Moore wrote:
> Tom Ring wrote:
>> No violation Cecil, space bends, not light.
>
> Is a straight line through bent space still a
> straight line? :-)

Hey, wait a minute, is that a straight answer? <grin>

Regards,
JS

1533. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 10:59:16 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <CIydneDV3tfxtvDbnZ2dnUVZ8v6dnZ2d@bt.com>
Source record: 40337

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:gv2bi.12265$4Y.2677@newssvr19.news.prodigy.net...
> Tom Ring wrote:
> > No violation Cecil, space bends, not light.
>
> Is a straight line through bent space still a
> straight line? :-)
> --
> 73, Cecil http://www.w5dxp.com

Cecil

It was Richard Feynman who 'proved' that light always travels by the most direct route (i.e. a straight line) between two objects. In doing that, he also managed to 'prove' that light took every other possible route too and by mutual interference between all the possible paths, arrived at the shortest route. Light travels by the most direct route even through curved space. Our perception that the light has been bent is apparently due to deficiencies in the way we see the universe. At least that's what I think the theory says. His proof is ingenious and somewhat counter intuitive. As he won a Nobel prize for this sort of stuff, I'm not inclined to argue.

Mike G0ULI

1534. Re: Newsgroup education

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 11:02:13 UTC
From: amdx <amdx@knology.net>
Message-ID: <1f094$466d2bb6$18d6b40c$28671@KNOLOGY.NET>
Source record: 40338

"Tom Ring" <news0003@taring.org> wrote in message
news:466c96f5$0$21259$39cecf19@news.twtelecom.net...
> Chuck wrote:
>> John Smith I wrote:
>>> Tehrasha Darkon wrote:
>>>
>>>>
>>>> 'Sex' scores 401,000,000, so you can see where the priorities are.
>>>
>>> "Idiot"--41,600,000. Wouldn't 'ya know it, the idiots are right on up
>>> there! :-(
>>>
>>> JS
>>
>> This may come as a surprise, John, but "genius" gives 64,000,000. Must be
>> the Lake Woebegone influence, where the children are all above average.
>>
>> Chuck
>>
>
> The Lake Wobegon influence is that that overblown a--hole makes fun of his
> fellow Minnesotans at our expense, and many of us do not appreciate it.
> It is well known that he looks down on us from a very great height with
> his infinite comedic wisdom on hand, or at least he thinks it a great
> height.

Aye

1535. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 12:41:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <uqbbi.7680$u56.1988@newssvr22.news.prodigy.net>
Source record: 40339

Mike Kaliski wrote:
> It was Richard Feynman who 'proved' that light always travels by the most
> direct route (i.e. a straight line) between two objects.

The famous relativity experiment that allowed men to
"see" a star "hidden" by the sun is a good example.

My point was that man's imperfect "laws of physics"
are often violated and have to be revised or discarded
in favor of a new set of laws of physics. If the
scientific progress over the next 1000 years
equals that of the last 1000 years, most of what
we think we know now will no doubt be revised or
proved incorrect and discarded.

For instance:
The laws of physics based on non-empty space (ether)
were discarded only to be revived in different form
by the discovery that empty space is far from empty.
--
73, Cecil http://www.w5dxp.com

1536. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 14:06:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dilq639g1m0v7qema2d5u1cqi7v5nc9f68@4ax.com>
Source record: 40340

On Mon, 11 Jun 2007 08:34:06 -0000, Andrea <fuffa2k5@gmail.com> wrote:

>One more thing is not clear to me:
>If I use a 1/4 wave wire, where are the 6000 ohms?
>Near the feed point or on the far end?

Hi Andrea,

At the far end. Think of the antenna as a resonant transmission line
(meaning it is not terminated in its characteristic Z) and that hi
impedance at the end is transformed through the length to the lower 30
- 50 Ohms typically encountered (accumulating real resistances of the
wire and radiation resistance along the way).

73's
Richard Clark, KB7QHC

1537. Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 15:10:02 UTC
From: amdx <amdx@knology.net>
Message-ID: <cc5da$466d65c9$18d6b40c$16335@KNOLOGY.NET>
Source record: 40341

Are beverage antennas useful at 10Mhz (length adjusted for frequency).
Do they still have the same pattern?
Do you still place them 6 to 10ft off the ground?
Still the same termination resistance and input impedance?
Thanks for the info.
Mike

1538. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 15:57:32 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <uladnc763O_O7PDbnZ2dnUVZ8qminZ2d@bt.com>
Source record: 40342

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:uqbbi.7680$u56.1988@newssvr22.news.prodigy.net...
> Mike Kaliski wrote:
> > It was Richard Feynman who 'proved' that light always travels by the
most
> > direct route (i.e. a straight line) between two objects.
>
> The famous relativity experiment that allowed men to
> "see" a star "hidden" by the sun is a good example.
>
> My point was that man's imperfect "laws of physics"
> are often violated and have to be revised or discarded
> in favor of a new set of laws of physics. If the
> scientific progress over the next 1000 years
> equals that of the last 1000 years, most of what
> we think we know now will no doubt be revised or
> proved incorrect and discarded.
>
> For instance:
> The laws of physics based on non-empty space (ether)
> were discarded only to be revived in different form
> by the discovery that empty space is far from empty.
> --
> 73, Cecil http://www.w5dxp.com

Indeed Cecil,

Even as a youngster, I was never happy with the concept of space vacuum being completely devoid of anything. I first started studying radio and electronics because I couldn't see how signals could propagate through absolute nothingness. With the benefit of age and experience, I can accept the concept that electromagnetic radiation is self sustaining, oscillating between magnetic and electric field incarnations and complete in itself. But there was always that nagging doubt that this was not the whole picture.

I don't really expect most of our current laws of physics will be overturned in the next 1000 years. I think new phenomena that exist outside of our normal everyday experience will be discovered and whole new areas of research will open up operating in parallel to our current understanding. Current quantum research seems to suggest that we are all ultimately made up of a series of coherent waves, with no solidity whatsoever. It's just a kind of electrostatic repulsion that stops us falling through the floor. Whatever the truth of the matter, it has very little impact on our daily lives and it still hurts like hell when I stub my toe on the table leg.

Cheers

Mike G0ULI

1539. Re: Dryer Vent Lead In

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 16:19:44 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f4jsn0$5sh$1@nntp1.jpl.nasa.gov>
Source record: 40344

NotMe wrote:
> Is it possible to use a dryer vent as a place to bring in my coax? It
> doesn't seem like the air coming out is too hot for the coax... Does anyone
> have any experience with this?
>
> Thanks.
>
>
You mean practical difficulties, aside from the building code violation
aspects?

I'd worry about lint accumulation and blocking the airflow from the
dryer causing problems from the dryer.

The air may not feel very hot, but I would imagine that a piece of coax
might get pretty warm, so you'd want to choose a high temperature
tolerant coax (e.g. one of the PTFE or FEP dielectric/jacket). Look for
the stuff that people use to wind high power transmission line transformers
(RG 142, RG188, RG316 types.) All you need is a short jumper, and you
could get a fairly small diameter to reduce the vent blockage
(obviously, you're in a compromise installation situation, and the loss
in 10 ft of even pretty small coax isn't going to be huge)

1540. Re: Ground reflection

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 16:27:28 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f4jt5g$609$1@nntp1.jpl.nasa.gov>
Source record: 40345

Wimpie wrote:
> On 7 jun, 20:20, ve2pid <ve2...@videotron.ca> wrote:
>
>>Hi ot all
>>
>>It is well known that the real ground seems to ''reflects'' a radio
>>wave. But I think that the term ''reflects'' is a bit confusing. My
>>understanding of the phenomenon is that the ground absorbs the
>>incident wave and, with that energy it re-radiates a new wave with a
>>different phase/amplitude value.
>
>
>>That new wave modifies the TO angle as a real optical-type reflection
>>would do. Then, it seems that it is not a ''bending'' of the wave, but
>>the production of a new one. With the value of the modification of the
>>TO angle, one can deduces a ''reflected'' wave's angle, even if it not
>>a real reflection.. Am I right?
>>
>>Also, I read in a older version of the ARRL's Handbook that ''The
>>effective ground plane, that is the plane from which ground
>>reflections can be considered to take place, seldom is the actual
>>surface of the ground, but a few feet below it, depending upon the
>>characteristics of the soil.''
>>
>>Considering what I said about re-routing with phase/amplitude
>>modifications, how to interpret the text form the Handbook? How to
>>determine the depth of that 'effective gorund plane'? Or is there any
>>depth at all? As is, it could be interpreted as a optical reflection
>>like occuring somewhere deep in the real ground..
>>
>>Thanks..
>>
>>Pierre ve2...@videotron.ca
>
>
> Hello Pierre,
>
> You are right, reflection is reradiation. The driving field causes
> charges to oscillate and oscillating charges radiate. When the change
> in direction of propagation changes over a volume far more then a
> wavelength, most people call it "bending" (as happens in the
> ionosphere).
>
> The amplitude and phase of the reflected wave depends heavily on angle

> of incidence (AoI), frequency, soil properties and polarization. In
> case of vertical polarization, there is AoI where the reflection is
> minimal ([pseudo] Brewster angle). For vertical polarization, the
> phase of the reflected wave varies strongly with AoI. You might look
> for the "Fresnel Equations". These equations covers reflection on all
> type of surfaces.
>
> To avoid confusion, physicists define the Angle of Incidence with
> respect to the normal (so 0 degr elevation angle is 90 degr AoI). What
> radio engineers call "vertical polarization" is called "parallel
> polarization" in physics.
>
If you look up the wikipedia entry
http://en.wikipedia.org/wiki/Fresnel_equations

parallel => parallel to the plane of incidence => p subscript in the
Wikipedia entry

1541. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 16:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <8qa0k4-1rq.ln1@mail.specsol.com>
Source record: 40343

Cecil Moore <nospam@w5dxp.com> wrote:
> Mike Kaliski wrote:
> > It was Richard Feynman who 'proved' that light always travels by the most
> > direct route (i.e. a straight line) between two objects.

> The famous relativity experiment that allowed men to
> "see" a star "hidden" by the sun is a good example.

> My point was that man's imperfect "laws of physics"
> are often violated and have to be revised or discarded
> in favor of a new set of laws of physics. If the
> scientific progress over the next 1000 years
> equals that of the last 1000 years, most of what
> we think we know now will no doubt be revised or
> proved incorrect and discarded.

Except that isn't true.

Any new physics must encompass and explain everything already proven.

As a simplistic example, relativistic physics doesn't make Newtonian
physics "wrong", discard it or revise it, Newton just becomes a subset,
a special case where if velocity is much, much smaller than c, the
effects of velocity can be ignored.

If some new discovery allows for travel faster than c, relativistic
physics as we now know it becomes a special case for velocity less
than c as it is already experimentally validated and must become
a subset of the new physics.

--
Jim Pennino

Remove .spam.sux to reply.

1542. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 17:03:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c0vq63lcle2c81ombrj0pnk8ipsripe187@4ax.com>
Source record: 40346

On Mon, 11 Jun 2007 10:10:02 -0500, "amdx" <amdx@knology.net> wrote:

>Are beverage antennas useful at 10Mhz (length adjusted for frequency).
>Do they still have the same pattern?
>Do you still place them 6 to 10ft off the ground?
>Still the same termination resistance and input impedance?

Hi Mike,

The characteristics are largely due to the proximity of earth, and its conductive property which in HF is quite different from the original design for LF. Having said that, there's not much you can do to alter earth's conductivity over a long stretch (well, I suppose you could try....) and the convention of a long, low antenna will still give you some benefit - maybe - it needs only trying to determine.

The termination can be ignored unless you absolutely demand end-fire performance (from one end, otherwise it is end-fire at both ends).

Here is a citation and discussion from my recent research in this matter:
History of Radio, Gleason Archer
621.38409
pg. 121
"Ernst F. W. Alexanderson's Multiple Tuned Antenna for Marconi at New Brunswick used six tuned down-wires at regular intervals along a mile long antenna to increase its gain ten-fold"
pg. 140
"Along with a 200KW Alexanderson alternator, this was in 1918 the strongest transmitter in the world, capable of being heard on portable radios in the field."
pg. 146-147
"Harold H. Beverage & Anti-static tuned antennas with Chester W. Rice.
'The Barrage Receiver'
Using a 10 mile long wire on the ground, they eliminated static originating in the Caribbean that masked European signals."

Some may recognize Arthur's "Gaussian Array" in Alexanderson's design (as certainly Arthur would not) and even more how the Yagi's improvement consigned that array's fate to oblivion. Mike, you may want to experiment with these tuned down-wires for yourself if you choose to dabble with the Beverage. The 10 mile long wire on the ground might be replaced with the standard resistor if you want to build your own Barrage antenna.

In the course of some dozen years of correspondence here, I have never seen any attributions to Alexanderson or Rice or their techniques.

73's
Richard Clark, KB7QHC

1543. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 17:07:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <260r635kavb08hm3movs1cmii0mnehqf5q@4ax.com>
Source record: 40347

On Mon, 11 Jun 2007 10:03:55 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>In the course of some dozen years of correspondence here, I have never
>seen any attributions to Alexanderson or Rice or their techniques.

For more researcher's of the first two decades of Radio antenna
design, consult:
Ferdinand Braun
F. Kiebitz
J. Murgas
J. Harris Rogers
A.A. Hall
G.G. Blake
and
Gleason Archer

73's
Richard Clark, KB7QHC

1544. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 17:45:09 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <1Ofbi.7$bP5.4@newssvr19.news.prodigy.net>
Source record: 40348

jimp@specsol.spam.sux.com wrote:
> As a simplistic example, relativistic physics doesn't make Newtonian
> physics "wrong", discard it or revise it, Newton just becomes a subset,
> a special case where if velocity is much, much smaller than c, the
> effects of velocity can be ignored.

As an earlier simplistic example, the four elements of fire,
earth, air, and water are not all the elements that exist
although one might rationalize that those four elements are
a subset of the periodic table of the elements.

Forcing boundary conditions on existing "laws of physics" doesn't
make things like Newtonian physics any more accurate. It just
makes some of us human beings feel better about our sacred
cows. :-)
--
73, Cecil, w5dxp.com

1545. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 19:05:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5ki0k4-pbi.ln1@mail.specsol.com>
Source record: 40349

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > As a simplistic example, relativistic physics doesn't make Newtonian
> > physics "wrong", discard it or revise it, Newton just becomes a subset,
> > a special case where if velocity is much, much smaller than c, the
> > effects of velocity can be ignored.

> As an earlier simplistic example, the four elements of fire,
> earth, air, and water are not all the elements that exist
> although one might rationalize that those four elements are
> a subset of the periodic table of the elements.

Except no one ever did experiments to prove the hypothesis that fire,
earth, air, and water were elements, so it remained a hypothesis until
experiments were conducted to define elements, at which time the
hypothesis was discarded.

Hypotheses are discarded all the time, theories aren't.

You do know the difference between a scientific theory and a scientific
hypothesis, don't you?

> Forcing boundary conditions on existing "laws of physics" doesn't
> make things like Newtonian physics any more accurate. It just
> makes some of us human beings feel better about our sacred
> cows. :-)

Nonsense, it is just reality.

Everything has boundary conditions, except maybe your proclivity
to try and stir the pot.

--
Jim Pennino

Remove .spam.sux to reply.

1546. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 19:49:52 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <QChbi.18170$C96.10532@newssvr23.news.prodigy.net>
Source record: 40350

jimp@specsol.spam.sux.com wrote:
> Hypotheses are discarded all the time, theories aren't.

Quoted from:
****
Ask A Scientist - General Science Archive

Theories Proven Wrong

Question - Where can I find information on theories that
were proven wrong?

Answer: Rumor has it that "Fads & Fallacies in the Name of
Science" by Martin Gardner is just what your looking for.

Every scientific theory is wrong in some respect. There is
no scientific theory of "everything".
****
end quote
--
73, Cecil, w5dxp.com

1547. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 20:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jjm0k4-k8s.ln1@mail.specsol.com>
Source record: 40351

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Hypotheses are discarded all the time, theories aren't.

> Quoted from:
> **********
> Ask A Scientist - General Science Archive
> ----------
> Theories Proven Wrong

> Question - Where can I find information on theories that
> were proven wrong?
> ----------
> Answer: Rumor has it that "Fads & Fallacies in the Name of
> Science" by Martin Gardner is just what your looking for.

> Every scientific theory is wrong in some respect. There is
> no scientific theory of "everything".
> **********

Apples and oranges.

A "scientific theory of everything" is meaningless babble
thrown around by the clueless.

A theory is a logically self-consistent model or framework for
describing the behavior of a related set of natural or social
phenomena. It originates from or is supported by experimental
evidence. In this sense, a theory is a systematic and formalized
expression of all previous observations that is predictive,
logical and testable.

In physics, the term theory is generally used for a mathematical
framework - derived from a small set of basic principles (usually
symmetries - like equality of locations in space or in time, or
identity of electrons, etc) - which is capable of producing
experimental predictions for a given category of physical systems.

Note the words "a given category of physical systems".

As for the "aether", no observations that are predictive,
logical or testable except in the negative.

--
Jim Pennino

Remove .spam.sux to reply.

1548. MFJ 17758

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 20:27:40 UTC
From: Bent J�rgensen <bjoe@post5.tele.dk>
Message-ID: <466db039$0$52121$edfadb0f@dread11.news.tele.dk>
Source record: 40352

Hallo

I need some information about the MFJ 17758 dipole.
Does anyone have any experience with this dipole?

Thanks in advance.

Bent

1549. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 21:09:13 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <dNibi.68$c06.63@newssvr22.news.prodigy.net>
Source record: 40353

jimp@specsol.spam.sux.com wrote:
> A "scientific theory of everything" is meaningless babble
> thrown around by the clueless.

Is that your theory? :-) Such "meaningless babble"
was quoted from an "Ask a Scientist" web page.

> A theory is a logically self-consistent model or framework for
> describing the behavior of a related set of natural or social
> phenomena.

Or a theory is "a reasonable guess or conjecture", (quoted
from Webster's).

For instance: "The red shift in the spectra of galaxies
supports the theory that the universe is continuously
expanding."

That theory seems to be on the verge of being proved wrong.

> As for the "aether", no observations that are predictive,
> logical or testable except in the negative.

On the contrary, the Casmire effect seems to prove the
existence of something existing in empty space. Particles
seem to wink in and out of existence within the "absolute
nothingness" of a vacuum.

"For many years the Casimir effect was little more than
a theoretical curiosity."

Was that theory a "curiosity" or is it a "logically self-
consistent model"?

One more example: Nothing can travel faster than the
speed of light yet the communications between entangled
particles obviously travels faster than the speed of
light.

How about the "Theory of Evolution"? Is it right or wrong?

How about all the JFK "Conspiracy Theories"? Are they all
"logically self-consistent"?
--
73, Cecil, w5dxp.com

1550. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 21:15:06 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <9hq0k4-rq8.ln1@mail.specsol.com>
Source record: 40354

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > A "scientific theory of everything" is meaningless babble
> > thrown around by the clueless.

> Is that your theory? :-) Such "meaningless babble"
> was quoted from an "Ask a Scientist" web page.

> > A theory is a logically self-consistent model or framework for
> > describing the behavior of a related set of natural or social
> > phenomena.

> Or a theory is "a reasonable guess or conjecture", (quoted
> from Webster's).

That isn't the scientific definition of "theory" and you know it.

Why do you insist on playing these silly games?

<snip remaining word games>

--
Jim Pennino

Remove .spam.sux to reply.

1551. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 21:35:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <U9jbi.602$c06.247@newssvr22.news.prodigy.net>
Source record: 40355

jimp@specsol.spam.sux.com wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Or a theory is "a reasonable guess or conjecture", (quoted
>> from Webster's).
>
> That isn't the scientific definition of "theory" and you know it.

No mention of "scientific definition" before your assertion:

> Hypotheses are discarded all the time, theories aren't.

I have personally discarded the "Devine Creation Theory"
and most of the JFK assassination theories. I have also
discarded the "Red-Shift Theory" of the expansion of the
universe as will most astronomers in the near future.
--
73, Cecil, w5dxp.com

1552. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 21:50:19 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4kgda$4kh$1@news.service.uci.edu>
Source record: 40356

Cecil Moore wrote:

> jimp@specsol.spam.sux.com wrote:
>
>> Cecil Moore <nospam@w5dxp.com> wrote:
>>
>>> Or a theory is "a reasonable guess or conjecture", (quoted
>>> from Webster's).
>>
>>
>> That isn't the scientific definition of "theory" and you know it.
>
>
> No mention of "scientific definition" before your assertion:
>
> > Hypotheses are discarded all the time, theories aren't.
>
> I have personally discarded the "Devine Creation Theory"
> and most of the JFK assassination theories. I have also
> discarded the "Red-Shift Theory" of the expansion of the
> universe as will most astronomers in the near future.
> --
> 73, Cecil, w5dxp.com

I'm not sure what you're asserting here, Cecil. Is that the light isn't red shifted, or that the universe isn't expanding?

73, ac6xg

1553. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 22:21:05 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4khsk$n88$1@nnrp.linuxfan.it>
Source record: 40357

jimp@specsol.spam.sux.com wrote:

A theory is just an idea of why something is a particular way(s), or appears to act in some particular way(s.)

Of course, most any theory appears COMPLETELY believable, otherwise a person would appear a fool to even form or advance such a theory.

At to whether the theory is valid or not? That takes a level of belief beyond what is needed to form a belief in a creator! (especially given history on how we have had to constantly "tweak" our theories into compliance with new discoveries!)

Probably 90% of our equations, observations and "facts" are in some type of error. Our use of time in equations is but one example--and belief in the validity of "earth time" in equations has become widely accepted, but is in error. (well, OK, it is valid in bank amortization formulas--because those formulas are simply "figments of imagination" and have nothing to do with science ...

However, if I spun up the moon to revolve once ever 48 hours, that would NOT make use of the moons spin valid in equations ... even if I expressed it in equations like: moon-speed = (earth-speed * 2)

Something, or some effect, unknown to us belongs in those equations! Sheer logic provides the proof ...

JS

JS

1554. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 22:25:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4ki4r$n88$2@nnrp.linuxfan.it>
Source record: 40358

jimp@specsol.spam.sux.com wrote:

> ...
> A "scientific theory of everything" is meaningless babble
> thrown around by the clueless.
> ...

Really?

Hmmm, Einstein was the first to propose such a thing--one equation, ~1-2 inch long, explaining everything ... gawd, what a shame he died before you could point out his error(s) to him ...

JS

1555. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 22:35:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <73v0k4-3oi.ln1@mail.specsol.com>
Source record: 40359

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Cecil Moore <nospam@w5dxp.com> wrote:
> >> Or a theory is "a reasonable guess or conjecture", (quoted
> >> from Webster's).
> >
> > That isn't the scientific definition of "theory" and you know it.

> No mention of "scientific definition" before your assertion:

Since the discussion was always about science and not about TV cop
dramas, it would be obvious to just about everyone which definition
was meant, but you know that and are just playing word games again.

<snip remaining word games>

--
Jim Pennino

Remove .spam.sux to reply.

1556. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 22:49:08 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ljkbi.105$vi5.91@newssvr17.news.prodigy.net>
Source record: 40360

Jim Kelley wrote:
> I'm not sure what you're asserting here, Cecil. Is that the light isn't
> red shifted, or that the universe isn't expanding?

I'm asserting that most of the red shift is not
a Doppler effect.
--
73, Cecil http://www.w5dxp.com

1557. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 22:53:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Qnkbi.108$vi5.95@newssvr17.news.prodigy.net>
Source record: 40361

jimp@specsol.spam.sux.com wrote:
> Since the discussion was always about science and not about TV cop
> dramas, it would be obvious to just about everyone which definition
> was meant, but you know that and are just playing word games again.

Why is it OK to beat me about the head and shoulders
for accidentally omitting an adjective and not OK to
point out your omission of same?
--
73, Cecil http://www.w5dxp.com

1558. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:02:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4kkki$80k$1@news.service.uci.edu>
Source record: 40364

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> I'm not sure what you're asserting here, Cecil. Is that the light
>> isn't red shifted, or that the universe isn't expanding?
>
>
> I'm asserting that most of the red shift is not
> a Doppler effect.

It is your assertion that there is an effect with dominates Doppler
shifting on any scale?

73, Jim AC6XG

1559. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:05:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <an01k4-o4o.ln1@mail.specsol.com>
Source record: 40362

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Since the discussion was always about science and not about TV cop
> > dramas, it would be obvious to just about everyone which definition
> > was meant, but you know that and are just playing word games again.

> Why is it OK to beat me about the head and shoulders
> for accidentally omitting an adjective and not OK to
> point out your omission of same?

I doubt that you've ever accidentally omitted an adjective in your
life.

All your posts are rather cleverly crafted to produce maximum
consternation, I will give you that.

--
Jim Pennino

Remove .spam.sux to reply.

1560. Re: MFJ 17758

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:07:10 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <yAkbi.13551$2v1.4592@newssvr14.news.prodigy.net>
Source record: 40363

No experience- but here is the address for the
manual :
http://www.mfjenterprises.com/man/pdf/MFJ-17758.pdf

Hope it helps-- Jim NN7K

Bent Jørgensen wrote:
> Hallo
>
> I need some information about the MFJ 17758 dipole.
> Does anyone have any experience with this dipole?
>
> Thanks in advance.
>
> Bent
>
>

1561. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:36:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Z%kbi.18328$C96.4975@newssvr23.news.prodigy.net>
Source record: 40365

Jim Kelley wrote:
> Cecil Moore wrote:
>> I'm asserting that most of the red shift is not
>> a Doppler effect.
>
> It is your assertion that there is an effect with dominates Doppler
> shifting on any scale?

No, primarily on a macro (non-local) scale. Let's
say you had a cable stretching from our galaxy to
a distant red-shifted galaxy. What would be your
conclusion if the red-shift continued without
the cable breaking?
--
73, Cecil http://www.w5dxp.com

1562. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:49:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <rclbi.18331$C96.17767@newssvr23.news.prodigy.net>
Source record: 40366

jimp@specsol.spam.sux.com wrote:
> I doubt that you've ever accidentally omitted an adjective in your
> life.

Of course, I don't consider myself to be omniscient. The
difference between you and me is that you put your faith
in science while I am skeptical of virtually everything.
IMO, Newton's laws of physics were proved wrong and their
application had to be limited as a result. If Newton had
been informed about seconds getting longer and mass
increasing as velocity is increased, he no doubt would
have rejected such as complete nonsense.

Again, how do you explain the fact that entangled particles
violate the theory that nothing can happen faster than the
speed of light? Oh yeah, I forgot - simply re-define the
problem out of existence. Those particles are communicating
faster than light but there is no information flow (yet).
--
73, Cecil http://www.w5dxp.com

1563. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-11 23:51:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4knfuabm1@news.service.uci.edu>
Source record: 40367

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> Cecil Moore wrote:
>>
>>> I'm asserting that most of the red shift is not
>>> a Doppler effect.
>>
>>
>> It is your assertion that there is an effect with dominates Doppler
>> shifting on any scale?
>
>
> No, primarily on a macro (non-local) scale.

So then, red shifts greater than 1, or 2, or 3, or....? Which?

> Let's
> say you had a cable stretching from our galaxy to
> a distant red-shifted galaxy. What would be your
> conclusion if the red-shift continued without
> the cable breaking?

It must be one of those Bungee cables. :-)

73, Jim AC6XG

1564. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 00:01:13 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <dnlbi.35485$G23.3824@newsreading01.news.tds.net>
Source record: 40368

1. What do you mean when you state that entangled particles have
"communications"?
2. Entangled particles can not be used to send _information_ at a speed
greater than the speed of light.

If you can show that item 2 above is false, you will become both famous and
rich.

John, N9JG

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:dNibi.68$c06.63@newssvr22.news.prodigy.net...
[snip]
> One more example: Nothing can travel faster than the
> speed of light yet the communications between entangled
> particles obviously travels faster than the speed of
> light.
[snip]
> 73, Cecil, w5dxp.com

1565. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 00:12:11 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466de4c9$0$4658$4c368faf@roadrunner.com>
Source record: 40369

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:uqbbi.7680$u56.1988@newssvr22.news.prodigy.net...
> Mike Kaliski wrote:
>> It was Richard Feynman who 'proved' that light always travels by the most
>> direct route (i.e. a straight line) between two objects.
>
> The famous relativity experiment that allowed men to
> "see" a star "hidden" by the sun is a good example.
>
> My point was that man's imperfect "laws of physics"
> are often violated and have to be revised or discarded
> in favor of a new set of laws of physics. If the
> scientific progress over the next 1000 years
> equals that of the last 1000 years, most of what
> we think we know now will no doubt be revised or
> proved incorrect and discarded.
>
> For instance:
> The laws of physics based on non-empty space (ether)
> were discarded only to be revived in different form
> by the discovery that empty space is far from empty.
> --
> 73, Cecil http://www.w5dxp.com

the problem isnt with believing space can be empty but believing that space
is nothing..

1566. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 00:21:00 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <R9ednQkSf_LevDbRVnyvwA@bt.com>
Source record: 40370

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:dnlbi.35485$G23.3824@newsreading01.news.tds.net...
> 1. What do you mean when you state that entangled particles have
> "communications"?
> 2. Entangled particles can not be used to send _information_ at a speed
> greater than the speed of light.
>
> If you can show that item 2 above is false, you will become both famous
and
> rich.
>
> John, N9JG
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:dNibi.68$c06.63@newssvr22.news.prodigy.net...
> [snip]
> > One more example: Nothing can travel faster than the
> > speed of light yet the communications between entangled
> > particles obviously travels faster than the speed of
> > light.
> [snip]
> > 73, Cecil, w5dxp.com
>
>

John & Cecil

Extract from http://www.valdostamuseum.org/hamsmith/newtech2.html

The Chiao Group at Berkeley is investigating superluminality. Ryan Frewin,
Renee George, Deborah Paulson have a web page about superluminality, in
which they say: "...

About ten years ago, Steven Chu and Stephen Wong at AT&T Bell Labs in New
Jersey measured superluminal velocities for light pulses traveling through
an absorbing material ...
In 1991, Anedio Ranfagni et al at the National Institute for Research into
Electromagnetic Waves in Florence, Italy measured the speed of propagation
for microwaves through a "forbidden zone" inside square metal w aveguides.
The reported values were initially less than the speed of light, until the
experiment was repeated in 1992 with thicker barriers ...
Also in 1992, Gunter Nimtz and colleagues at the University of Cologne
reported superluminal speeds for microwaves traversing a similar forbidden
region ...
In 1993, the most solid experimental evidence came from Chiao and his

colleagues Aephraim Steinberg and Paul Kwiat at the University of California at Berkeley. Using the Hong-Ou-Mandel interferometer ... they were able to measure the tunneling times of visible light. According to Brown, "the researchers found that the photons that tunneled their way through the optical filter arrived 1.5 femtoseconds sooner than the ones that traveled through air. The tunneling photons seemed to have traveled at 1.7 times the speed of light" ...
Similar experiments by Ferenc Krauss et al at the Technical University in Vienna in October of 1994 "strongly suggest that as they progressively increased the thickness of the barrier the tunneling time saturated toward a maximum value" ...
In March of 1995, at a colloquium in Snowbird, Utah, Nimtz announced that he had sent a signal across twelve centimeters of space at 4.7 times the speed of light . The signal was a modulation in the frequency of his microwave source matching Mozart's 40th Symphony ... Even Chiao and his colleagues were adamantly opposed to describing Nimtz' work as the sending of a signal ...
Why was the bar of Mozart's symphony not a signal? ... If a wave packet's shape upon incidence is smooth and well- defined, it is a straightforward calculation to determine its shape after transmission. Because the final shape can be mathematically determined ... most scientists would not consider a smoothly varying function to be a signal. ... Chiao and Steinberg were quick to point out that Nimtz' symphony was not a signal, but simply a smoothly varying pulse. .. A sudden change in the shape would still travel at only light speed, and only a sudden change, according to Chiao, could be regarded as a signal ... ".

Clearly some things do appear to travel faster than the speed of light in a vacuum. The jury appears to be out as to whether any practical use can be made of the phenomenon.

Mike G0ULI

1567. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 00:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <k971k4-6gb.ln1@mail.specsol.com>
Source record: 40371

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > I doubt that you've ever accidentally omitted an adjective in your
> > life.

> Of course, I don't consider myself to be omniscient. The
> difference between you and me is that you put your faith
> in science while I am skeptical of virtually everything.
> IMO, Newton's laws of physics were proved wrong and their
> application had to be limited as a result. If Newton had
> been informed about seconds getting longer and mass
> increasing as velocity is increased, he no doubt would
> have rejected such as complete nonsense.

Is a ruler calibrated to 1/32 of an inch wrong compared to a
micrometer calibrated to .0005 inch?

Is the micrometer wrong compared to an optical inferometer?

Must one use an optical inferometer to build a one hole outhouse?

> Again, how do you explain the fact that entangled particles
> violate the theory that nothing can happen faster than the
> speed of light? Oh yeah, I forgot - simply re-define the
> problem out of existence. Those particles are communicating
> faster than light but there is no information flow (yet).

A nonsense question.

There is a big difference between "something happening" and
mass moving, but you know that, don't you?

--
Jim Pennino

Remove .spam.sux to reply.

1568. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 01:02:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4krao$d5n$1@nnrp.linuxfan.it>
Source record: 40372

John Smith I wrote:

> ...
> However, if I spun up the moon to revolve once ever 48 hours, that would
> NOT make use of the moons spin valid in equations ... even if I
> expressed it in equations like: moon-speed = (earth-speed * 2)
>
> Something, or some effect, unknown to us belongs in those equations!
> Sheer logic provides the proof ...
>
> JS

Another thing, as I get older, NOTHING gets better ...

Change the above: "moon_speed = (earth_speed * 2)"
to:
moon_speed = (earth_speed/2)

I hate those dyslexic slips ... :-(

JS

1569. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 01:04:51 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466df144$0$17208$39cecf19@news.twtelecom.net>
Source record: 40373

Mike Kaliski wrote:
> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
> news:dnlbi.35485$G23.3824@newsreading01.news.tds.net...
>> 1. What do you mean when you state that entangled particles have
>> "communications"?
>> 2. Entangled particles can not be used to send _information_ at a speed
>> greater than the speed of light.
>>
>> If you can show that item 2 above is false, you will become both famous
> and
>> rich.
>>
>> John, N9JG
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> news:dNibi.68$c06.63@newssvr22.news.prodigy.net...
>> [snip]
>>> One more example: Nothing can travel faster than the
>>> speed of light yet the communications between entangled
>>> particles obviously travels faster than the speed of
>>> light.
>> [snip]
>>> 73, Cecil, w5dxp.com
>>
>
> John & Cecil
>
> Extract from http://www.valdostamuseum.org/hamsmith/newtech2.html
>
> The Chiao Group at Berkeley is investigating superluminality. Ryan Frewin,
> Renee George, Deborah Paulson have a web page about superluminality, in
> which they say: "...
>
> About ten years ago, Steven Chu and Stephen Wong at AT&T Bell Labs in New
> Jersey measured superluminal velocities for light pulses traveling through
> an absorbing material ...
> In 1991, Anedio Ranfagni et al at the National Institute for Research into
> Electromagnetic Waves in Florence, Italy measured the speed of propagation
> for microwaves through a "forbidden zone" inside square metal w aveguides.
> The reported values were initially less than the speed of light, until the
> experiment was repeated in 1992 with thicker barriers ...
> Also in 1992, Gunter Nimtz and colleagues at the University of Cologne
> reported superluminal speeds for microwaves traversing a similar forbidden
> region ...

> In 1993, the most solid experimental evidence came from Chiao and his
> colleagues Aephraim Steinberg and Paul Kwiat at the University of California
> at Berkeley. Using the Hong-Ou-Mandel interferometer ... they were able to
> measure the tunneling times of visible light. According to Brown, "the
> researchers found that the photons that tunneled their way through the
> optical filter arrived 1.5 femtoseconds sooner than the ones that traveled
> through air. The tunneling photons seemed to have traveled at 1.7 times the
> speed of light" ...
> Similar experiments by Ferenc Krauss et al at the Technical University in
> Vienna in October of 1994 "strongly suggest that as they progressively
> increased the thickness of the barrier the tunneling time saturated toward a
> maximum value" ...
> In March of 1995, at a colloquium in Snowbird, Utah, Nimtz announced that he
> had sent a signal across twelve centimeters of space at 4.7 times the speed
> of light . The signal was a modulation in the frequency of his microwave
> source matching Mozart's 40th Symphony ... Even Chiao and his colleagues
> were adamantly opposed to describing Nimtz' work as the sending of a signal
> ...
> Why was the bar of Mozart's symphony not a signal? ... If a wave packet's
> shape upon incidence is smooth and well- defined, it is a straightforward
> calculation to determine its shape after transmission. Because the final
> shape can be mathematically determined ... most scientists would not
> consider a smoothly varying function to be a signal. ... Chiao and Steinberg
> were quick to point out that Nimtz' symphony was not a signal, but simply a
> smoothly varying pulse. .. A sudden change in the shape would still travel
> at only light speed, and only a sudden change, according to Chiao, could be
> regarded as a signal ... ".
>
> Clearly some things do appear to travel faster than the speed of light in a
> vacuum. The jury appears to be out as to whether any practical use can be
> made of the phenomenon.
>
> Mike G0ULI
>
>

This was in "evanescent mode", in other words, waveguide or something
similar. Not "free space". So very very very unlikely exceeding the
speed of light in a vacuum. As in it didn't. No laws were broken.

tom
K0TAR

1570. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 01:31:39 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <8Imbi.41$RK.2@newsfe12.lga>
Source record: 40374

"amdx" <amdx@knology.net> wrote in message
news:cc5da$466d65c9$18d6b40c$16335@KNOLOGY.NET...
> Are beverage antennas useful at 10Mhz (length adjusted for frequency).
> Do they still have the same pattern?
> Do you still place them 6 to 10ft off the ground?
> Still the same termination resistance and input impedance?
> Thanks for the info.
> Mike
>
Mike,
the same rules for Beverage construction and use apply at 10 MHz, they are
being used with benefit on 14 MHz by contest stations.

Impedance for precise matching and termination should be measured for
particular setup - depends on height, ground conductivity.

For low angle performance length of 2 - 4 wavelength gives narrower beam.
For cleaner lobes phased or staggered configuration is preferred.

Yuri, K3BU.us

1571. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 01:55:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <U2nbi.1100$bP5.903@newssvr19.news.prodigy.net>
Source record: 40375

John, N9JG wrote:
> 1. What do you mean when you state that entangled particles have
> "communications"?
> 2. Entangled particles can not be used to send _information_ at a speed
> greater than the speed of light.

Already answered from another posting:
"Those particles are communicating faster than light
but there is no information flow (yet)."

IMO, it is only a matter of time and effort before
we figure out how to modulate entangled particles.
After all, it took ~250,000 years for us to figure
out how to modulate EM waves.
--
73, Cecil http://www.w5dxp.com

1572. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 01:58:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <L4nbi.1101$bP5.223@newssvr19.news.prodigy.net>
Source record: 40376

Jimmie D wrote:
> the problem isnt with believing space can be empty but believing that space
> is nothing..

Empty and nothing are synonyms.
--
73, Cecil http://www.w5dxp.com

1573. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:04:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2bnbi.14162$RX.11312@newssvr11.news.prodigy.net>
Source record: 40377

Mike Kaliski wrote:
> Clearly some things do appear to travel faster than the speed of light in a
> vacuum. The jury appears to be out as to whether any practical use can be
> made of the phenomenon.

A few centuries ago, the jury was out on whether any practical
use could be made of RF waves. The people who seem to know
what it is possible to know remind me of the patent office
employee who asserted (100+ years ago) that all possible
inventions had already been invented.
--
73, Cecil http://www.w5dxp.com

1574. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:05:51 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Sv-dnTPIvPZ2YvDbnZ2dnUVZ8tSdnZ2d@bt.com>
Source record: 40378

<snip>
> > In 1993, the most solid experimental evidence came from Chiao and his
> > colleagues Aephraim Steinberg and Paul Kwiat at the University of
California
> > at Berkeley. Using the Hong-Ou-Mandel interferometer ... they were able
to
> > measure the tunneling times of visible light. According to Brown, "the
> > researchers found that the photons that tunneled their way through the
> > optical filter arrived 1.5 femtoseconds sooner than the ones that
traveled
> > through air. The tunneling photons seemed to have traveled at 1.7 times
the
> > speed of light" ...
> > Similar experiments by Ferenc Krauss et al at the Technical University
in
> > Vienna in October of 1994 "strongly suggest that as they progressively
> > increased the thickness of the barrier the tunneling time saturated
toward a
> > maximum value" ...
<snip>

> This was in "evanescent mode", in other words, waveguide or something
> similar. Not "free space". So very very very unlikely exceeding the
> speed of light in a vacuum. As in it didn't. No laws were broken.
>
> tom
> K0TAR

Tom,

The speed of light in air is not vastly different from the speed of light in a vacuum. If photons were apparently travelling at 1.7 times the speed of light in air, they clearly must have been exceeding the speed of light in a vacuum.

This result was observed using visible light. Current theory is usually quoted as nothing can travel faster than the speed of light in a vaccum. It is probably more correct to state that objects with mass cannot exceed the speed of light in a vacuum. Photons, having no mass, are not necessarily subject to this rule and seem to be observed travelling at superluminal velocity under certain very specific conditions. If the photons are tunnelling and travelling faster than light in a vacuum, it does not necessarily mean that any laws have been broken.

One way of imagining a way in which this could happen is if a block of material is energised to a high energy state. Photons are continually fired

into the material and are absorbed one by one with atoms within the structure absorbing each new photon. At some point, the material becomes completely saturated and cannot absorb any more photons. When the next photon hits and is absorbed, a shockwave propogates through the material and a photon is emitted from the opposite side travelling at the same speed and in the same direction as the original absorbed photon. Stability is restored and energy is conserved.

But, it is the shockwave that has propogated faster than the speed of light and it is not the original photon that entered the material that is emitted. The emitted photon will contain exactly the same properties as the absorbed photon and the two would be indistinguishable. So the photon appears to have been transmitted through the material at faster than light speed, but no laws have been broken.

A Newtons cradle can help with visualising how this can happen.

Mike G0ULI

1575. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:07:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <jdnbi.14163$RX.4947@newssvr11.news.prodigy.net>
Source record: 40279

Tom Ring wrote:
> This was in "evanescent mode", in other words, waveguide or something
> similar. Not "free space". So very very very unlikely exceeding the
> speed of light in a vacuum. As in it didn't. No laws were broken.

What will happen when the very concept of time
is discredited as merely a human illusion?
--
73, Cecil http://www.w5dxp.com

1576. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:34:10 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <CCnbi.76954$Sa4.13438@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40280

Mike Kaliski wrote:

>
> Tom,
>
> The speed of light in air is not vastly different from the speed of light in
> a vacuum. If photons were apparently travelling at 1.7 times the speed of
> light in air, they clearly must have been exceeding the speed of light in a
> vacuum.
>
> This result was observed using visible light. Current theory is usually
> quoted as nothing can travel faster than the speed of light in a vaccum. It
> is probably more correct to state that objects with mass cannot exceed the
> speed of light in a vacuum. Photons, having no mass, are not necessarily
> subject to this rule and seem to be observed travelling at superluminal
> velocity under certain very specific conditions. If the photons are
> tunnelling and travelling faster than light in a vacuum, it does not
> necessarily mean that any laws have been broken.
>
> One way of imagining a way in which this could happen is if a block of
> material is energised to a high energy state. Photons are continually fired
> into the material and are absorbed one by one with atoms within the
> structure absorbing each new photon. At some point, the material becomes
> completely saturated and cannot absorb any more photons. When the next
> photon hits and is absorbed, a shockwave propogates through the material and
> a photon is emitted from the opposite side travelling at the same speed and
> in the same direction as the original absorbed photon. Stability is restored
> and energy is conserved.
>
> But, it is the shockwave that has propogated faster than the speed of light
> and it is not the original photon that entered the material that is emitted.
> The emitted photon will contain exactly the same properties as the absorbed
> photon and the two would be indistinguishable. So the photon appears to have
> been transmitted through the material at faster than light speed, but no
> laws have been broken.
>
> A Newtons cradle can help with visualising how this can happen.
>
> Mike G0ULI
>

Mike,

You had me fooled. It appeared that you might actually know something.
But that response bent the needle on my bullshit meter.

73,
Gene
W4SZ

1577. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:42:16 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466e07f8$0$21246$39cecf19@news.twtelecom.net>
Source record: 40281

Mike Kaliski wrote:
> <snip>
>>> In 1993, the most solid experimental evidence came from Chiao and his
>>> colleagues Aephraim Steinberg and Paul Kwiat at the University of
> California
>>> at Berkeley. Using the Hong-Ou-Mandel interferometer ... they were able
> to
>>> measure the tunneling times of visible light. According to Brown, "the
>>> researchers found that the photons that tunneled their way through the
>>> optical filter arrived 1.5 femtoseconds sooner than the ones that
> traveled
>>> through air. The tunneling photons seemed to have traveled at 1.7 times
> the
>>> speed of light" ...
>>> Similar experiments by Ferenc Krauss et al at the Technical University
> in
>>> Vienna in October of 1994 "strongly suggest that as they progressively
>>> increased the thickness of the barrier the tunneling time saturated
> toward a
>>> maximum value" ...
> <snip>
>
>> This was in "evanescent mode", in other words, waveguide or something
>> similar. Not "free space". So very very very unlikely exceeding the
>> speed of light in a vacuum. As in it didn't. No laws were broken.
>>
>> tom
>> K0TAR
>
> Tom,
>
> The speed of light in air is not vastly different from the speed of light in
> a vacuum. If photons were apparently travelling at 1.7 times the speed of
> light in air, they clearly must have been exceeding the speed of light in a
> vacuum.
>
> This result was observed using visible light. Current theory is usually
> quoted as nothing can travel faster than the speed of light in a vaccum. It
> is probably more correct to state that objects with mass cannot exceed the
> speed of light in a vacuum. Photons, having no mass, are not necessarily
> subject to this rule and seem to be observed travelling at superluminal
> velocity under certain very specific conditions. If the photons are
> tunnelling and travelling faster than light in a vacuum, it does not
> necessarily mean that any laws have been broken.

>
> One way of imagining a way in which this could happen is if a block of
> material is energised to a high energy state. Photons are continually fired
> into the material and are absorbed one by one with atoms within the
> structure absorbing each new photon. At some point, the material becomes
> completely saturated and cannot absorb any more photons. When the next
> photon hits and is absorbed, a shockwave propogates through the material and
> a photon is emitted from the opposite side travelling at the same speed and
> in the same direction as the original absorbed photon. Stability is restored
> and energy is conserved.
>
> But, it is the shockwave that has propogated faster than the speed of light
> and it is not the original photon that entered the material that is emitted.
> The emitted photon will contain exactly the same properties as the absorbed
> photon and the two would be indistinguishable. So the photon appears to have
> been transmitted through the material at faster than light speed, but no
> laws have been broken.
>
> A Newtons cradle can help with visualising how this can happen.
>
> Mike G0ULI
>
>
>

Keep smoking, it must be good stuff.

tom
K0TAR

1578. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 02:54:10 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466e0ae3$0$17201$39cecf19@news.twtelecom.net>
Source record: 40282

Cecil Moore wrote:
> Jimmie D wrote:
>> the problem isnt with believing space can be empty but believing that
>> space is nothing..
>
> Empty and nothing are synonyms.

And yet say very different things. The difference is important in some
(most?) cases. Which means they really are not synonyms.

tom
K0TAR

1579. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 03:19:03 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <MLudnauyyKCOjPPbnZ2dnUVZ8tmhnZ2d@bt.com>
Source record: 40283

"Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
news:CCnbi.76954$Sa4.13438@bgtnsc05-news.ops.worldnet.att.net...
> Mike Kaliski wrote:
>
> >
> > Tom,
> >
> > The speed of light in air is not vastly different from the speed of
light in
> > a vacuum. If photons were apparently travelling at 1.7 times the speed
of
> > light in air, they clearly must have been exceeding the speed of light
in a
> > vacuum.
> >
> > This result was observed using visible light. Current theory is usually
> > quoted as nothing can travel faster than the speed of light in a vaccum.
It
> > is probably more correct to state that objects with mass cannot exceed
the
> > speed of light in a vacuum. Photons, having no mass, are not necessarily
> > subject to this rule and seem to be observed travelling at superluminal
> > velocity under certain very specific conditions. If the photons are
> > tunnelling and travelling faster than light in a vacuum, it does not
> > necessarily mean that any laws have been broken.
> >
> > One way of imagining a way in which this could happen is if a block of
> > material is energised to a high energy state. Photons are continually
fired
> > into the material and are absorbed one by one with atoms within the
> > structure absorbing each new photon. At some point, the material becomes
> > completely saturated and cannot absorb any more photons. When the next
> > photon hits and is absorbed, a shockwave propogates through the material
and
> > a photon is emitted from the opposite side travelling at the same speed
and
> > in the same direction as the original absorbed photon. Stability is
restored
> > and energy is conserved.
> >
> > But, it is the shockwave that has propogated faster than the speed of
light
> > and it is not the original photon that entered the material that is
emitted.

> > The emitted photon will contain exactly the same properties as the
absorbed
> > photon and the two would be indistinguishable. So the photon appears to
have
> > been transmitted through the material at faster than light speed, but no
> > laws have been broken.
> >
> > A Newtons cradle can help with visualising how this can happen.
> >
> > Mike G0ULI
> >
>
> Mike,
>
> You had me fooled. It appeared that you might actually know something.
> But that response bent the needle on my bullshit meter.
>
> 73,
> Gene
> W4SZ

Gene

I don't claim that this is what does happen, merely propose it as an aid to visualising how the observed results could possibly arise without necessarily violating any of the currently accepted laws of physics. Clearly the experimental results demonstrate something odd is happening in the laboratory and photons are apparently exceeding light speed, which they shouldn't be able to do in light of current knowledge.

I think it must have been a mention of Newton together with quantum phenomena that upsets people :-)

Regards

Mike G0ULI

1580. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 04:16:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <q6pbi.14172$RX.9932@newssvr11.news.prodigy.net>
Source record: 40284

Tom Ring wrote:
> Cecil Moore wrote:
>> Empty and nothing are synonyms.
>
> And yet say very different things. The difference is important in some
> (most?) cases. Which means they really are not synonyms.

From Webster's: "empty - containing nothing"
I guess it depends upon the definition of nothing.
Seems to me, absolute-nothing cannot exist within
our universe.
--
73, Cecil http://www.w5dxp.com

1581. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 04:41:33 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4l85veiu1@nnrp.linuxfan.it>
Source record: 40285

Cecil Moore wrote:

> ...
> After all, it took ~250,000 years for us to figure
> out how to modulate EM waves.

John Smith imagines a caveman shading a fire (newly developed
technology) with a palm frond, jumping in glee, pointing, and declaring,
"Look, I am modulating light! I just wonder what I can do with a
campfire and a blanket?"

And then, I return to work ... and thoughts of cavemen leave ...

Regards,
JS

1582. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 04:47:36 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4l8hbeiu2@nnrp.linuxfan.it>
Source record: 40286

amdx wrote:
> Are beverage antennas useful at 10Mhz (length adjusted for frequency).
> Do they still have the same pattern?
> Do you still place them 6 to 10ft off the ground?
> Still the same termination resistance and input impedance?
> Thanks for the info.
> Mike
>
>

The only reason I have never liked an antenna that terminates in a carbon resistance? Or, a resistor constructed in a manner to eliminate capacitance and inductive reactance?

Well, it simply looks too much like the dummy load I use now and then ...

Why go to all that work (generating a good wave) just to heat the environment?

JS

1583. one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 05:00:14 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <136sai9qdb9ec5c@corp.supernews.com>
Source record: 40287

Is there a site that explores/explains the latest theories on one way propagation? The ARRL antenna book is not much help on the subject.

tnx, AL

1584. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 09:11:04 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns994D16422855Ddoldridgsprintca@64.59.135.159>
Source record: 40288

"Alfred Lorona" <w6wqc@dslextreme.com> wrote in
news:136sai9qdb9ec5c@corp.supernews.com:

> Is there a site that explores/explains the latest theories on one way
> propagation? The ARRL antenna book is not much help on the subject.

Propagation is pretty usually reciprocal. What SEEMS to be one way
conditions is usually the result of high noise (QRN or man-made) audible at
one end of the path, but not the other. I can't even remember any instance
of GENUINE one-way propagation, though I'm sure it occasionally happens.

--
Dave Oldridge+
ICQ 1800667

1585. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 11:13:52 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <_dvbi.61$RK.55@newsfe12.lga>
Source record: 40289

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4l8hbeiu2@nnrp.linuxfan.it...
> amdx wrote:
>> Are beverage antennas useful at 10Mhz (length adjusted for frequency).
>> Do they still have the same pattern?
>> Do you still place them 6 to 10ft off the ground?
>> Still the same termination resistance and input impedance?
>> Thanks for the info.
>> Mike
>
> The only reason I have never liked an antenna that terminates in a carbon
> resistance? Or, a resistor constructed in a manner to eliminate
> capacitance and inductive reactance?
>
> Well, it simply looks too much like the dummy load I use now and then ...
>
> Why go to all that work (generating a good wave) just to heat the
> environment?
>
> JS

This should compete for the honors in the category of most ignorant
statement of the month :-)

Some study of traveling wave antennas and reception techniques should be in
order.

Beverage type of antennas allow to hear stuff that other "miraculous"
antennas can't touch especially on low bands.

See www.TeslaRadio.org and click on PHOTOS and W8LRL to see some 3000 ft
phased and staggered "dummy loads".

73 Yuri, K3BU.us

1586. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 11:15:04 UTC
From: amdx <amdx@knology.net>
Message-ID: <6d1ca$466e8037$18d6b40c$1849@KNOLOGY.NET>
Source record: 40290

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4l8hbeiu2@nnrp.linuxfan.it...
> amdx wrote:
>> Are beverage antennas useful at 10Mhz (length adjusted for frequency).
>> Do they still have the same pattern?
>> Do you still place them 6 to 10ft off the ground?
>> Still the same termination resistance and input impedance?
>> Thanks for the info.
>> Mike

> The only reason I have never liked an antenna that terminates in a carbon
> resistance? Or, a resistor constructed in a manner to eliminate
> capacitance and inductive reactance?
>
> Well, it simply looks too much like the dummy load I use now and then ...
>

> Why go to all that work (generating a good wave) just to heat the
> environment?

Signal to noise ratio.
Mike

1587. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 11:17:57 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <Phvbi.62$RK.47@newsfe12.lga>
Source record: 40291

"Alfred Lorona" <w6wqc@dslextreme.com> wrote in message
news:136sai9qdb9ec5c@corp.supernews.com...
> Is there a site that explores/explains the latest theories on one way
> propagation? The ARRL antenna book is not much help on the subject.
>
> tnx, AL

One possible explanation is in my old CQ article at
http://www.k3bu.us/propagation.htm
Generally the opinions are that it is mainly due to the difference in local
noise levels at different ends of the path, but my experience made me
believe as I tried to explain in the article.

73 Yuri, K3BU.us

1588. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 12:07:24 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <2v2t63d57t5bs4lh7h9o677ot9mjdv25es@4ax.com>
Source record: 40292

On Tue, 12 Jun 2007 02:34:10 GMT, Gene Fuller <W4SZzzzzzz@att.net>
wrote:

>>
>> A Newtons cradle can help with visualising how this can happen.
>>
>> Mike G0ULI
>>
>
>Mike,
>
>You had me fooled. It appeared that you might actually know something.
>But that response bent the needle on my bullshit meter.
>
>73,
>Gene
>W4SZ

FWIW:

http://www.lhup.edu/~dsimanek/scenario/cradle.htm

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

1589. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 13:07:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <OUwbi.25249$YL5.13533@newssvr29.news.prodigy.net>
Source record: 40293

John Smith I wrote:
> Well, it simply looks too much like the dummy load I use now and then ...
> Why go to all that work (generating a good wave) just to heat the
> environment?

If the gain in the desired direction is unaffected
and the gain in the undesired direction is reduced,
what is the downside?
--
73, Cecil http://www.w5dxp.com

1590. New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 13:10:26 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com>
Source record: 40294

Hi,

I have a Uniden 996 scanner and would really like to pick up some marine traffic from Boston Harbor.
Live about 20 miles due west of the harbor.

Have a Scantenna antenna which I think is "pretty good". It's up in my attic.

It's omni directional, and broadband over the typical scanner ranges (supposedly).

I can often pick up coast guard conversations, but very rarely (but ooccassionally) ship traffic.

Do you think a dedicated, very directional, and tuned to the marine freq's would help, or am I just too far away ?

Any thoughts on, or antenna suggestions would be most appreciated.
No idea what to buy, if you feel it's worth a try ?

Very interested in the AIS data being transmitted by ships at around 162 MHz, as well as general marine stuff.

BTW: really surprised that I hear the CG at all. I would have thought that their antennas would be "focused" out to sea, with any propagation going the other way (towards me) minimized to maximize the effectiveness of their radiated power in the direction that it's needed.

Thoughts ?

Thanks,
Bob

1591. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 13:18:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <o2xbi.25250$YL5.23407@newssvr29.news.prodigy.net>
Source record: 40295

John Smith I wrote:
> John Smith imagines a caveman shading a fire (newly developed
> technology) with a palm frond, jumping in glee, pointing, and declaring,
> "Look, I am modulating light! I just wonder what I can do with a
> campfire and a blanket?"

Strangely enough, since the use of fire seems to
date back some 790,000 years, that "caveman" may
not have been a homo sapien.
--
73, Cecil http://www.w5dxp.com

1592. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:12:04 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4m9js$1abg$1@f04n12.cac.psu.edu>
Source record: 40296

Jim Higgins wrote:
> On Tue, 05 Jun 2007 09:21:32 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>
>> Jim Higgins wrote:
>>
>>> ...
>>> This invention will never withstand strict scientific review because
>>> it will be trivial to demonstrate that it doesn't produce more power
>>> than is input in the form of RF. No net excess power produced means
>>> no new power source.
>>> ...
>> At no time did I ever think it was over unity. The law of conservation
>> of energy is just another law awaiting to be "broken", i.e. a new "law"
>> found which acts to the contrary ... after experiencing the insanity of
>> quantum physics, it leaves ones belief system shattered!
>
>
> If quantum physics leaves your belief system shattered, then I'd have
> to say you don't understand quantum physics on even a superficial
> level... or else you're exaggerating your reaction to it. The math
> is a real bitch, but the generalized concepts are easily grasped by
> those who understand classical physics. But that aside, the real
> point is that quantum physics doesn't leave classical physics as a
> broken law to be tossed aside. NASA will continue to use classical
> physics to plot trajectories to the Moon or to Mars.

perhaps we should talk a while on the interesting effects that will be
realized if the law of conservation of energy is "broken".

- 73 de Mike KB3EIA -

1593. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:33:50 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4mase$1abm$1@f04n12.cac.psu.edu>
Source record: 40298

Cecil Moore wrote:

> How about the "Theory of Evolution"? Is it right or wrong?
>
> How about all the JFK "Conspiracy Theories"? Are they all
> "logically self-consistent"?

Just to be sure, The "theory" of evolution is not the same sort of thing as a conspiracy "theory". A lot of problems have arisen out of lumping the two together.

- 73 de Mike KB3EIA -

1594. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:34:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <E5ybi.595$vi5.264@newssvr17.news.prodigy.net>
Source record: 40297

John, N9JG wrote:
> 1. What do you mean when you state that entangled particles have
> "communications"?
> 2. Entangled particles can not be used to send _information_ at a speed
> greater than the speed of light.

From:
http://www.socialtext.net/wired-mag/index.cgi?how_do_entangled_particles_communicate

--Quote: How do entangled particles communicate?
One of the zanier notions in the plenty zany world of quantum
mechanics is that a pair of subatomic particles can sometimes
become ï¿½entangled.ï¿½ This means the fate of one instantly affects
the other, no matter how far apart they are. Itï¿½s such a bizarre
phenomenon that Einstein dissed the idea in the 1930s as ï¿½spooky
action at a distance,ï¿½ saying it showed that the developing model
of the atomic world needed rethinking.

But it turns out that the universe is spooky after all. In 1997,
scientists separated a pair of entangled photons by shooting
them through fiber-optic cables to two villages 6 miles apart.
Tipping one into a particular quantum state forced the other
into the opposite state less than five-trillionths of a second
later, or *nearly 7 million times faster than light* could travel
between the two. Of course, according to relativity, nothing
travels faster than the speed of light - not even information
between particles.

Even the best theories to explain how entanglement gets around
this problem seem preposterous. One, for example, speculates
that signals are shot back through time. Ultimately, the answer
is bound to be unnerving: According to a famous doctrine called
Bellï¿½s Inequality, for entanglement to square with relativity,
either we have no free will or reality is an illusion. Some choice.
--end quote
73, Cecil, w5dxp.com

1595. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:39:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9aybi.597$vi5.446@newssvr17.news.prodigy.net>
Source record: 40299

Michael Coslo wrote:
> perhaps we should talk a while on the interesting effects that will
> be realized if the law of conservation of energy is "broken".

We could start with: Where did all that energy come from
that caused the Big Bang? Why did it wait until the time
of the Big Bang to explode? How long was a second before
the Big Bang? :-)
--
73, Cecil, w5dxp.com

1596. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:42:37 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <43ct63pkns33rn50o3i2d275ap2ujhn5fn@4ax.com>
Source record: 40300

On Tue, 12 Jun 2007 09:10:26 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hi,
>
>I have a Uniden 996 scanner and would really like to pick up some marine
>traffic from Boston Harbor.
>Live about 20 miles due west of the harbor.
>
>Have a Scantenna antenna which I think is "pretty good". It's up in my
>attic.
>
>It's omni directional, and broadband over the typical scanner ranges
>(supposedly).
>
>I can often pick up coast guard conversations, but very rarely (but
>ooccassionally) ship traffic.
>
>Do you think a dedicated, very directional, and tuned to the marine freq's
>would help, or am I just too far away ?
>
>Any thoughts on, or antenna suggestions would be most appreciated.
>No idea what to buy, if you feel it's worth a try ?
>
>Very interested in the AIS data being transmitted by ships at around 162
>MHz, as well as general marine stuff.
>
>BTW: really surprised that I hear the CG at all. I would have thought that
>their antennas would be "focused" out to sea, with any propagation going the
>other way (towards me) minimized to maximize the effectiveness of their
>radiated power in the direction that it's needed.
>
>Thoughts ?
>
>Thanks,
>Bob
>

I suggest you get your antenna out of the attic and put it outside as
high up as you can get it. For VHF height is everything.

Danny, K6MHE

1597. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:44:23 UTC
From: Dave Heil <k8mn@earthlink.net>
Message-ID: <bjybi.3506$tb6.329@newsread3.news.pas.earthlink.net>
Source record: 40301

Cecil Moore wrote:
> John Smith I wrote:
>> Well, it simply looks too much like the dummy load I use now and then ...
>> Why go to all that work (generating a good wave) just to heat the
>> environment?
>
> If the gain in the desired direction is unaffected
> and the gain in the undesired direction is reduced,
> what is the downside?

"John" seems to be telling us that it is an increased carbon footprint. :-)

Dave K8MN

1598. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:46:16 UTC
From: Dave Heil <k8mn@earthlink.net>
Message-ID: <Ykybi.3507$tb6.766@newsread3.news.pas.earthlink.net>
Source record: 40302

Cecil Moore wrote:
> Michael Coslo wrote:
>> perhaps we should talk a while on the interesting effects that will be
>> realized if the law of conservation of energy is "broken".
>
> We could start with: Where did all that energy come from
> that caused the Big Bang? Why did it wait until the time
> of the Big Bang to explode? How long was a second before
> the Big Bang? :-)

You might add:

What set it off?

Where did all of that matter come from?

Where did all of the empty space come from?

Dave K8MN

1599. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 14:58:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Arybi.604$vi5.397@newssvr17.news.prodigy.net>
Source record: 40303

Jim Higgins wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> For instance:
>> The laws of physics based on non-empty space (ether)
>> were discarded only to be revived in different form
>> by the discovery that empty space is far from empty.
>
> This was more akin to replacing the wheel covers on a car than it was
> to replacing the whole car.

More like taking away the entire car, replacing the wheel
covers, and then bringing the car back.

Pre-1887 1. There is a substance filling empty space.
1887 2. There is nothing filling empty space.
Present 3. There is a quantum structure filling empty space.

Incidentally, the shortening and lengthening effects
that Michelson and Morley were looking for were actually
there but rendered undetectable by relativity effects
of which they were, of course, ignorant in 1887.
--
73, Cecil, w5dxp.com

1600. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 15:10:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <tHybi.40209$5j1.37508@newssvr21.news.prodigy.net>
Source record: 40305

Michael Coslo wrote:
> Just to be sure, The "theory" of evolution is not the same sort of
> thing as a conspiracy "theory". A lot of problems have arisen out of
> lumping the two together.

My Southern Baptist Mother (rest her soul) always said that
the theory of evolution was an atheist conspiracy. :-)

And it seems that the theory of evolution has been proved
not to be 100% correct. Man is already, or soon will be,
capable of creating designer species. That's certainly not
random selection. How does manufacturing human blood within
a pig's body fit with the theory of evolution? :-)

How about "string theory", something that cannot even be
tested? Last I heard, there were seven or so competing
string theories - all "logically self-consistent"????
--
73, Cecil, w5dxp.com

1601. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 15:10:37 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1181661086_46065@sp12lax.superfeed.net>
Source record: 40304

Robert11 wrote:
> Hi,
>
> I have a Uniden 996 scanner and would really like to pick up some marine
> traffic from Boston Harbor.
> Live about 20 miles due west of the harbor.
>
> Have a Scantenna antenna which I think is "pretty good". It's up in my
> attic.
>
> It's omni directional, and broadband over the typical scanner ranges
> (supposedly).
>
> I can often pick up coast guard conversations, but very rarely (but
> ooccassionally) ship traffic.

Increasing your antenna height would
probably improve reception more than
increasing antenna gain at that distance.

Theoretically, ships will switch to low
power (~5 watts) when they enter the
harbor, but you should still hear them.

I think pilot-to-tug communication is
done with portable, hand-held radios.
Very low power is needed for distances
on the order of a few hundred feet and
antenna height is quite close to the
water. So you may not be able to hear
these communications from your distance.

If you look here:

http://209.85.165.104/search?q=cache:9k0JXDat8fQJ:chartmaker.ncd.noaa.gov/nsd/Cp1/CP1-37ed-Ch11_1.pdf+boston+harbor+vhf+pilot+tug+communications&hl=en&ct=clnk&cd=2&gl=us
Chapter 11 ■ Coast Pilot 1

you will find some info on which VHF
channels ships would normally use (#13)
in their approach to Boston Harbor.
Also, you can see that transmissions are
brief and occur at specific points.

Unlike the USCG, which recites a 1,000
word, mostly unintelligible, preamble to

every announcement, ship traffic in a crowded harbor is likely to be terse and easy to miss.

A call to the Harbormaster or a posting to a marine newsgroup (rec.boat.electronics) could get a more definitive answer.

Chuck

----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1602. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 15:14:06 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2Lybi.40210$5j1.4014@newssvr21.news.prodigy.net>
Source record: 40306

Jim Higgins wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Empty and nothing are synonyms.
>
> Hardly! A box can be empty, but a box isn't nothing.

I should have said that the definition of
"empty" is "containing nothing".
--
73, Cecil, w5dxp.com

1603. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 15:38:13 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <F5zbi.40213$5j1.16727@newssvr21.news.prodigy.net>
Source record: 40307

Dave Heil wrote:
> You might add:
> What set it off?

Chaotic conditions? One last electron encountering
the singularity?

> Where did all of that matter come from?

A small plasma singularity?

> Where did all of the empty space come from?

It's not empty, i.e. not absolute nothing.
Dark matter? Dark energy?

Presumably, the Big Bang was more energetic than
a Supernova. Heavy elements are created during
a Supernova. Why were no heavy elements created
during the Big Bang?
--
73, Cecil, w5dxp.com

1604. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 15:53:34 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4mfi1$f5o$1@nnrp.linuxfan.it>
Source record: 40308

Cecil Moore wrote:

> ...
> If the gain in the desired direction is unaffected
> and the gain in the undesired direction is reduced,
> what is the downside?

Cecil:

I didn't imply that there was not a desirable phenomenon occurring with this antenna, just that the sheer idea of wasting any amount of rf in a lossy component was repugnant to me ... and, if I were to run a vlf or ulf xmitter, I'd probably have to reconsider and run one. These days it is 80m for late night chats, and usually shf.

Regards,
JS

1605. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 16:10:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4mgic$f5o$2@nnrp.linuxfan.it>
Source record: 40309

Michael Coslo wrote:

> ...
> Just to be sure, The "theory" of evolution is not the same sort of
> thing as a conspiracy "theory". A lot of problems have arisen out of
> lumping the two together.
>
> - 73 de Mike KB3EIA -

I believe "theory of evolution" is highly correct.

Ever toss a hand full of metal, glass and plastic into a mud
puddle--come back a few million years later and start digging up
microwaves, cell phones, mp3 players, etc.?

If not, then you have a faith greater than it takes to have faith in
aliens or God ... our existence is about as strange a mystery as you
will ever find.

I just love those with over-simplified explanations ... occams' razor
seems to dull a bit on this problem.

JS

1606. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 16:36:48 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <M6qdnTOHX5njVvPbRVnyggA@bt.com>
Source record: 40310

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:F5zbi.40213$5j1.16727@newssvr21.news.prodigy.net...
> Dave Heil wrote:
> > You might add:
> > What set it off?
>
> Chaotic conditions? One last electron encountering
> the singularity?
>
> > Where did all of that matter come from?
>
> A small plasma singularity?
>
> > Where did all of the empty space come from?
>
> It's not empty, i.e. not absolute nothing.
> Dark matter? Dark energy?
>
> Presumably, the Big Bang was more energetic than
> a Supernova. Heavy elements are created during
> a Supernova. Why were no heavy elements created
> during the Big Bang?
> --
> 73, Cecil, w5dxp.com

Cecil

Heavy elements are created from precursors that exist prior to the supernova. All fusion reactions up to Iron result in the creation of energy. This is what keeps a star from collapsing under its gravitational mass. Once a star reaches the stage where a given proportion of the core is composed of Iron, not enough energy is given off to prevent the star from a catastrophic gravitational collapse. It is the energy from the gravitational collapse that creates the heavy elements and if the star is big enough, a nova or supernova.

I seem to recall that the big bang by comparison resulted in an initial state that was composed of something in the order of 97% Hydrogen and 3% Helium. The elements condensed from an expanding cloud of sub atomic particles as temperatures (or energy levels) dropped with the expansion. By the time individual atoms had condensed, the particles must have been too far apart to become involved in further fusion reactions until they coalesced under gravity to form stars.

Each new generation of stars contains a higher level of Helium (and heavier elements) than the last and this is used as an indicator for how old a star or galaxy cluster might be.

Mike G0ULI

1607. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 16:56:48 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <tfAbi.12$Kc2.5@newsfe12.lga>
Source record: 40311

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4mfi1$f5o$1@nnrp.linuxfan.it...
> Cecil Moore wrote:
>
> > ...
>> If the gain in the desired direction is unaffected
>> and the gain in the undesired direction is reduced,
>> what is the downside?
>
> Cecil:
>
> I didn't imply that there was not a desirable phenomenon occurring with
> this antenna, just that the sheer idea of wasting any amount of rf in a
> lossy component was repugnant to me ... and, if I were to run a vlf or ulf
> xmitter, I'd probably have to reconsider and run one. These days it is
> 80m for late night chats, and usually shf.
>
> Regards,
> JS

...and the idea that they argue other, more serious things :-)

JS, really, read something about the Beverage and then offer your comments,
or better ask questions if you don't get it..
It is a RECEIVING antenna, and people "waste" power in resistor in Rhombic
antenna if they want to reduce the back lobe.

73 Yuri, K3BU.us

1608. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 17:36:35 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4mluestb1@news.service.uci.edu>
Source record: 40315

Cecil Moore wrote:

> Presumably, the Big Bang was more energetic than
> a Supernova.

Ya think?

> Heavy elements are created during
> a Supernova. Why were no heavy elements created
> during the Big Bang?

How about this: The bigger the explosion the smaller the pieces.

73, ac6xg

1609. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 17:40:39 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4mlqp$ui5$1@nnrp.linuxfan.it>
Source record: 40312

Yuri Blanarovich wrote:
> [stuff]

Yuri:

This is a free country (but, getting less so everyday.)

Perhaps in another country your orders would be followed ... you may worship at the altar of the beverage antenna, trust me man, it is a creator given right, don't let others tell you differently!

JS

1610. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 17:43:57 UTC
From: nm5k@wt.net
Message-ID: <1181670237.259760.33740@i13g2000prf.googlegroups.com>
Source record: 40313

On Jun 12, 7:10 am, "Robert11" <rgs...@notme.com> wrote:
> Hi,

>
> Do you think a dedicated, very directional, and tuned to the marine freq's
> would help, or am I just too far away ?

Sure, I did the same thing once. Except I'm 55-65 miles from the
gulf, instead of 20.. I built a 4 el yagi for 162 mhz.
Worked great, and I could hear boats that didn't exist on the
omni vertical.
MK

1611. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 17:45:23 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <TYAbi.3722$O15.28@trnddc03>
Source record: 40314

"Robert11" <rgsros@notme.com> wrote in message
news:T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com...
> Hi,
>
> I have a Uniden 996 scanner and would really like to pick up some marine
> traffic from Boston Harbor.
> Live about 20 miles due west of the harbor.
>
> Have a Scantenna antenna which I think is "pretty good". It's up in my
> attic.
>
> It's omni directional, and broadband over the typical scanner ranges
> (supposedly).
>
> I can often pick up coast guard conversations, but very rarely (but
> ooccassionally) ship traffic.
>
> Do you think a dedicated, very directional, and tuned to the marine freq's
> would help, or am I just too far away ?
>
> Any thoughts on, or antenna suggestions would be most appreciated.
> No idea what to buy, if you feel it's worth a try ?
>
> Very interested in the AIS data being transmitted by ships at around 162
> MHz, as well as general marine stuff.
>
> BTW: really surprised that I hear the CG at all. I would have thought
> that their antennas would be "focused" out to sea, with any propagation
> going the other way (towards me) minimized to maximize the effectiveness
> of their radiated power in the direction that it's needed.
>
> Thoughts ?
>
> Thanks,
> Bob

Hi Bob

Do you want to try building your own antenna? If so, I'd think a simple
antenna like a J-pole (http://www.hamuniverse.com/jpole.html) would be
worth trying.

Jerry

1612. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:07:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4mnnp$13h$1@news.service.uci.edu>
Source record: 40318

Cecil Moore wrote:

> Why did it wait until the time
> of the Big Bang to explode?

It didn't. The Big Bang was originally scheduled to explode the
following week.

73, ac6xg

1613. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:07:23 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ee0c9$0$17130$4c368faf@roadrunner.com>
Source record: 40316

"Alfred Lorona" <w6wqc@dslextreme.com> wrote in message
news:136sai9qdb9ec5c@corp.supernews.com...
> Is there a site that explores/explains the latest theories on one way
> propagation? The ARRL antenna book is not much help on the subject.
>
> tnx, AL

The closst experience I have with the matter is when the guy on the other end is putting out about 20db more power than I am. I can hear him and he cant hear me. Recent example I was talking with one ogf my local friends on 10m another station from 3K miles comes in and starts talking with my friend, I can hear both sides but the dx station cant hear me because I am on low power on the other hand my friend has switched to legal limit.I cant verify any other situation than this thayt would appear as one way propigation.

Jimmie

1614. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:14:20 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ee269$0$17123$4c368faf@roadrunner.com>
Source record: 40317

<nm5k@wt.net> wrote in message
news:1181670237.259760.33740@i13g2000prf.googlegroups.com...
> On Jun 12, 7:10 am, "Robert11" <rgs...@notme.com> wrote:
>> Hi,
>
>>
>> Do you think a dedicated, very directional, and tuned to the marine
>> freq's
>> would help, or am I just too far away ?
>
> Sure, I did the same thing once. Except I'm 55-65 miles from the
> gulf, instead of 20.. I built a 4 el yagi for 162 mhz.
> Worked great, and I could hear boats that didn't exist on the
> omni vertical.
> MK
>

I used to pick up tons of stuff about 20 miles away with just a vertical
antenna at about 50 ft.
My experience with VHF/UHF in the attic has not been good. I think asphalt
shingles are pretty good RF absorbers at that frequency.

Jimmie

1615. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:25:23 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ee500$0$5211$4c368faf@roadrunner.com>
Source record: 40319

"Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
news:CCnbi.76954$Sa4.13438@bgtnsc05-news.ops.worldnet.att.net...
> Mike Kaliski wrote:
>
>>
>> Tom,
>>
>> The speed of light in air is not vastly different from the speed of light
>> in
>> a vacuum. If photons were apparently travelling at 1.7 times the speed of
>> light in air, they clearly must have been exceeding the speed of light in
>> a
>> vacuum.
>>
>> This result was observed using visible light. Current theory is usually
>> quoted as nothing can travel faster than the speed of light in a vaccum.
>> It
>> is probably more correct to state that objects with mass cannot exceed
>> the
>> speed of light in a vacuum. Photons, having no mass, are not necessarily
>> subject to this rule and seem to be observed travelling at superluminal
>> velocity under certain very specific conditions. If the photons are
>> tunnelling and travelling faster than light in a vacuum, it does not
>> necessarily mean that any laws have been broken.
>>
>> One way of imagining a way in which this could happen is if a block of
>> material is energised to a high energy state. Photons are continually
>> fired
>> into the material and are absorbed one by one with atoms within the
>> structure absorbing each new photon. At some point, the material becomes
>> completely saturated and cannot absorb any more photons. When the next
>> photon hits and is absorbed, a shockwave propogates through the material
>> and
>> a photon is emitted from the opposite side travelling at the same speed
>> and
>> in the same direction as the original absorbed photon. Stability is
>> restored
>> and energy is conserved.
>>
>> But, it is the shockwave that has propogated faster than the speed of
>> light
>> and it is not the original photon that entered the material that is
>> emitted.
>> The emitted photon will contain exactly the same properties as the

>> absorbed
>> photon and the two would be indistinguishable. So the photon appears to
>> have
>> been transmitted through the material at faster than light speed, but no
>> laws have been broken.
>>
>> A Newtons cradle can help with visualising how this can happen.
>>
>> Mike G0ULI
>>
>
> Mike,
>
> You had me fooled. It appeared that you might actually know something. But
> that response bent the needle on my bullshit meter.
>
> 73,
> Gene
> W4SZ

Actually that response is very credable, It is analogous to what happens when electrons travel in a wire. Put an electron in one end of a wire and one pops out the other end almost instantaneously even though the actual speed of electrons flowing ththrough the wire is very, very slow.

Jimmie

1616. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:36:45 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466ee7aa$0$30615$4c368faf@roadrunner.com>
Source record: 40320

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:L4nbi.1101$bP5.223@newssvr19.news.prodigy.net...
> Jimmie D wrote:
>> the problem isnt with believing space can be empty but believing that
>> space is nothing..
>
> Empty and nothing are synonyms.
> --
> 73, Cecil http://www.w5dxp.com

Nope, they are not. And the physicist that explanined it to me made me wish I had never brought up the subject becuse I had planned other things for the evening than her 4 hr explanation. From what I got of it nothing is what exist beyound the boundries of the universe and empty space would have to exist within the universe.

Jimmie

1617. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:40:59 UTC
From: dplatt@radagast.org
Message-ID: <ru53k4-oct.ln1@radagast.org>
Source record: 40321

In article <T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com>,
Robert11 <rgsros@notme.com> wrote:

>Have a Scantenna antenna which I think is "pretty good". It's up in my
>attic.
>
>It's omni directional, and broadband over the typical scanner ranges
>(supposedly).
>
>I can often pick up coast guard conversations, but very rarely (but
>ooccassionally) ship traffic.
>
>Do you think a dedicated, very directional, and tuned to the marine freq's
>would help, or am I just too far away ?

Could very well help, especially if you can get it up above the attic
into clear air. In fact, the height of the antenna may make more
difference than antenna gain/directionality.

My guess is that your current antenna is high enough up to pick up the
shore antennas (which are probably tower- or building-mounted) but is
too low to be in good line-of-sight to the ships themselves.

Review the page at http://www.connect802.com/height.htm - it has a
chart showing the required height-above-ground of an antenna, to "see"
another antenna past the earth's curvature.

>Any thoughts on, or antenna suggestions would be most appreciated.
>No idea what to buy, if you feel it's worth a try ?

Take a look at

http://www.wa5vjb.com/yagi-pdf/cheapyagi.pdf

Simple, decent-performing Yagi antennas that you can throw together
with a piece of one-by-two wood for the beam, some stiff copper wire,
and a soldering iron.

I'd suggest taking the dimensions for the simplest (3-element) 144 MHz
antenna, and rescaling them all by a factor based on the _highest_
marine-band frequency you want to receive. You'll need to rescale the
element lengths, and the distances between the elements. You'll end
up with a Yagi which is intermediate in size between the 144- and
220-MHz versions.

>Very interested in the AIS data being transmitted by ships at around 162
>MHz, as well as general marine stuff.

>
>BTW: really surprised that I hear the CG at all. I would have thought that
>their antennas would be "focused" out to sea, with any propagation going the
>other way (towards me) minimized to maximize the effectiveness of their
>radiated power in the direction that it's needed.

At most, I'd think that they'd use an antenna with a cardioid or
off-center-circular pattern, so that a single shore station's signal
would cover the whole half-circle with fairly equal power. There's
probably still quite a bit of back-spill towards shore - plenty enough
for you to receive. They wouldn't use (or need to use) an antenna
with an extremely high front-to-back ratio, because they have no need
to "reject" transmissions from shore-side... since there probably
aren't any. Increasing the front-to-back ratio would just add
complexity and expense to the antenna, reducing its overall
reliability (more things to break), at no significant benefit in
received-signal quality or desired-direction output power.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1618. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 18:50:24 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f4mptg$1t1$1@nntp1.jpl.nasa.gov>
Source record: 40324

Alfred Lorona wrote:
> Is there a site that explores/explains the latest theories on one way
> propagation? The ARRL antenna book is not much help on the subject.
>
> tnx, AL

One way propagation is possible if there is an anisotropic medium in between (like the ionosphere).

A polarized wave may get rotated in passing through the ionized medium, then refracted differently depending on the polarization. If you envision your launching a beam up to the ionosphere, the place on the ground that it hits after "reflecting" would be different depending on the polarization. If someone in the "reflected spot" sent a beam back to you, it too would get rotated on the way, and might propagate to a spot other than yours.

A good practical example is the glare reducing filters that rely on a linear polarizer followed by a rotator that rotates the polarization 45 degrees. Unpolarized light coming from the display gets rotated and then polarized, and you see half of it. Light coming from behind you gets polarized, rotated, reflected, rotated again, so now it's 90 degrees to the linear polarizer, and blocked.

1619. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:01:39 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466eed81$0$8040$4c368faf@roadrunner.com>
Source record: 40323

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:E5ybi.595$vi5.264@newssvr17.news.prodigy.net...
> John, N9JG wrote:
>> 1. What do you mean when you state that entangled particles have
>> "communications"?
>> 2. Entangled particles can not be used to send _information_ at a speed
>> greater than the speed of light.
>
> From:
> http://www.socialtext.net/wired-mag/index.cgi?how_do_entangled_particles_communicate
>
> --Quote: How do entangled particles communicate?
> One of the zanier notions in the plenty zany world of quantum
> mechanics is that a pair of subatomic particles can sometimes
> become entangled. This means the fate of one instantly affects
> the other, no matter how far apart they are. It's such a bizarre
> phenomenon that Einstein dissed the idea in the 1930s as spooky
> action at a distance, saying it showed that the developing model
> of the atomic world needed rethinking.
>
> But it turns out that the universe is spooky after all. In 1997,
> scientists separated a pair of entangled photons by shooting
> them through fiber-optic cables to two villages 6 miles apart.
> Tipping one into a particular quantum state forced the other
> into the opposite state less than five-trillionths of a second
> later, or *nearly 7 million times faster than light* could travel
> between the two. Of course, according to relativity, nothing
> travels faster than the speed of light - not even information
> between particles.
>
> Even the best theories to explain how entanglement gets around
> this problem seem preposterous. One, for example, speculates
> that signals are shot back through time. Ultimately, the answer
> is bound to be unnerving: According to a famous doctrine called
> Bell's Inequality, for entanglement to square with relativity,
> either we have no free will or reality is an illusion. Some choice.
> --end quote
> 73, Cecil, w5dxp.com
>
Very interesting if you limit yourself to a three dimensional universe. In a
>3 dimensional universe these particle may be adjacent to each other.

1620. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:04:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <C2Cbi.3502$bP5.2262@newssvr19.news.prodigy.net>
Source record: 40322

Jimmie D wrote:
> And the physicist that explanined it to me made me wish
> I had never brought up the subject becuse I had planned other things for the
> evening than her 4 hr explanation. From what I got of it nothing is what
> exist beyound the boundries of the universe and empty space would have to
> exist within the universe.

Outside the universe would be "absolute nothingness"
as opposed to nothing being in an empty bucket within
the universe. It certainly depends upon the definition
of "nothing" that is being used
--
73, Cecil, w5dxp.com

1621. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:12:39 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4mr7f$1d7i$1@f04n12.cac.psu.edu>
Source record: 40325

Cecil Moore wrote:
> Michael Coslo wrote:
>> perhaps we should talk a while on the interesting effects that will be
>> realized if the law of conservation of energy is "broken".
>
> We could start with: Where did all that energy come from
> that caused the Big Bang? Why did it wait until the time
> of the Big Bang to explode? How long was a second before
> the Big Bang? :-)

Well we could Cecil. But before we do, It would be cool to ruminate on a universe that has no restrictions on energy. If energy isn't conserved, that would be the case.

Your big bang questions only hint at the possibilities.

Arthur C Clarke had some interesting thoughts on some of the possible issues from just zero point energy extraction - which does not violate the conservation of energy. See the heat crisis from the space oddysey books.

- 73 de Mike KB3EIA -

1622. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:22:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <NnCbi.25285$YL5.11645@newssvr29.news.prodigy.net>
Source record: 40326

Jimmie D wrote:
> Very interesting if you limit yourself to a three dimensional universe. In a
> >3 dimensional universe these particle may be adjacent to each other.

Or as the quantum physicists say: "Reality is non-local".
Ever read, "Stranger in a Strange Land", by Heinlein?
Valentine Michael Smith sent bad people into that 4th
dimension.
--
73, Cecil, w5dxp.com

1623. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:38:53 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4msod$1d7s$1@f04n12.cac.psu.edu>
Source record: 40327

Cecil Moore wrote:
> Michael Coslo wrote:
>> Just to be sure, The "theory" of evolution is not the same sort of
>> thing as a conspiracy "theory". A lot of problems have arisen out of
>> lumping the two together.
>
> My Southern Baptist Mother (rest her soul) always said that
> the theory of evolution was an atheist conspiracy. :-)

A wonderful lady I'm sure. My mother also did not believe in evolution. She always said "Man did not descend from Apes" She was right on that count, but wrong about evolution.

The theory has stood the test of time. So many other concepts and measurements corroborate with it, and none disprove it. If it is wrong, then most of what we know about the universe is wrong. There will always be details that may indicate that something here or there needs an update. But the basic concept and most of the details has survived much more rigorous testing than the reference material of those who declare it wrong.

> And it seems that the theory of evolution has been proved
> not to be 100% correct. Man is already, or soon will be,
> capable of creating designer species. That's certainly not
> random selection. How does manufacturing human blood within
> a pig's body fit with the theory of evolution? :-)

I'm not sure how that disproves anything regarding the theory. In fact, those things we are tinkering with are just an extension of the theory in the end. Where the pressure to mutate - and therefore change - comes from is not necessarily important i the end, but say we're talking about sheep with human organs in them. Ever wonder what happens to the embryo's and young ones that didn't have the right attributes?

> How about "string theory", something that cannot even be
> tested? Last I heard, there were seven or so competing
> string theories - all "logically self-consistent"????

Lots more than that, even. More flavors than Baskin-Robbins. I can't really speculate a lot on string theory. String always seemed like a "just so" story to me.

- 73 de Mike KB3EIA -

1624. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:47:28 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <kLCbi.149480$p47.82089@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40328

```
Jimmie D wrote:
> "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
>> Mike Kaliski wrote:

[snip]

>>>
>>> One way of imagining a way in which this could happen is if a block of
>>> material is energised to a high energy state. Photons are continually
>>> fired
>>> into the material and are absorbed one by one with atoms within the
>>> structure absorbing each new photon. At some point, the material becomes
>>> completely saturated and cannot absorb any more photons. When the next
>>> photon hits and is absorbed, a shockwave propogates through the material
>>> and
>>> a photon is emitted from the opposite side travelling at the same speed
>>> and
>>> in the same direction as the original absorbed photon. Stability is
>>> restored
>>> and energy is conserved.
>>>
>>> But, it is the shockwave that has propogated faster than the speed of
>>> light
>>> and it is not the original photon that entered the material that is
>>> emitted.
>>> The emitted photon will contain exactly the same properties as the
>>> absorbed
>>> photon and the two would be indistinguishable. So the photon appears to
>>> have
>>> been transmitted through the material at faster than light speed, but no
>>> laws have been broken.
>>>
>>> A Newtons cradle can help with visualising how this can happen.
>>>
>>> Mike G0ULI
>>>
>> Mike,
>>
>> You had me fooled. It appeared that you might actually know something. But
>> that response bent the needle on my bullshit meter.
>>
>> 73,
>> Gene
>> W4SZ
>
```

> Actually that response is very credable, It is analogous to what happens
> when electrons travel in a wire. Put an electron in one end of a wire and
> one pops out the other end almost instantaneously even though the actual
> speed of electrons flowing ththrough the wire is very, very slow.
>
> Jimmie
>

Jimmie,

No particular argument about electrons in a wire. However, the stuff proposed by Mike bears little resemblance to the wire.

How about:

Atoms absorbing photons one by one, i.e. one per atom in a solid? Doesn't match anything I have ever learned.

Material becomes saturated with photons? What is this, a bag of marbles?

Shockwave propagates faster than speed of light? (Yes, I am familiar with Cerenkov radiation. Not interesting in this context.)

Emitted photons contains exactly the same properties as the absorbed photon? How do they get absorbed yet remember everything? How do they know when and where they should pop out the other side?

Every part of that proposed explanation was nonsense.

73,
Gene
W4SZ

1625. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 19:56:59 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466efa79$0$15017$4c368faf@roadrunner.com>
Source record: 40229

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:C2Cbi.3502$bP5.2262@newssvr19.news.prodigy.net...
> Jimmie D wrote:
>> And the physicist that explanined it to me made me wish I had never
>> brought up the subject becuse I had planned other things for the evening
>> than her 4 hr explanation. From what I got of it nothing is what exist
>> beyound the boundries of the universe and empty space would have to exist
>> within the universe.
>
> Outside the universe would be "absolute nothingness"
> as opposed to nothing being in an empty bucket within
> the universe. It certainly depends upon the definition
> of "nothing" that is being used
> --
> 73, Cecil, w5dxp.com

Is there any other kind of nothingness than absolute nothingness?

Jimmie

1626. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 20:01:19 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466efb7c$0$30610$4c368faf@roadrunner.com>
Source record: 40230

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:F5zbi.40213$5j1.16727@newssvr21.news.prodigy.net...
> Dave Heil wrote:
>> You might add:
>> What set it off?
>
> Chaotic conditions? One last electron encountering
> the singularity?
>
>> Where did all of that matter come from?
>
> A small plasma singularity?
>
>> Where did all of the empty space come from?
>
> It's not empty, i.e. not absolute nothing.
> Dark matter? Dark energy?
>
> Presumably, the Big Bang was more energetic than
> a Supernova. Heavy elements are created during
> a Supernova. Why were no heavy elements created
> during the Big Bang?
> --
> 73, Cecil, w5dxp.com

Perhaps the universe existed pretty much thhe way it does now before the Big Bang, Maybe the Big bang is just one niverse passing from one demension to another.

1627. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 20:06:00 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4mub8$1efe$1@f04n12.cac.psu.edu>
Source record: 40231

John Smith I wrote:
> Michael Coslo wrote:
>
> > ...
>> Just to be sure, The "theory" of evolution is not the same sort of
>> thing as a conspiracy "theory". A lot of problems have arisen out of
>> lumping the two together.
>>
>> - 73 de Mike KB3EIA -

> I believe "theory of evolution" is highly correct.
>
> Ever toss a hand full of metal, glass and plastic into a mud
> puddle--come back a few million years later and start digging up
> microwaves, cell phones, mp3 players, etc.?
>
> If not, then you have a faith greater than it takes to have faith in
> aliens or God ... our existence is about as strange a mystery as you
> will ever find.
>
> I just love those with over-simplified explanations ... occams' razor
> seems to dull a bit on this problem.

Did you mean over-simplified explanations (in this case posing as a
question) such as?:

> Ever toss a hand full of metal, glass and plastic into a mud
> puddle--come back a few million years later and start digging up
> microwaves, cell phones, mp3 players, etc.?

Is a specious argument, for some folks. it is wrong for all folks.
If you just want to say "God did it", then have at it. No further
explanation is required, and your argument is noted.

- 73 de Mike KB3EIA -

1628. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 20:12:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <n2Dbi.665$vi5.514@newssvr17.news.prodigy.net>
Source record: 40232

Jimmie D wrote:
> Is there any other kind of nothingness than absolute nothingness?

"nothingness" is defined as empty space. It's
difficult to come up with appropriate words.
--
73, Cecil, w5dxp.com

1629. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 20:16:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Q5Dbi.668$vi5.0@newssvr17.news.prodigy.net>
Source record: 40233

Jimmie D wrote:
> Perhaps the universe existed pretty much thhe way it does now before the Big
> Bang, Maybe the Big bang is just one niverse passing from one deminsion to
> another.

Or maybe it is simply a self-generating fractal. :-)

http://www.stanford.edu/~alinde/1032226.pdf
--
73, Cecil, w5dxp.com

1630. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:46:05 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4n46v$t3$1@nnrp.linuxfan.it>
Source record: 40234

Michael Coslo wrote:

> ...
> Is a specious argument, for some folks. it is wrong for all folks.
> If you just want to say "God did it", then have at it. No further
> explanation is required, and your argument is noted.
>
> - 73 de Mike KB3EIA -

Does nature have a conscious? What purpose does man serve nature? What "pressures" caused nature to create and develop man?

I don't see nature doing anything which suggests an intelligence ...

I don't see chance and probability constructing highly complex "anythings."

Your logic escapes me ...

JS

1631. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:48:22 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466f1493$0$30597$4c368faf@roadrunner.com>
Source record: 40235

"Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
news:kLCbi.149480$p47.82089@bgtnsc04-news.ops.worldnet.att.net...
> Jimmie D wrote:
>> "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
>>> Mike Kaliski wrote:
>
> [snip]
>
>>>>
>>>> One way of imagining a way in which this could happen is if a block of
>>>> material is energised to a high energy state. Photons are continually
>>>> fired
>>>> into the material and are absorbed one by one with atoms within the
>>>> structure absorbing each new photon. At some point, the material
>>>> becomes
>>>> completely saturated and cannot absorb any more photons. When the next
>>>> photon hits and is absorbed, a shockwave propogates through the
>>>> material and
>>>> a photon is emitted from the opposite side travelling at the same speed
>>>> and
>>>> in the same direction as the original absorbed photon. Stability is
>>>> restored
>>>> and energy is conserved.
>>>>
>>>> But, it is the shockwave that has propogated faster than the speed of
>>>> light
>>>> and it is not the original photon that entered the material that is
>>>> emitted.
>>>> The emitted photon will contain exactly the same properties as the
>>>> absorbed
>>>> photon and the two would be indistinguishable. So the photon appears to
>>>> have
>>>> been transmitted through the material at faster than light speed, but
>>>> no
>>>> laws have been broken.
>>>>
>>>> A Newtons cradle can help with visualising how this can happen.
>>>>
>>>> Mike G0ULI
>>>>
>>> Mike,
>>>
>>> You had me fooled. It appeared that you might actually know something.
>>> But that response bent the needle on my bullshit meter.

>>>
>>> 73,
>>> Gene
>>> W4SZ
>>
>> Actually that response is very credable, It is analogous to what happens
>> when electrons travel in a wire. Put an electron in one end of a wire and
>> one pops out the other end almost instantaneously even though the actual
>> speed of electrons flowing ththrough the wire is very, very slow.
>>
>> Jimmie
>
> Jimmie,
>
> No particular argument about electrons in a wire. However, the stuff
> proposed by Mike bears little resemblance to the wire.
>
> How about:
>
> Atoms absorbing photons one by one, i.e. one per atom in a solid? Doesn't
> match anything I have ever learned.
>
> Material becomes saturated with photons? What is this, a bag of marbles?
>
> Shockwave propagates faster than speed of light? (Yes, I am familiar with
> Cerenkov radiation. Not interesting in this context.)
>
> Emitted photons contains exactly the same properties as the absorbed
> photon? How do they get absorbed yet remember everything? How do they know
> when and where they should pop out the other side?
>
> Every part of that proposed explanation was nonsense.
>
> 73,
> Gene
> W4SZ
>
>
Yes, nonsense as we now understand it, most great breakthroughs in physics
have at one time or other appeared to be nonsense, The Earth is a sphere,
the sun is 93,000,000 miles away, pepole can fly were all considered
nonsense at time. It is sometime difficult to keep a grasp on reality while
still being able to ponder the things that make for truly great break
throughs in science.

Jimmie

1632. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:50:02 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4n4eg$2fr$1@nnrp.linuxfan.it>
Source record: 40236

Cecil Moore wrote:

> ...
> Or maybe it is simply a self-generating fractal. :-)
>
> http://www.stanford.edu/~alinde/1032226.pdf
> --
> 73, Cecil, w5dxp.com

Or, maybe I am just imagining all this, and y'all don't even exist!
Just a "brain in a bottle" on some aliens shelf in his lab!

Hey, don't get me wrong, it could be worse, at least it keeps me from
being bored. ;-)

Regards,
JS

1633. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:54:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466f161e$0$5220$4c368faf@roadrunner.com>
Source record: 40237

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:n2Dbi.665$vi5.514@newssvr17.news.prodigy.net...
> Jimmie D wrote:
>> Is there any other kind of nothingness than absolute nothingness?
>
> "nothingness" is defined as empty space. It's
> difficult to come up with appropriate words.

Not when you are talking about physics.

In physics even empty space is something..

that which is beyound the universe is not empty space, it is just nothing.
> --
> 73, Cecil, w5dxp.com

1634. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:55:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2DEbi.14784$rO7.9233@newssvr25.news.prodigy.net>
Source record: 40239

John Smith I wrote:
> I don't see nature doing anything which suggests an intelligence ...

Do you see homo sapiens "doing anything which
suggests an intelligence?" :-)

I once picked up a book in the university
library entitled: "Is There Intelligent
Life in the Universe". One of the chapters
was: "Is There Intelligent Life on Earth?"
I assume that question is still open. :-)
--
73, Cecil http://www.w5dxp.com

1635. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:55:15 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <S7mdnd9MV4e9i_LbRVnyjwA@bt.com>
Source record: 40238

"Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
news:kLCbi.149480$p47.82089@bgtnsc04-news.ops.worldnet.att.net...
> Jimmie D wrote:
> > "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
> >> Mike Kaliski wrote:
>
> [snip]
>
> >>>
> >>> One way of imagining a way in which this could happen is if a block of
> >>> material is energised to a high energy state. Photons are continually
> >>> fired
> >>> into the material and are absorbed one by one with atoms within the
> >>> structure absorbing each new photon. At some point, the material
becomes
> >>> completely saturated and cannot absorb any more photons. When the next
> >>> photon hits and is absorbed, a shockwave propogates through the
material
> >>> and
> >>> a photon is emitted from the opposite side travelling at the same
speed
> >>> and
> >>> in the same direction as the original absorbed photon. Stability is
> >>> restored
> >>> and energy is conserved.
> >>>
> >>> But, it is the shockwave that has propogated faster than the speed of
> >>> light
> >>> and it is not the original photon that entered the material that is
> >>> emitted.
> >>> The emitted photon will contain exactly the same properties as the
> >>> absorbed
> >>> photon and the two would be indistinguishable. So the photon appears
to
> >>> have
> >>> been transmitted through the material at faster than light speed, but
no
> >>> laws have been broken.
> >>>
> >>> A Newtons cradle can help with visualising how this can happen.
> >>>
> >>> Mike G0ULI
> >>>
> >> Mike,

> >>
> >> You had me fooled. It appeared that you might actually know something.
But
> >> that response bent the needle on my bullshit meter.
> >>
> >> 73,
> >> Gene
> >> W4SZ
> >
> > Actually that response is very credable, It is analogous to what happens
> > when electrons travel in a wire. Put an electron in one end of a wire
and
> > one pops out the other end almost instantaneously even though the actual
> > speed of electrons flowing ththrough the wire is very, very slow.
> >
> > Jimmie
> >
>
> Jimmie,
>
> No particular argument about electrons in a wire. However, the stuff
> proposed by Mike bears little resemblance to the wire.
>
> How about:
>
> Atoms absorbing photons one by one, i.e. one per atom in a solid?
> Doesn't match anything I have ever learned.
>
> Material becomes saturated with photons? What is this, a bag of marbles?
>
> Shockwave propagates faster than speed of light? (Yes, I am familiar
> with Cerenkov radiation. Not interesting in this context.)
>
> Emitted photons contains exactly the same properties as the absorbed
> photon? How do they get absorbed yet remember everything? How do they
> know when and where they should pop out the other side?
>
> Every part of that proposed explanation was nonsense.
>
> 73,
> Gene
> W4SZ
>
>

Gene

Fair comment.

What I was proposing was a way of imagining how such a process could happen.
Such a simplistic explanation is almost certainly completely false. I was

trying to illustrate how superluminal phenomena could exist within our current laws of physics but using as yet unrecognised means of propagation. It might have been equally valid to state that certain photons upon hitting an impervious barrier, drop out of our universe, traverse some unknown dimension, and pop back into existence on the other side of the barrier. That might have been a little more difficult for people to reconcile with processes they already know and understand.

It is a notoriously difficult problem to detect and measure fast moving phenomena with little or no mass. The experiments to capture and identify the different types of neutrinos are a prime example.

I suspect that neither you, me or anybody else currently has a completely credible explanation for the observed superluminal phenomena.

Regards

Mike G0ULI

1636. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 21:57:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CFEbi.14785$rO7.4410@newssvr25.news.prodigy.net>
Source record: 40240

Jimmie D wrote:
> In physics even empty space is something..

But that is only recently. It once was nothing.
--
73, Cecil http://www.w5dxp.com

1637. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 22:07:18 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <rqadnbucvNVvhfLbRVnygQA@bt.com>
Source record: 40241

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:466efa79$0$15017$4c368faf@roadrunner.com...
>
> Is there any other kind of nothingness than absolute nothingness?
>
> Jimmie
>
A philosophical point.

Just as there are various degrees of infinity, an infinity of odd numbers, an infinity of even numbers, an infinity of fractions between zero and one, allegedly an infinite series of numbers after the decimal point of Pi, an infinity of infinities...

Consider there could be various degrees of nothingness, vacuum - absence of atoms, absolute zero - absence of heat, absolute nothingness - the area 'outside' the universe. Words are inadequate to express such concepts.

Mike G0ULI

1638. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 22:17:32 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <aYEbi.34$Kc2.33@newsfe12.lga>
Source record: 40242

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4mlqp$ui5$1@nnrp.linuxfan.it...
> Yuri Blanarovich wrote:
> > [stuff]
>
> Yuri:
>
> This is a free country (but, getting less so everyday.)
>
> Perhaps in another country your orders would be followed ... you may
> worship at the altar of the beverage antenna, trust me man, it is a
> creator given right, don't let others tell you differently!
>
> JS

What was that Forrest Gump said?

More "brilliance" emanating from JS.

1639. glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 22:23:17 UTC
From: larya <larya@rogers.com>
Message-ID: <1181686997.644511.198400@d30g2000prg.googlegroups.com>
Source record: 40243

Sorry if I used the wrong words... but I am curious as to how those glass mounted antennas work... Is there a toutorial that explains it?...Larry ve3fxq

1640. Re: Beverage Ant. at ShortWave freq.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 22:25:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4n6gd$t3$2@nnrp.linuxfan.it>
Source record: 40244

Yuri Blanarovich wrote:

> ...
> What was that Forrest Gump said?
>
> More "brilliance" emanating from JS.

Your questionable input ends ...

PLONK!

JS

1641. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 22:57:33 UTC
From: rmount@bigpond.net.au
Message-ID: <1181689053.074004.199120@r19g2000prf.googlegroups.com>
Source record: 40245

On Jun 13, 8:23 am, larya <l...@rogers.com> wrote:
> Sorry if I used the wrong words... but I am curious as to how those
> glass mounted antennas work... Is there a toutorial that explains
> it?...Larry ve3fxq

I would"t waste my time with on glass antennas,if you can use a roof-
rack and mount a whip etc in the middle of it .....
hope this helps you ....

de bob vk4la

1642. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 23:00:01 UTC
From: rmount@bigpond.net.au
Message-ID: <1181689201.110203.163750@a26g2000pre.googlegroups.com>
Source record: 40246

On Jun 10, 4:00 am, g...@mendelson.com (Geoffrey S. Mendelson) wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
> IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
> Visit my 'blog athttp://geoffstechno.livejournal.com/

hi Geof, i have always uses a nebch-grinder with a wire wheel,it will
clean up the alluminium like new .....or even steel wool will do the
trick ....

bob vk4la

1643. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 23:06:57 UTC
From: rmount@bigpond.net.au
Message-ID: <1181689617.815546.178180@a26g2000pre.googlegroups.com>
Source record: 40247

On Jun 12, 11:10 pm, "Robert11" <rgs...@notme.com> wrote:
> Hi,
>
> I have a Uniden 996 scanner and would really like to pick up some marine
> traffic from Boston Harbor.
> Live about 20 miles due west of the harbor.
>
> Have a Scantenna antenna which I think is "pretty good". It's up in my
> attic.
>
> It's omni directional, and broadband over the typical scanner ranges
> (supposedly).
>
> I can often pick up coast guard conversations, but very rarely (but
> ooccassionally) ship traffic.
>
> Do you think a dedicated, very directional, and tuned to the marine freq's
> would help, or am I just too far away ?
>
> Any thoughts on, or antenna suggestions would be most appreciated.
> No idea what to buy, if you feel it's worth a try ?
>
> Very interested in the AIS data being transmitted by ships at around 162
> MHz, as well as general marine stuff.
>
> BTW: really surprised that I hear the CG at all. I would have thought that
> their antennas would be "focused" out to sea, with any propagation going the
> other way (towards me) minimized to maximize the effectiveness of their
> radiated power in the direction that it's needed.
>
> Thoughts ?
>
> Thanks,
> Bob

hi bob ..if you want really good reception on vhf marine band ,you
should consider buying a ham 2mtr band base antenna .
these work on 147mhz and will work just as good on the marine band for
receive.

hope this helps ...
bob vk4la in australia

1644. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-12 23:07:45 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <tMWdnc8WlqOCuvLbnZ2dnUVZ8vmdnZ2d@bt.com>
Source record: 40248

"larya" <larya@rogers.com> wrote in message
news:1181686997.644511.198400@d30g2000prg.googlegroups.com...
> Sorry if I used the wrong words... but I am curious as to how those
> glass mounted antennas work... Is there a toutorial that explains
> it?...Larry ve3fxq
>

Larry,

The principle is very simple for vhf/uhf antennas. A pair of rectangular metal plates, usually brass or copper, a couple of inches square are fixed either side of the window glass. The two plates form the plates of a capacitor with the glass acting as a dielectric. The coax centre is connected to the centre of the plate inside the vehicle, with the screen being bonded to vehicle earth via the transceiver or wired directly, the screen is also connected to the edge of the inside plate via a small preset capacitor. The capacitor is adjusted for lowest SWR. A wire antenna is connected directly to the plate on the outside of the vehicle. At vhf/uhf frequencies, the capacitance between the two metal plates passes a fair amount of the signal through.

There are a few things to look out for. Don't fix the plates over areas of glass containing demist wires. Vehicles with metallised/solar glass screens may not be suitable for this type of antenna. At high transmitter powers, the plates heat up and can cause damage to laminated glass. Larger plates disipate more heat but 25 watts is probably the maximum power it is advisable to use.

The ARRL website contains design details, unfortunately for members only. Details also appear in the ARRL Antenna Book.

It is probably fair to say that a glass mount antenna should be used as a last resort, when no other type of antenna installation is possible, loaned or hire vehicle, vintage vehicle etc. A magnetic mount antenna system usually offers far better performance all other things being equal, with fixed antenna systems being the most efficient of all.

The external mounting point (position and design) may be subject to local vehicle construction and use regulations relating to the security of external fittings and risks poses to other road users.

Mike G0ULI

1645. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 00:58:12 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466f4115$0$21246$39cecf19@news.twtelecom.net>
Source record: 40249

Jimmie D wrote:
> "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
<snip>
>> when and where they should pop out the other side?
>>
>> Every part of that proposed explanation was nonsense.
>>
>> 73,
>> Gene
>> W4SZ
>>
>>
> Yes, nonsense as we now understand it, most great breakthroughs in physics
> have at one time or other appeared to be nonsense, The Earth is a sphere,
> the sun is 93,000,000 miles away, pepole can fly were all considered
> nonsense at time. It is sometime difficult to keep a grasp on reality while
> still being able to ponder the things that make for truly great break
> throughs in science.
>
> Jimmie
>
>

Which require one really important thing, proof, in the form of documented facts that are reproducible by others. They are missing here. If it was done in 93 or 95 or whatever (I found more than I date for the claim on the net), there has certainly been plenty of time for someone else to confirm the results. Especially considering how much research is done in precisely this area.

"This area" being making EM waves go faster or slower that normal in a given physical situation, and even stopping them for short periods of time.

tom
K0TAR

1646. Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:00:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <5532d$466f419c$18d6b40c$8339@KNOLOGY.NET>
Source record: 40250

I'm comparing elevation plots of an antenna. They have different
forward gains, this makes it difficult to compare the lobe shape.

Is there a way to equalize the gains to do a comparison?

Example: I have an antenna that is -19dbi and one that is -23dbi.
Can I add 4db of gain to one to make the comparison easier?
Mike

1647. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:16:24 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466f4559$0$21250$39cecf19@news.twtelecom.net>
Source record: 40251

amdx wrote:
> I'm comparing elevation plots of an antenna. They have different
> forward gains, this makes it difficult to compare the lobe shape.
>
> Is there a way to equalize the gains to do a comparison?
>
>
> Example: I have an antenna that is -19dbi and one that is -23dbi.
> Can I add 4db of gain to one to make the comparison easier?
> Mike
>
>

I am wondering what type of antenna has -19 or -23 dBi gain. I would speculate that they are quite omnidirectional, and the patterns wouldn't be significantly different.

It's tough to get gain that low unintentionally. If they are commercial, could you please point me at a web site? I'd love to see why they made these.

tom
K0TAR

1648. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:20:13 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466f463d$0$21250$39cecf19@news.twtelecom.net>
Source record: 40252

Tom Ring wrote:
> Jimmie D wrote:
>> "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
> <snip>
>>> when and where they should pop out the other side?
>>>
>>> Every part of that proposed explanation was nonsense.
>>>
>>> 73,
>>> Gene
>>> W4SZ
>>>
>>>
>> Yes, nonsense as we now understand it, most great breakthroughs in
>> physics have at one time or other appeared to be nonsense, The Earth
>> is a sphere, the sun is 93,000,000 miles away, pepole can fly were all
>> considered nonsense at time. It is sometime difficult to keep a grasp
>> on reality while still being able to ponder the things that make for
>> truly great break throughs in science.
>>
>> Jimmie
>>
>
> Which require one really important thing, proof, in the form of
> documented facts that are reproducible by others. They are missing
> here. If it was done in 93 or 95 or whatever (I found more than I date
> for the claim on the net), there has certainly been plenty of time for
> someone else to confirm the results. Especially considering how much
> research is done in precisely this area.
>
> "This area" being making EM waves go faster or slower that normal in a
> given physical situation, and even stopping them for short periods of time.
>
> tom
> K0TAR

My apologies for typos, as I am using a new news client and it does
replies in an absurdly small typeface. When I make a mistake, I can't
see it.

tom
K0TAR

1649. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:21:44 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466f4698$0$5174$4c368faf@roadrunner.com>
Source record: 40253

<rmount@bigpond.net.au> wrote in message
news:1181689201.110203.163750@a26g2000pre.googlegroups.com...
> On Jun 10, 4:00 am, g...@mendelson.com (Geoffrey S. Mendelson) wrote:
>> I have Cushraft 2m vertical antenna made out of aluminum. It has been
>> sitting out in the weather for 10 years and could use a good cleaning.
>>
>> Anyone have any suggestions for common household products that would
>> do the job?
>>
>> Thanks,
>>
>> Geoff.
>> --
>> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
>> IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
>> Visit my 'blog athttp://geoffstechno.livejournal.com/
>
> hi Geof, i have always uses a nebch-grinder with a wire wheel,it will
> clean up the alluminium like new .....or even steel wool will do the
> trick ....
>
> bob vk4la
>

I tried steel wool on AL once. It left little bits of the wool imbeded in
the AL that soon rust.

Jimmie

1650. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:31:02 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <DZ-dnX-F750l1fLbnZ2dnUVZ8seinZ2d@bt.com>
Source record: 40254

"Tom Ring" <news0003@taring.org> wrote in message
news:466f4115$0$21246$39cecf19@news.twtelecom.net...
> Jimmie D wrote:
> > "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
> <snip>
> >> when and where they should pop out the other side?
> >>
> >> Every part of that proposed explanation was nonsense.
> >>
> >> 73,
> >> Gene
> >> W4SZ
> >>
> >>
> > Yes, nonsense as we now understand it, most great breakthroughs in
physics
> > have at one time or other appeared to be nonsense, The Earth is a
sphere,
> > the sun is 93,000,000 miles away, pepole can fly were all considered
> > nonsense at time. It is sometime difficult to keep a grasp on reality
while
> > still being able to ponder the things that make for truly great break
> > throughs in science.
> >
> > Jimmie
> >
> >
>
> Which require one really important thing, proof, in the form of
> documented facts that are reproducible by others. They are missing
> here. If it was done in 93 or 95 or whatever (I found more than I date
> for the claim on the net), there has certainly been plenty of time for
> someone else to confirm the results. Especially considering how much
> research is done in precisely this area.
>
> "This area" being making EM waves go faster or slower that normal in a
> given physical situation, and even stopping them for short periods of
time.
>
> tom
> K0TAR

Tom,

These experiments are time consuming, tricky (very sensitive to external influences) and expensive to conduct, yielding results close to the limits of what is measurable. Unfortunately this isn't the sort of research that can be conducted by an amateur in a shed in the back yard. Unless commercial applications for experimental findings are found, funds are rapidly switched to other areas of research looking for a new discovery that might make a profit.

It's just the way that capitalism works.

Mike G0ULI

1651. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:53:21 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466f4dfe$0$3192$4c368faf@roadrunner.com>
Source record: 40255

>
> It is probably fair to say that a glass mount antenna should be used as a
> last resort, when no other type of antenna installation is possible,
> loaned
> or hire vehicle, vintage vehicle etc. A magnetic mount antenna system
> usually offers far better performance all other things being equal, with
> fixed antenna systems being the most efficient of all.
>
> The external mounting point (position and design) may be subject to local
> vehicle construction and use regulations relating to the security of
> external fittings and risks poses to other road users.
>
> Mike G0ULI
>
>

Mag mount antennas may be the worst way to go if you are concerned about damage to the vehicle. A little grit under the magnet can do a lot of damage to a paint job. The kind of damage that hurts resale value. On the other hand drilling a hole has no effect at all, just plug the hole with a rubber plug designed for that purpose.

Jimmie

1652. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 01:56:40 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <466f4ec5$0$5202$4c368faf@roadrunner.com>
Source record: 40256

"Tom Ring" <news0003@taring.org> wrote in message
news:466f4559$0$21250$39cecf19@news.twtelecom.net...
> amdx wrote:
>> I'm comparing elevation plots of an antenna. They have different
>> forward gains, this makes it difficult to compare the lobe shape.
>>
>> Is there a way to equalize the gains to do a comparison?
>>
>>
>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>> Can I add 4db of gain to one to make the comparison easier?
>> Mike
>>
>>
>
> I am wondering what type of antenna has -19 or -23 dBi gain. I would
> speculate that they are quite omnidirectional, and the patterns wouldn't
> be significantly different.
>
> It's tough to get gain that low unintentionally. If they are commercial,
> could you please point me at a web site? I'd love to see why they made
> these.
>
> tom
> K0TAR

Very broadbanded.

1653. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 02:18:29 UTC
From: Mike Lucas <w5chr@bellsouth.net>
Message-ID: <LvIbi.127$kR2.56@bignews1.bellsouth.net>
Source record: 40257

"Mike Kaliski" wrote
> These experiments are time consuming, tricky (very sensitive to external
> influences) and expensive to conduct, yielding results close to the
> limits
> of what is measurable. Unfortunately this isn't the sort of research that
> can be conducted by an amateur in a shed in the back yard. Unless
> commercial
> applications for experimental findings are found, funds are rapidly
> switched
> to other areas of research looking for a new discovery that might make a
> profit.
>
> It's just the way that capitalism works.
>
> Mike G0ULI
>
This is EXACTLY why it Art is having such a difficult time with his Gaussian
antenna project. I think it highly unlikely that aluminium foil on tapered
fish-poles
will offer the repeatability that Gaussian equilibrium demands, since the
skin depth
is so large in ALL units. Perhaps if he made better models available, those
of us
who have a true desire to see his work progress would be able to contribute
something to advancement of antenna history.

Mike W5CHR

1654. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 03:45:47 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466f685b$0$21252$39cecf19@news.twtelecom.net>
Source record: 40258

```
Mike Kaliski wrote:
> "Tom Ring" <news0003@taring.org> wrote in message
> news:466f4115$0$21246$39cecf19@news.twtelecom.net...
>> Jimmie D wrote:
>>> "Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
>> <snip>
>>>> when and where they should pop out the other side?
>>>>
>>>> Every part of that proposed explanation was nonsense.
>>>>
>>>> 73,
>>>> Gene
>>>> W4SZ
>>>>
>>>>
>>> Yes, nonsense as we now understand it, most great breakthroughs in
> physics
>>> have at one time or other appeared to be nonsense, The Earth is a
> sphere,
>>> the sun is 93,000,000 miles away, pepole can fly were all considered
>>> nonsense at time. It is sometime difficult to keep a grasp on reality
> while
>>> still being able to ponder the things that make for truly great break
>>> throughs in science.
>>>
>>> Jimmie
>>>
>>>
>> Which require one really important thing, proof, in the form of
>> documented facts that are reproducible by others. They are missing
>> here. If it was done in 93 or 95 or whatever (I found more than I date
>> for the claim on the net), there has certainly been plenty of time for
>> someone else to confirm the results. Especially considering how much
>> research is done in precisely this area.
>>
>> "This area" being making EM waves go faster or slower that normal in a
>> given physical situation, and even stopping them for short periods of
> time.
>> tom
>> K0TAR
>
> Tom,
>
> These experiments are time consuming, tricky (very sensitive to external
```

> influences) and expensive to conduct, yielding results close to the limits
> of what is measurable. Unfortunately this isn't the sort of research that
> can be conducted by an amateur in a shed in the back yard. Unless commercial
> applications for experimental findings are found, funds are rapidly switched
> to other areas of research looking for a new discovery that might make a
> profit.
>
> It's just the way that capitalism works.
>
> Mike G0ULI
>
>

And yet they are done all the time by Universities and commercial labs.
Sorry, I don't buy your excuse. If you were a slashdot.org regular,
you would have noticed that reports on exactly this subject come through
every 2 weeks to a month. And many other science news sources report
the same events.

Again, I don't buy your excuse.

tom
K0TAR

1655. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 03:48:15 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <466f68ef$0$21252$39cecf19@news.twtelecom.net>
Source record: 40259

Jimmie D wrote:

>> I am wondering what type of antenna has -19 or -23 dBi gain. I would
>> speculate that they are quite omnidirectional, and the patterns wouldn't
>> be significantly different.
>>
>> It's tough to get gain that low unintentionally. If they are commercial,
>> could you please point me at a web site? I'd love to see why they made
>> these.
>>
>> tom
>> K0TAR
>
> Very broadbanded.
>
>

Ridiculous.

tom
K0TAR

1656. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 03:50:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zQJbi.15597$y_7.3658@newssvr27.news.prodigy.net>
Source record: 40260

amdx wrote:
> I'm comparing elevation plots of an antenna. They have different
> forward gains, this makes it difficult to compare the lobe shape.
>
> Is there a way to equalize the gains to do a comparison?
>
> Example: I have an antenna that is -19dbi and one that is -23dbi.
> Can I add 4db of gain to one to make the comparison easier?
> Mike

Under 'Desc Options', under '2D Misc', under 'Outer Ring',
you can set the gain of the outer ring to -19 dBi for
both antennas.
--
73, Cecil http://www.w5dxp.com

1657. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 04:12:13 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns994E223AA1CBmcoslocomcastnet@216.196.97.136>
Source record: 40261

Andrea <fuffa2k5@gmail.com> wrote in news:1181550846.846262.75560
@m36g2000hse.googlegroups.com:

> One more thing is not clear to me:
> If I use a 1/4 wave wire, where are the 6000 ohms?
> Near the feed point or on the far end?

It will be at the far end of the antenna, Andrea.

- 73 de Mike KB3EIA -

1658. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 05:19:06 UTC
From: gsm@mendelson.com
Message-ID: <slrnf6uvc7.ml3.gsm@cable.mendelson.com>
Source record: 40262

rmount@bigpond.net.au wrote:

> hi Geof, i have always uses a nebch-grinder with a wire wheel,it will
> clean up the alluminium like new .....or even steel wool will do the
> trick ....

Thanks, it does sound like a bit much for me.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

1659. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 07:28:02 UTC
From: Jeff <jeff@local.host>
Message-ID: <466f9cb5$0$1351$834e42db@reader.greatnowhere.com>
Source record: 40263

> Larry,
>
> The principle is very simple for vhf/uhf antennas. A pair of rectangular
> metal plates, usually brass or copper, a couple of inches square are fixed
> either side of the window glass. The two plates form the plates of a
> capacitor with the glass acting as a dielectric. The coax centre is
> connected to the centre of the plate inside the vehicle, with the screen
> being bonded to vehicle earth via the transceiver or wired directly, the
> screen is also connected to the edge of the inside plate via a small
> preset
> capacitor. The capacitor is adjusted for lowest SWR. A wire antenna is
> connected directly to the plate on the outside of the vehicle. At vhf/uhf
> frequencies, the capacitance between the two metal plates passes a fair
> amount of the signal through.
>

That doesn't quite tie up with the ones that I have taken apart. On those the matching box contained a parallel tuned circuit with the coax screen connected to the cold end and the 'inside' plate to the top, 'hot', end of the tuned circuit. The coax inner was tapped a short way up the coil.

The whip is something close to a half wave, which is end fed, and of course high impedance at that point, so it requires very little capacitance through the glass to achieve very good coupling.

Through glass antennas do work very well, but they are sensitive to the composition of the glass; tinting and reflective metal coatings have a detrimental effect on performance. I have used and made several home brew versions with results similar to a mag mount on the roof.

73
Jeff
G8HUL

1660. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 09:09:41 UTC
From: Andrea <fuffa2k5@gmail.com>
Message-ID: <1181725781.864121.195400@i38g2000prf.googlegroups.com>
Source record: 40264

On Jun 13, 6:12 am, Mike Coslo <mco...@youknow.comcast.net> wrote:
> Andrea <fuffa...@gmail.com> wrote in news:1181550846.846262.75560
> @m36g2000hse.googlegroups.com:
>
> > One more thing is not clear to me:
> > If I use a 1/4 wave wire, where are the 6000 ohms?
> > Near the feed point or on the far end?
>
> It will be at the far end of the antenna, Andrea.
>
> - 73 de Mike KB3EIA -

Thanks everybody.
Andrea.

1661. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 10:16:50 UTC
From: Dave <noone@nowhere.com>
Message-ID: <muPbi.10807$Ar5.10317@trndny01>
Source record: 40265

"Tom Ring" <news0003@taring.org> wrote in message
news:466f4559$0$21250$39cecf19@news.twtelecom.net...
> amdx wrote:
>> I'm comparing elevation plots of an antenna. They have different
>> forward gains, this makes it difficult to compare the lobe shape.
>>
>> Is there a way to equalize the gains to do a comparison?
>>
>>
>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>> Can I add 4db of gain to one to make the comparison easier?
>> Mike
>>
>>
>
> I am wondering what type of antenna has -19 or -23 dBi gain. I would
> speculate that they are quite omnidirectional, and the patterns wouldn't
> be significantly different.
>
> It's tough to get gain that low unintentionally. If they are commercial,
> could you please point me at a web site? I'd love to see why they made
> these.
>
> tom
> K0TAR

but 0dBi would be perfectly omnidirectional by definition. either he is
reading the scale wrong or is looking at f/b ratio instead of gain, or maybe
looking at depth of a null or sidelobes.

1662. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 10:56:36 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-1306070656360001@jbw-mac.itd.nrl.navy.mil>
Source record: 40266

In article <466f4559$0$21250$39cecf19@news.twtelecom.net>, Tom Ring
<news0003@taring.org> wrote:

> It's tough to get gain that low unintentionally. If they are
> commercial, could you please point me at a web site? I'd love to see
> why they made these.
>
> tom
> K0TAR

Hello, and you can just integrate a pad into the antenna feedpoint and
market it as a broadband antenna - Works 2-30 MHz with no tuning required!
;-) Sincerely, and 73s from N4GG0,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1663. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 11:04:23 UTC
From: amdx <amdx@knology.net>
Message-ID: <27d22$466fcf40$18d6b40c$13445@KNOLOGY.NET>
Source record: 40267

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:zQJbi.15597$y_7.3658@newssvr27.news.prodigy.net...
> amdx wrote:
>> I'm comparing elevation plots of an antenna. They have different
>> forward gains, this makes it difficult to compare the lobe shape.
>>
>> Is there a way to equalize the gains to do a comparison?
>>
>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>> Can I add 4db of gain to one to make the comparison easier?
>> Mike
>
> Under 'Desc Options', under '2D Misc', under 'Outer Ring',
> you can set the gain of the outer ring to -19 dBi for
> both antennas.
> --
> 73, Cecil http://www.w5dxp.com

Thank you Cecil, I'll give that a try.

1664. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 11:11:33 UTC
From: amdx <amdx@knology.net>
Message-ID: <cb14d$466fd0ed$18d6b40c$14071@KNOLOGY.NET>
Source record: 40268

"Tom Ring" <news0003@taring.org> wrote in message
news:466f4559$0$21250$39cecf19@news.twtelecom.net...
> amdx wrote:
>> I'm comparing elevation plots of an antenna. They have different
>> forward gains, this makes it difficult to compare the lobe shape.
>>
>> Is there a way to equalize the gains to do a comparison?
>>
>>
>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>> Can I add 4db of gain to one to make the comparison easier?
>> Mike
>>
>>
>
> I am wondering what type of antenna has -19 or -23 dBi gain. I would
> speculate that they are quite omnidirectional, and the patterns wouldn't
> be significantly different.
>
> It's tough to get gain that low unintentionally. If they are commercial,
> could you please point me at a web site? I'd love to see why they made
> these.
>
> tom
> K0TAR
I'm modeling a Flag antenna.
It is a directional antenna.
Small size for the low bands.
Btw, this site has one that has -43dbi gain.
http://taliaphoto.com/n4is/BIG_DUAL_LOOP.html
I'd like to have one!
Mike

1665. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 11:16:26 UTC
From: amdx <amdx@knology.net>
Message-ID: <cac63$466fd212$18d6b40c$14450@KNOLOGY.NET>
Source record: 40269

"Dave" <noone@nowhere.com> wrote in message
news:muPbi.10807$Ar5.10317@trndny01...
>
> "Tom Ring" <news0003@taring.org> wrote in message
> news:466f4559$0$21250$39cecf19@news.twtelecom.net...
>> amdx wrote:
>>> I'm comparing elevation plots of an antenna. They have different
>>> forward gains, this makes it difficult to compare the lobe shape.
>>>
>>> Is there a way to equalize the gains to do a comparison?
>>>
>>>
>>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>>> Can I add 4db of gain to one to make the comparison easier?
>>> Mike
>>>
>>>
>>
>> I am wondering what type of antenna has -19 or -23 dBi gain. I would
>> speculate that they are quite omnidirectional, and the patterns wouldn't
>> be significantly different.
>>
>> It's tough to get gain that low unintentionally. If they are commercial,
>> could you please point me at a web site? I'd love to see why they made
>> these.
>>
>> tom
>> K0TAR

> but 0dBi would be perfectly omnidirectional by definition.
Yes.
>either he is reading the scale wrong
No.
>or is looking at f/b ratio instead of gain,
No.
>or maybe looking at depth of a null or sidelobes.
No.
Mike

1666. Re: power on random wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 12:18:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <wgRbi.3381$c06.3316@newssvr22.news.prodigy.net>
Source record: 40270

Mike Coslo wrote:
> Andrea <fuffa2k5@gmail.com> wrote:
>
>> One more thing is not clear to me:
>> If I use a 1/4 wave wire, where are the 6000 ohms?
>> Near the feed point or on the far end?
>
> It will be at the far end of the antenna, Andrea.

One way to remember that:
The Z = V/I ratio is sky high at the end of an antenna
because the current is obviously very close to zero.
--
73, Cecil http://www.w5dxp.com

1667. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 12:19:37 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <y5SdnRC-s84IffLbnZ2dnUVZ8vednZ2d@bt.com>
Source record: 40271

"Tom Ring" <news0003@taring.org> wrote in message
news:466f685b$0$21252$39cecf19@news.twtelecom.net...
<snip>
> > Tom,
> >
> > These experiments are time consuming, tricky (very sensitive to external
> > influences) and expensive to conduct, yielding results close to the
limits
> > of what is measurable. Unfortunately this isn't the sort of research
that
> > can be conducted by an amateur in a shed in the back yard. Unless
commercial
> > applications for experimental findings are found, funds are rapidly
switched
> > to other areas of research looking for a new discovery that might make a
> > profit.
> >
> > It's just the way that capitalism works.
> >
> > Mike G0ULI
> >
> >
>
> And yet they are done all the time by Universities and commercial labs.
> Sorry, I don't buy your excuse. If you were a slashdot.org regular,
> you would have noticed that reports on exactly this subject come through
> every 2 weeks to a month. And many other science news sources report
> the same events.
>
> Again, I don't buy your excuse.
>
> tom
> K0TAR

Tom,

University research is largely financed by commercial interests. A
university project uncovers some new phenomena or result. The financiers ask
what use can be made of the result in producing something that can be sold
at a profit. If the discovery has no immediate application, the funding
dries up. There are many areas of research that are currently languishing
for lack of funds even though they are important for the advancement of
scientific knowledge.

Discoveries with military or national security implications are moved to secure research establishments and the results are withheld from general circulation. This is just common sense, you don't need every tin pot dictator with an oil well setting up their own starwars type missle defence program. I am NOT talking about the conspiracy theorist ideas of flying saucers actually existing, and similar fictions.

If some research team announce that the have detected/measured/discovered some phenomena and the explanation is credible. Once the results have been independently confirmed by a second source, is there really any need to keep reinventing the wheel. If there's no profit in it, that's where the research stops.

Perhaps I am becoming just too jaded and cynical as I get older...

Mike G0ULI

1668. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 12:22:00 UTC
From: amdx <amdx@knology.net>
Message-ID: <1609e$466fe171$18d6b40c$6827@KNOLOGY.NET>
Source record: 40272

"amdx" <amdx@knology.net> wrote in message
news:27d22$466fcf40$18d6b40c$13445@KNOLOGY.NET...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:zQJbi.15597$y_7.3658@newssvr27.news.prodigy.net...
>> amdx wrote:
>>> I'm comparing elevation plots of an antenna. They have different
>>> forward gains, this makes it difficult to compare the lobe shape.
>>>
>>> Is there a way to equalize the gains to do a comparison?
>>>
>>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>>> Can I add 4db of gain to one to make the comparison easier?
>>> Mike
>>
>> Under 'Desc Options', under '2D Misc', under 'Outer Ring',
>> you can set the gain of the outer ring to -19 dBi for
>> both antennas.
>> --
>> 73, Cecil http://www.w5dxp.com
>
> Thank you Cecil, I'll give that a try.
>
I tried it Cecil, that only changes the scale of the plot, both antenna
patterns just move there relative positions.
I need to add gain to one pattern or subtract from the other and put them
on the same plot.
Thanks, Mike

1669. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 12:33:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PuRbi.29468$JZ3.2632@newssvr13.news.prodigy.net>
Source record: 40273

amdx wrote:
> I tried it Cecil, that only changes the scale of the plot, both antenna
> patterns just move there relative positions.
> I need to add gain to one pattern or subtract from the other and put them
> on the same plot.

I guess I don't understand what you are wanting
to do. Is -19 dBi and -23 dBi the maximum gain
for each respective antenna? Or is that just some
point you want the radiation patterns to have in
common?
--
73, Cecil http://www.w5dxp.com

1670. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 13:03:27 UTC
From: amdx <amdx@knology.net>
Message-ID: <2849$466feb28$18d6b40c$24566@KNOLOGY.NET>
Source record: 40274

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:PuRbi.29468$JZ3.2632@newssvr13.news.prodigy.net...
> amdx wrote:
>> I tried it Cecil, that only changes the scale of the plot, both antenna
>> patterns just move there relative positions.
>> I need to add gain to one pattern or subtract from the other and put
>> them
>> on the same plot.

> I guess I don't understand what you are wanting
> to do. Is -19 dBi and -23 dBi the maximum gain
> for each respective antenna?

Yes.

I want the maximum gain point of each antenna to
reach the same point on the plot.
As if I put a 4db amplifier on the -23dbi antenna.
Thanks, Mike

1671. Antenna Suggestions, Please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 13:12:36 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <JpOdnaKG__5AcfLbnZ2dnUVZ_vumnZ2d@comcast.com>
Source record: 40275

Hi,

Thank you all for the very good suggestions and comments re my previous post on trying an antenna for receiving Maritime conversations from myt location of around 20 miles west of Boston harbor.
Really good info. I've copied my old post below, for reference.

Think I would like to try a "dedicated" antenna.

I'm in my 70's now, and frankly, even building a really simple antenna is probably beyond me. So, I would like to purchase a suitable one, for, perhaps, $75 or so, max.

For a variety of reasons, would have to go in attic.

Would want it to be very directional, with "lots" of gain, and essentially tuned for the Maritime freq's of around 155 -170 MHz, receiving only usage.

And, I guess, not too big, so it would fit reasonably in my attic.

If anyone could suggest a "good" commercial unit, would be most appreciative.

BTW: would it be possible to parallel the coax feed from this new antenna, with my existing broadband scanner Scantenna antenna (via a "splitter", or...?), or would phase differences, etc., louse everything up ?

Realize it would undoubtedly be better to use separate coax feeds, but was wondering about the practicality of using a single feed from the attic ?
(again, receiving only)

Thanks,
Bob

I have a Uniden 996 scanner and would really like to pick up some marine traffic from Boston Harbor.
Live about 20 miles due west of the harbor.

Have a Scantenna antenna which I think is "pretty good". It's up in my attic.

It's omni directional, and broadband over the typical scanner ranges (supposedly).

I can often pick up coast guard conversations, but very rarely (but ooccassionally) ship traffic.

Do you think a dedicated, very directional, and tuned to the marine freq's would help, or am I just too far away ?

Any thoughts on, or antenna suggestions would be most appreciated.
No idea what to buy, if you feel it's worth a try ?

Very interested in the AIS data being transmitted by ships at around 162 MHz, as well as general marine stuff.

1672. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 15:09:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CMTbi.14842$rO7.4929@newssvr25.news.prodigy.net>
Source record: 40276

amdx wrote:
> I want the maximum gain point of each antenna to
> reach the same point on the plot.

If the two antennas have different take-off-angles, that
will require a graphics program capable of rotating one
of the graphics by n degrees.
--
73, Cecil, w5dxp.com

1673. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 15:16:56 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181747816.065017.176580@i13g2000prf.googlegroups.com>
Source record: 40277

On 12 Jun, 19:18, "Mike Lucas" <w...@bellsouth.net> wrote:
> "Mike Kaliski" wrote> These experiments are time consuming, tricky (very sensitive to external
> > influences) and expensive to conduct, yielding results close to the
> > limits
> > of what is measurable. Unfortunately this isn't the sort of research that
> > can be conducted by an amateur in a shed in the back yard. Unless
> > commercial
> > applications for experimental findings are found, funds are rapidly
> > switched
> > to other areas of research looking for a new discovery that might make a
> > profit.
>
> > It's just the way that capitalism works.
>
> > Mike G0ULI
>
> This is EXACTLY why it Art is having such a difficult time with his Gaussian
> antenna project. I think it highly unlikely that aluminium foil on tapered
> fish-poles
> will offer the repeatability that Gaussian equilibrium demands, since the
> skin depth
> is so large in ALL units.

snip.

What are you trying to say is "unlikely"?
Art
> Mike W5CHR

1674. Re: Antenna Suggestions, Please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 16:27:48 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1181752068.566734.313880@q19g2000prn.googlegroups.com>
Source record: 40278

Hello Robert,

Whether it will be successful, depends heavily on the path profile between you and the harbor. When there is a (small) hill between you and the harbor, you will probably not get reliable reception, even with a moderate sized directional antenna. Also increasing the height (to practical values) does not have a large effect (when there are hills in between).

When the profile is flat (as in most parts of the Netherlands where I live) it must be possible. However when there are many obstacles (buildings) close to you (in the direction of the harbor), you also might increase the height of the antenna (be aware of higher risk of lightning strikes).

I do not know the "scantenna", maybe some other people can tell us that. When it is really good, you need a directional antenna to get improvement. If you want to experiment with antennas, try to arrange with the vendor that you can bring it back as it doesn't work. Unfortunately, there is a physical relation between gain of antennas and size: the more gain, the bigger the antenna.

Other issues
What about the noise floor and interference? Where I live, you cannot use most scanners without a selective input filter when raising the antenna.

With respect to using one cable for 2 antennas, yes, theoretically it can be done, but I don't know whether there are good splitters/filters in the market for your application.

Best regards,

Wim
PA3DJS
www.tetech.nl

1675. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 16:51:29 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <6v707319lv3gm0d8rsgb4et11qfapv130u@4ax.com>
Source record: 40179

On Mon, 11 Jun 2007 22:00:14 -0700, "Alfred Lorona"
<w6wqc@dslextreme.com> wrote:

>Is there a site that explores/explains the latest theories on one way
>propagation? The ARRL antenna book is not much help on the subject.
>
>tnx, AL

One way Propagation: The cause of one-way propagation is a station who
uses power to overcome antenna losses. the station can be heard but
cannot hear.
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

1676. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 17:02:58 UTC
From: amdx <amdx@knology.net>
Message-ID: <6954$4670234e$18d6b40c$9989@KNOLOGY.NET>
Source record: 40180

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:CMTbi.14842$rO7.4929@newssvr25.news.prodigy.net...
> amdx wrote:
>> I want the maximum gain point of each antenna to
>> reach the same point on the plot.

I should have said " I want the maximum gain point of
each antenna to reach same db level on the graph."
Sorry about that confusing line.
>
> If the two antennas have different take-off-angles, that
> will require a graphics program capable of rotating one
> of the graphics by n degrees.
> --
> 73, Cecil, w5dxp.com

I have put a picture on abse to show what I want.
Subject Line: Two Flag Patterns.
Thanks, Mike

1677. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 17:30:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JQVbi.15646$y_7.2509@newssvr27.news.prodigy.net>
Source record: 40181

amdx wrote:
> I have put a picture on abse to show what I want.
> Subject Line: Two Flag Patterns.

I doubt you can do that within EZNEC. It will probably
require generating two graphics and superposing them -
which you can accomplish by changing the reference gain
of the outer ring in EZNEC and using, e.g. MS Paint
for the superposition.
--
73, Cecil, w5dxp.com

1678. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 17:38:04 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f4pa1skfs1@nntp1.jpl.nasa.gov>
Source record: 40183

Buck wrote:
> On Mon, 11 Jun 2007 22:00:14 -0700, "Alfred Lorona"
> <w6wqc@dslextreme.com> wrote:
>
>
>>Is there a site that explores/explains the latest theories on one way
>>propagation? The ARRL antenna book is not much help on the subject.
>>
>>tnx, AL
>
>
>
> One way Propagation: The cause of one-way propagation is a station who
> uses power to overcome antenna losses. the station can be heard but
> cannot hear.

perhaps on VHF and higher where receiver noise dominates. On lower frequencies, where atmospheric noise dominates, one could tolerate quite a bit of loss in the antenna/feedline and still "hear" exactly the same, since the SNR at the antenna dominates the overall situation.

A nice practical example, in use in many HF commercial, government, and utility type stations, would be the use of an antenna that has been broadbanded by use of lossy elements (e.g. the terminated folded dipole sorts of things). You might take a 6-8 dB hit in the antenna loss, which you make up by jacking up the Tx power by 6-8 dB, but you also don't have to worry about tuners, etc. This would be particularly useful if you were doing ALE or frequency hopping.

1679. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 17:49:48 UTC
From: amdx <amdx@knology.net>
Message-ID: <c23b1$467030d5$18d6b40c$1231@KNOLOGY.NET>
Source record: 40182

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:JQVbi.15646$y_7.2509@newssvr27.news.prodigy.net...
> amdx wrote:
>> I have put a picture on abse to show what I want.
>> Subject Line: Two Flag Patterns.
>
> I doubt you can do that within EZNEC. It will probably
> require generating two graphics and superposing them -
> which you can accomplish by changing the reference gain
> of the outer ring in EZNEC and using, e.g. MS Paint
> for the superposition.
> --
> 73, Cecil, w5dxp.com

I'll give that one a try.
Thanks again, Mike

1680. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 18:03:36 UTC
From: amdx <amdx@knology.net>
Message-ID: <5704$4670316f$18d6b40c$1631@KNOLOGY.NET>
Source record: 40184

"amdx" <amdx@knology.net> wrote in message
news:c23b1$467030d5$18d6b40c$1231@KNOLOGY.NET...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:JQVbi.15646$y_7.2509@newssvr27.news.prodigy.net...
>> amdx wrote:
>>> I have put a picture on abse to show what I want.
>>> Subject Line: Two Flag Patterns.
>>
>> I doubt you can do that within EZNEC. It will probably
>> require generating two graphics and superposing them -
>> which you can accomplish by changing the reference gain
>> of the outer ring in EZNEC and using, e.g. MS Paint
>> for the superposition.
>> --
>> 73, Cecil, w5dxp.com
>
> I'll give that one a try.
> Thanks again, Mike

Hey Cecil, That does exactly what I wanted, although not
in the program I wanted.
Thanks, Mike

1681. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 18:28:23 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181759303.547335.100840@e26g2000pro.googlegroups.com>
Source record: 40185

On Jun 11, 6:49 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > I'm not sure what you're asserting here, Cecil. Is that the light isn't
> > red shifted, or that the universe isn't expanding?
>
> I'm asserting that most of the red shift is not
> a Doppler effect.
> --
> 73, Cecil http://www.w5dxp.com

Jeez, what happened... I agree with Cecil on something.. Will
wonders never cease...
The BIg Bang wasn't <Fred Hoyle was, and is, right>
The BBT is more rickety than the house the Topsy built - and dark
matter is the stake through its heart <or is that 'steak'>
Red shift can be tired light, not just velocity - everything leaks
energy over time, including evaporation from impregnable black
holes... When a photon leaks energy its wavelength increases - simple
cause and effect...
Empty space is not empty
Energy and matter are interconvertable - so it should not come as some
huge surprise when increasing energy flow through a sphere of 'empty'
space relieves the stress and pings into into a quark...

For those who find this news upsetting, you can always retreat into
religion...

denny

1682. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 19:05:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <S8Xbi.3493$c06.951@newssvr22.news.prodigy.net>
Source record: 40186

Jim Higgins wrote:
> I assert that the box itself is significant regardless of what it does
> or does not contain.

Is that the box that holds Schrï¿½dinger's cat?
How about an imaginary box drawn around a closed
volume or system?
--
73, Cecil, w5dxp.com

1683. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 19:38:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZIXbi.29511$JZ3.3334@newssvr13.news.prodigy.net>
Source record: 40187

Jim Higgins wrote:
> Do you understand Darwin's Theory of Evolution?

In a nutshell, random mutations followed by survival
of the fittest. But now man can cause non-random
mutations followed by guaranteed survival of whatever
species we create no matter how unfit they might be.
Man has evolved to the point of being able to violate
the theory of evolution.

> What exactly is your apparent issue with this?

All N versions of string theory cannot be correct.
Yet someone implied that "scientific theories"
wrap aroung subsets of theories that essentially
are so scientifically well designed that they cannot
be wrong.
--
73, Cecil, w5dxp.com

1684. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 19:47:30 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4phkp$1d4i$1@f04n12.cac.psu.edu>
Source record: 40188

Jim Higgins wrote:
> On Tue, 12 Jun 2007 15:38:53 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Cecil Moore wrote:
>>> Michael Coslo wrote:
>>>> Just to be sure, The "theory" of evolution is not the same sort of
>>>> thing as a conspiracy "theory". A lot of problems have arisen out of
>>>> lumping the two together.
>>> My Southern Baptist Mother (rest her soul) always said that
>>> the theory of evolution was an atheist conspiracy. :-)
>> A wonderful lady I'm sure. My mother also did not believe in evolution.
>> She always said "Man did not descend from Apes" She was right on that
>> count, but wrong about evolution.
>>
>> The theory has stood the test of time. So many other concepts and
>> measurements corroborate with it, and none disprove it. If it is wrong,
>> then most of what we know about the universe is wrong. There will always
>> be details that may indicate that something here or there needs an
>> update. But the basic concept and most of the details has survived much
>> more rigorous testing than the reference material of those who declare
>> it wrong.
>
>
> Those who declare it wrong generally do so from a rigid religious
> foundation and then they seek facts - bending them unmercifully in the
> process - to support their preconceived objection that the Theory of
> Evolution is non- (or even worse, anti-) religious.
>
> It's a battle between objective science and those who believe the
> Bible is the literal word of God. Those who believe the Bible is
> often allegorical tend to have no real problem with evolution once
> they understand it never said that man descended from apes.

One of the most interesting things is that the allegorical nature of
the Bible was an accepted notion, and the so-called fundamentalist ideas
are a relatively new thing, originating in the late 1800's early 1900's.
So I guess it took most of two millenium for them to get it right? Old
time religion apparently started a long time after it started.

>
>>> And it seems that the theory of evolution has been proved
>>> not to be 100% correct. Man is already, or soon will be,
>>> capable of creating designer species. That's certainly not
>>> random selection. How does manufacturing human blood within

>>> a pig's body fit with the theory of evolution? :-)
>> I'm not sure how that disproves anything regarding the theory. In fact,
>> those things we are tinkering with are just an extension of the theory
>> in the end. Where the pressure to mutate - and therefore change - comes
>>from is not necessarily important i the end, but say we're talking about
>> sheep with human organs in them. Ever wonder what happens to the
>> embryo's and young ones that didn't have the right attributes?
>
>
> I'd tend to call the whole thing scientific tinkering vs evolution
> (natural selection) and I'd characterize Cecil's objections as a near
> total non sequitur. You can force fit it if you wish, but I consider
> it more charity than anything else to do so. ;-)

I think Cecil's point was more along the line of look at the issues
with this stuff, so how can you be so sure of what you are talking
about. I think that was in response to my noting the interesting
universe we would live in should the law of conservation of energy not
hold sway. (my best guess is that such a universe would be incompatible
with anything living in it, and would immediately destroy itself)

But that conservation of energy law is just about as foundational as you
can get.

>
>>> How about "string theory", something that cannot even be
>>> tested? Last I heard, there were seven or so competing
>>> string theories - all "logically self-consistent"????
>> Lots more than that, even. More flavors than Baskin-Robbins. I can't
>> really speculate a lot on string theory. String always seemed like a
>> "just so" story to me.
>
>
> The math - and it's all math at this point - is well beyond something
> close to (and probably on the other side of) 99% of mathematicians.
> Those at the cutting edge of this field who fully understand the
> theory and the underlying math to the extent they can actually add to
> current knowledge probably number less than 50, maybe even closer to a
> dozen. And it's all complicated by many different theories with not
> enough truly capable people sharing one or more theories to mount a
> decent peer review effort sufficient to reduce the number of theories
> significantly.
>
> It's a work in progress. Even the paintings of the masters looked
> like hell at some point before they were finished.

Perhaps. My gut on this is that there are so many flavors, all designed
to "correct" something else. So I'll look into it from time to time, but
I'm not going to hold my breath. 8^) And that math.....

- 73 d eMike KB3EIA -

1685. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 19:56:11 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4pi4r$1efi$1@f04n12.cac.psu.edu>
Source record: 40189

Jim Higgins wrote:
> On Tue, 12 Jun 2007 10:12:04 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:

>> perhaps we should talk a while on the interesting effects that will be
>> realized if the law of conservation of energy is "broken".
>
>
> What's the point... unless you think there's a liklihood the law of
> conservation of energy and matter as it truly exists is breakable?

It's a bit of a kind nudge to some folk so that they might think about
the absurdity of the idea. As far as I know, thee are only two people
who question the Conservation of Energy, and they is both in this newsgroup.

And nahh, I don't think it is breakable. Any law that has a zeroth Law
within it is okay in my book ;^)

- 73 de Mike KB3EIA -

1686. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 20:55:47 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <sRYbi.465434$115.378027@newsfe10.phx>
Source record: 40190

"Buck" <usenet01@lumpuckeroo.com> wrote in message
news:6v707319lv3gm0d8rsgb4et11qfapv130u@4ax.com...
> On Mon, 11 Jun 2007 22:00:14 -0700, "Alfred Lorona"
> <w6wqc@dslextreme.com> wrote:
>
>>Is there a site that explores/explains the latest theories on one way
>>propagation? The ARRL antenna book is not much help on the subject.
>>
>>tnx, AL
>
>
> One way Propagation: The cause of one-way propagation is a station who
> uses power to overcome antenna losses. the station can be heard but
> cannot hear.
> --
> 73 for now
> Buck, N4PGW
>
> www.lumpuckeroo.com
>
Dubbed an Alligator - Big Mouth, Small Ears
Lamont - Been There Done That

1687. Re: Antenna Suggestions, Please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 20:59:01 UTC
From: James <jnipperxxx@nospamfdn.com>
Message-ID: <H4idnQycp9YOx-3bnZ2dnUVZ_oqmnZ2d@comcast.com>
Source record: 40191

Bob, look at this antenna from Arrow Antennas. They are a good company with a good reputation among ham radio operators.

http://www.arrowantennas.com/146-4s.html

73 de Jim K4PYT

1688. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:01:40 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf70tqk.2g2t.bit-bucket@shell.config.com>
Source record: 40192

On Tue, 12 Jun 2007 11:50:24 -0700, Jim Lux wrote:
> Alfred Lorona wrote:
>> Is there a site that explores/explains the latest theories on one way
>> propagation? The ARRL antenna book is not much help on the subject.
>
> One way propagation is possible if there is an anisotropic medium in
> between (like the ionosphere).
>
> A polarized wave may get rotated in passing through the ionized medium,
> then refracted differently depending on the polarization. If you
> envision your launching a beam up to the ionosphere, the place on the
> ground that it hits after "reflecting" would be different depending on
> the polarization. If someone in the "reflected spot" sent a beam back
> to you, it too would get rotated on the way, and might propagate to a
> spot other than yours.

Then _that_ would explain why I've seen "one way propagation" more
decidedly on 6M versus 15M or the such. I'd think reflections and
rotations would be more 'intense' at 50 Mcs., than at lower HF freqs.

I've had distant 6M ops give me 'honest' 5/9+10, 5/9+15, 5/9+20 reports
when I could only honestly give them S-4, S-5, S-6 reports. Doesn't
happen often, but I've experienced it.

73
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

1689. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:06:31 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f4pt9o$1k5$1@nntp1.jpl.nasa.gov>
Source record: 40199

Allodoxaphobia wrote:
> On Tue, 12 Jun 2007 11:50:24 -0700, Jim Lux wrote:
>
>>Alfred Lorona wrote:
>>
>>>Is there a site that explores/explains the latest theories on one way
>>>propagation? The ARRL antenna book is not much help on the subject.
>>
>>One way propagation is possible if there is an anisotropic medium in
>>between (like the ionosphere).
>>
>>A polarized wave may get rotated in passing through the ionized medium,
>>then refracted differently depending on the polarization. If you
>>envision your launching a beam up to the ionosphere, the place on the
>>ground that it hits after "reflecting" would be different depending on
>>the polarization. If someone in the "reflected spot" sent a beam back
>>to you, it too would get rotated on the way, and might propagate to a
>>spot other than yours.
>
>
> Then _that_ would explain why I've seen "one way propagation" more
> decidedly on 6M versus 15M or the such. I'd think reflections and
> rotations would be more 'intense' at 50 Mcs., than at lower HF freqs.
>
> I've had distant 6M ops give me 'honest' 5/9+10, 5/9+15, 5/9+20 reports
> when I could only honestly give them S-4, S-5, S-6 reports. Doesn't
> happen often, but I've experienced it.

Very much so..

The assumption of reciprocal paths goes completely out the window when
you have polarization and anisotropic media.

Another example of nonreciprocal paths (albeit not for electromagnetic
waves) is sound travelling some distance where there is a wind shear.
The propagation velocity varies, so sound travelling "with the wind"
tends to bend down, while "against the wind" tends to bend up. Same
thing occurs, very strikingly, with temperature gradients.

I would imagine that conditions conducive to tropospheric ducting would
have similar effects, but I can't think of a non-reciprocal example off
the top of my head.
>
> 73
> Jonesy

1690. Re: Antenna Suggestions, Please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:18:33 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <CR_bi.1125$ma.216@bignews4.bellsouth.net>
Source record: 40193

"Robert11" <rgsros@notme.com> wrote in message
news:JpOdnaKG__5AcfLbnZ2dnUVZ_vumnZ2d@comcast.com...
> Hi,
>
> Thank you all for the very good suggestions and comments re my previous
> post on trying an antenna for receiving Maritime conversations from myt
> location of around 20 miles west of Boston harbor.
> Really good info. I've copied my old post below, for reference.
>
> Think I would like to try a "dedicated" antenna.
>
> I'm in my 70's now, and frankly, even building a really simple antenna is
> probably beyond me. So, I would like to purchase a suitable one, for,
> perhaps, $75 or so, max.
>
> For a variety of reasons, would have to go in attic.
>
> Would want it to be very directional, with "lots" of gain, and essentially
> tuned for the Maritime freq's of around 155 -170 MHz, receiving only
> usage.
>
> And, I guess, not too big, so it would fit reasonably in my attic.
>
> If anyone could suggest a "good" commercial unit, would be most
> appreciative.
>

If you have one of those outside TV antennas, you might just try one of
those I'm not sure, but I think they would cover those frequencies - I would
turn it 'sideways' so as to have it vertically polarized.
Use twinlead, and an adapter (4-1 balun).... Then if you discover that
old tv antenna works, then go get a longer one.
(I think they have decent gain, are relatively cheap, and usually have a
good bandwidth -) (aren't they log-periodic??)

1691. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:26:43 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <U2%bi.3537$c06.2751@newssvr22.news.prodigy.net>
Source record: 40194

Kinda thought so! got copy of THAT loop antenna-
Lots of loss, but abt 28 dB F-B ratio (great for
eliminateing stations off the back, and , as stated
very broadband! And the model at 12 mhz, did to
1.8 MHz , also 28 MHz- swr is flat (20:1)!, but
the directivity is seems to be flat,too. An
interesting antenna. Tks to Bill W5WVO for the
model! But the
4 db diff (on the angles of "radiation", probably
mean little on a change of pattern.maybe 2-3
degrees! (3dB points)! Definately NOT for trying
to xmit to! But with a 20 dB preamp looks like a
great recieve antenna! Jim NN7K

>>> Example: I have an antenna that is -19dbi and one that is -23dbi.
>>> Can I add 4db of gain to one to make the comparison easier?
>>> Mike

> I'm modeling a Flag antenna.
> It is a directional antenna.
> Small size for the low bands.
> Btw, this site has one that has -43dbi gain.
> http://taliaphoto.com/n4is/BIG_DUAL_LOOP.html
> I'd like to have one!
> Mike
>
>

1692. Re: Multi lobes

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:30:07 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <s0%bi.1128$ma.1039@bignews4.bellsouth.net>
Source record: 40195

"art" <aunwin@insightbb.com> wrote in message
news:1181705684.873780.26880@z28g2000prd.googlegroups.com...
>I haven't been on the air for a long time but I don't remember any
> conversations
> as to the upper lobe being used for communication. I always assumed
> that
> I was using the main lobe. Today I was messing around with some
> antenna designs
> and I arrived at one where there was only the lower single lobe to the
> front
> with the upper lobe somehow being removed.
> I have no idea what the ommission of any upper lobe would have of any
> consequence.
> Anybody had experience with this sort of thing?
> I suppose that in the early stages of propagation the lower lobe
> could make
> a connection where as the upper lobe transmission may well be absorbed
> by the upper layers that had not yet obtained reflected powers, but
> that is
> just conjector on my part.
> Art
>
Someone once explained antenna lobes and gain is like taking a balloon and
putting some water in it and put it on the table.
If you squeeze it from 2 sides, then 'lobes' would extend the other 2 sides.
The water in the balloon would represent the available RF. Since water is
not not compressable, pressing in on one side would require the water to
bulge into other lobes.
And they said about omni gain (like a 5/8 wave vs a 1/4-wave vertical) is
like pressing down on the top of the balloon so the total area of coverage
on the table is increased.

So to answer your question - if one of the lobes gets lost, then some other
lobe will gain. If the lobe lost was not being used, I would hazard to guess
the ones that are being used would benefit (gain).
...and they lived happily ever after

1693. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:32:54 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <87t073lr5lucnbf051bq695rtmu5n8ll0n@4ax.com>
Source record: 40196

On Wed, 13 Jun 2007 10:38:04 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>Buck wrote:
>> On Mon, 11 Jun 2007 22:00:14 -0700, "Alfred Lorona"
>> <w6wqc@dslextreme.com> wrote:
>>
>>
>>>Is there a site that explores/explains the latest theories on one way
>>>propagation? The ARRL antenna book is not much help on the subject.
>>>
>>>tnx, AL
>>
>>
>>
>> One way Propagation: The cause of one-way propagation is a station who
>> uses power to overcome antenna losses. the station can be heard but
>> cannot hear.

or they are ignoring stations they don't want to talk to....
>
>perhaps on VHF and higher where receiver noise dominates. On lower
>frequencies, where atmospheric noise dominates, one could tolerate quite
>a bit of loss in the antenna/feedline and still "hear" exactly the same,
>since the SNR at the antenna dominates the overall situation.
>
>A nice practical example, in use in many HF commercial, government, and
>utility type stations, would be the use of an antenna that has been
>broadbanded by use of lossy elements (e.g. the terminated folded dipole
>sorts of things). You might take a 6-8 dB hit in the antenna loss, which
>you make up by jacking up the Tx power by 6-8 dB, but you also don't
>have to worry about tuners, etc. This would be particularly useful if
>you were doing ALE or frequency hopping.

and actually, my original comment was tounge-in-cheek. I sent before
realizing I hadn't added the wink.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

1694. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:33:34 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <j9%bi.3539$c06.513@newssvr22.news.prodigy.net>
Source record: 40197

Cecil-- think what he wants is a Pattern, of
antenna 1, layed over Pattern 2, Both referenced
to Each other (at a 0 dB reference.) but as
stated, don't think the (-3) angle will change
drastically, nor the F.B. Ratio! Jim NN7K

Cecil Moore wrote:
> amdx wrote:
>> I want the maximum gain point of each antenna to
>> reach the same point on the plot.
>
> If the two antennas have different take-off-angles, that
> will require a graphics program capable of rotating one
> of the graphics by n degrees.
> --
> 73, Cecil, w5dxp.com

1695. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-13 23:50:38 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <HLCdnTH294pcH-3bnZ2dnUVZ_u2mnZ2d@comcast.com>
Source record: 40198

```
"amdx" <amdx@knology.net> wrote in message
news:5704$4670316f$18d6b40c$1631@KNOLOGY.NET...
>
> "amdx" <amdx@knology.net> wrote in message
> news:c23b1$467030d5$18d6b40c$1231@KNOLOGY.NET...
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> news:JQVbi.15646$y_7.2509@newssvr27.news.prodigy.net...
>>> amdx wrote:
>>>> I have put a picture on abse to show what I want.
>>>> Subject Line: Two Flag Patterns.
>>>
>>> I doubt you can do that within EZNEC. It will probably
>>> require generating two graphics and superposing them -
>>> which you can accomplish by changing the reference gain
>>> of the outer ring in EZNEC and using, e.g. MS Paint
>>> for the superposition.
>>> --
>>> 73, Cecil, w5dxp.com
>>
>> I'll give that one a try.
>> Thanks again, Mike
>
> Hey Cecil, That does exactly what I wanted, although not
> in the program I wanted.
> Thanks, Mike
>
I have never used it, but there is a button on the main screen labeled Ref
Level, defaults to 0 dbi.

Tam/WB2TT
```

1696. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:09:41 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4q109$1bv$1@nnrp.linuxfan.it>
Source record: 40200

Cecil Moore wrote:

> ...
> In a nutshell, random mutations followed by survival
> of the fittest. But now man can cause non-random
> mutations followed by guaranteed survival of whatever
> species we create no matter how unfit they might be.
> Man has evolved to the point of being able to violate
> the theory of evolution.
> ...

I find it difficult to generate a true and unwavering belief in "the creator."

However, when confronted with the argument that a single virus-type-thingy/cell sprang into being, by sheer chance, just a handful of billion of years ago (I would more likely expect such a phenomenon to take billions-of-billions-of years--if possible), with all the programming necessary to create an end result of beings with self awareness, and that this is some sort or "law", the fact that such is possible ... this cell, so perfectly programmed, was able to "work towards" multi-celled creatures ... and NO MIND WAS INVOLVED!

Well, I will tell you, long before I am even going to start making all those guesses, assumptions, and base it all on one single case--life on earth, I am going to seriously consider that something or some mind designed it ... "Who made God?" Krist, who knows? But, just as likely that God came from a cell billions-of-billions of years before mankind--and does exist--as the possibility of sheer chance beginning mankind and his predecessors.

However, I am a software engineer and see the sheer fantasy which is being proposed ... NEVER would all happen "just by sheer chance! (luck?)"

And there is NO law which states, "Extremely complex structures and lifeforms come into being by sheer luck!" There is no example which even shows nature has a slight tendency towards such a thing. No scientist would start basing conclusions on a single occurrence, science only begins when you have found "repeat-ability" of the phenomenon.

I mean, I would feel like a used car salesman, even thinking about selling that line to someone BELOW average intelligence! ...

Get real ... fairy tales are best used to amuse children ...

Regards,
JS

1697. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:11:11 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <zI%bi.14403$RX.243@newssvr11.news.prodigy.net>
Source record: 40201

P.S. Check out the "Traceview" option, at least
in EZNEC 5. Go to "View", then open "Traceview"!
Think this might allow you to compair 2 overlayed
patterns-- tho haven't gone thru manual-- YET!
Jim NN7K

Tam/WB2TT wrote:

1698. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:16:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4q1dc$1bv$2@nnrp.linuxfan.it>
Source record: 40202

Michael Coslo wrote:

> ...
> It's a bit of a kind nudge to some folk so that they might think
> about the absurdity of the idea. As far as I know, thee are only two
> people who question the Conservation of Energy, and they is both in this
> newsgroup.
>
> And nahh, I don't think it is breakable. Any law that has a zeroth
> Law within it is okay in my book ;^)
>
> - 73 de Mike KB3EIA -

Really? You can just find physicists all over the place who would bet
their lives that the law of conservation of energy can't be bent/broken?

H*ll, not even my high school physics teacher was that stupid!

JS

1699. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:39:33 UTC
From: amdx <amdx@knology.net>
Message-ID: <c62d6$46708e3d$18d6b40c$12098@KNOLOGY.NET>
Source record: 40203

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:j9%bi.3539$c06.513@newssvr22.news.prodigy.net...
> Cecil-- think what he wants is a Pattern, of
> antenna 1, layed over Pattern 2, Both referenced
> to Each other (at a 0 dB reference.) but as
> stated, don't think the (-3) angle will change
> drastically, nor the F.B. Ratio! Jim NN7K
>
>
>
> Cecil Moore wrote:
>> amdx wrote:
>>> I want the maximum gain point of each antenna to
>>> reach the same point on the plot.
>>
>> If the two antennas have different take-off-angles, that
>> will require a graphics program capable of rotating one
>> of the graphics by n degrees.
>> --
>> 73, Cecil, w5dxp.com

Just for fun and discussion I posted a plot with 6 different size
Flag antennas.
See it on abse, Subject line: Multiple Flag Ant. Patterns
Mike

1700. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:41:25 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <W80ci.3796$bP5.2294@newssvr19.news.prodigy.net>
Source record: 40204

John Smith I wrote:
> Get real ... fairy tales are best used to amuse children ...

Consider that the earth is about 4.5 billion years old
while the Milky Way galaxy may be about 12 billion years
old, not much younger than the universe itself. Some early
evolved intelligent life forms could possibly have been
seeding our galaxy for billions of years.

We are also discovering "nanobes" so small (20 nm) that
we never realized that they were alive before now. These
critters contain only about 10 DNA molecules.

http://www.nytimes.com/library/national/science/011800sci-space-nanobes.html
--
73, Cecil http://www.w5dxp.com

1701. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:43:59 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <jb0ci.14412$RX.1219@newssvr11.news.prodigy.net>
Source record: 40205

And, BTW, this DOES allows comparison of Plots, from
2 (or more?) antennas. I Tried it, works Great!
Jim

Jim - NN7K wrote:
> P.S. Check out the "Traceview" option, at least
> in EZNEC 5. Go to "View", then open "Traceview"!
> Think this might allow you to compair 2 overlayed
> patterns-- tho haven't gone thru manual-- YET! Jim NN7K
>
> Tam/WB2TT wrote:

1702. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:45:35 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46708fa0$0$21247$39cecf19@news.twtelecom.net>
Source record: 40206

Dave wrote:
>> I am wondering what type of antenna has -19 or -23 dBi gain. I would
>> speculate that they are quite omnidirectional, and the patterns wouldn't
>> be significantly different.
>>
>> It's tough to get gain that low unintentionally. If they are commercial,
>> could you please point me at a web site? I'd love to see why they made
>> these.
>>
>> tom
>> K0TAR
>
> but 0dBi would be perfectly omnidirectional by definition. either he is
> reading the scale wrong or is looking at f/b ratio instead of gain, or maybe
> looking at depth of a null or sidelobes.
>
>

Actually they could have gain that low and still be directional. It
would probably be silly to do so, but with nice lossy components, quite
possible.

Heck, I bet someone here may have even done something like it for some
reasonable engineering design.

tom
K0TAR

1703. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:53:15 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns994ED48C07C7mcoslocomcastnet@216.196.97.136>
Source record: 40207

Cecil Moore <nospam@w5dxp.com> wrote in news:ZIXbi.29511$JZ3.3334
@newssvr13.news.prodigy.net:

> Jim Higgins wrote:
>> Do you understand Darwin's Theory of Evolution?
>
> In a nutshell, random mutations followed by survival
> of the fittest. But now man can cause non-random
> mutations followed by guaranteed survival of whatever
> species we create no matter how unfit they might be.
> Man has evolved to the point of being able to violate
> the theory of evolution.

Just applying a different sort of evolution. If the pressure comes from humans, it is the same as pressure from radiation, environmental pressure, or simple random mutation. If man keeps life forms around that have genetic traits that would prove fatal in another environment, it just means that those traits are not fatal at this point. If things change, they could become a detriment, and the more red in tooth and claw version of evolution would take over.

>> What exactly is your apparent issue with this?
>
> All N versions of string theory cannot be correct.
> Yet someone implied that "scientific theories"
> wrap aroung subsets of theories that essentially
> are so scientifically well designed that they cannot
> be wrong.

Wow, who said that, Cecil?. They would be quite wrong.

Now if you were referring to my "evolution and all the other things we observe correlation that I mentioned a little while back, then that would be bit of a disservice on your part. A whole lot of observations do a fine job of propping up evolution.

- 73 de Mike KB3EIA -

1704. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 00:56:32 UTC
From: amdx <amdx@knology.net>
Message-ID: <c47f4$46709238$18d6b40c$14014@KNOLOGY.NET>
Source record: 40208

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:jb0ci.14412$RX.1219@newssvr11.news.prodigy.net...
> And, BTW, this DOES allows comparison of Plots, from
> 2 (or more?) antennas. I Tried it, works Great!
> Jim
>
> Jim - NN7K wrote:
>> P.S. Check out the "Traceview" option, at least
>> in EZNEC 5. Go to "View", then open "Traceview"!
>> Think this might allow you to compair 2 overlayed
>> patterns-- tho haven't gone thru manual-- YET! Jim NN7K
>>
>> Tam/WB2TT wrote:

Hi Jim,
I tried this and it's not working for me.
I can only get one trace in the view.
Can you walk me through your sequence of clicks?
Thanks, Mike

1705. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 01:17:46 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <ci51735khdpacb345j6e04ua7feor9rqvs@4ax.com>
Source record: 40209

On Wed, 13 Jun 2007 00:07:45 +0100, "Mike Kaliski"
<michael.kaliski@tesco.net> wrote:

>
>"larya" <larya@rogers.com> wrote in message
>news:1181686997.644511.198400@d30g2000prg.googlegroups.com...
>> Sorry if I used the wrong words... but I am curious as to how those
>> glass mounted antennas work... Is there a toutorial that explains
>> it?...Larry ve3fxq
>>
>
>Larry,
>
>The principle is very simple for vhf/uhf antennas. A pair of rectangular
>metal plates, usually brass or copper, a couple of inches square are fixed
>either side of the window glass. The two plates form the plates of a
>capacitor with the glass acting as a dielectric. The coax centre is
>connected to the centre of the plate inside the vehicle, with the screen
>being bonded to vehicle earth via the transceiver or wired directly, the
>screen is also connected to the edge of the inside plate via a small preset
>capacitor. The capacitor is adjusted for lowest SWR. A wire antenna is
>connected directly to the plate on the outside of the vehicle. At vhf/uhf

Typically you are looing at a half wave (or even 5/8ths) fed with a
variable cap. The cap tunes out the reactance. Contrary to popular
belief I've had good results with them. No they don't match the big
Diamond colinear I use on top of my 4-Runner, but they did work.

>frequencies, the capacitance between the two metal plates passes a fair
>amount of the signal through.
>
>There are a few things to look out for. Don't fix the plates over areas of
>glass containing demist wires. Vehicles with metallised/solar glass screens
>may not be suitable for this type of antenna. At high transmitter powers,
>the plates heat up and can cause damage to laminated glass. Larger plates
>disipate more heat but 25 watts is probably the maximum power it is
>advisable to use.
>

My transmitter runs 50 watts into a 160 watt mirage and I had no
trouble using such antennas for over 12 years on a T-Bird and Transam.

I never saw the mount get more than warm enough to just tell it had
changed temp.

>The ARRL website contains design details, unfortunately for members only.
>Details also appear in the ARRL Antenna Book.

Calculate a half wave for the frequency, find a ball park cap value
and have at it.

>
>It is probably fair to say that a glass mount antenna should be used as a
>last resort, when no other type of antenna installation is possible, loaned
>or hire vehicle, vintage vehicle etc. A magnetic mount antenna system
>usually offers far better performance all other things being equal, with
>fixed antenna systems being the most efficient of all.
>
>The external mounting point (position and design) may be subject to local
>vehicle construction and use regulations relating to the security of
>external fittings and risks poses to other road users.
>
>Mike G0ULI
>

1706. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 01:22:17 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4670985a$0$17205$39cecf19@news.twtelecom.net>
Source record: 40210

Mike Kaliski wrote:
> "Tom Ring" <news0003@taring.org> wrote in message
> news:466f685b$0$21252$39cecf19@news.twtelecom.net...
> <snip>
>>> Tom,
>>>
>>> These experiments are time consuming, tricky (very sensitive to external
>>> influences) and expensive to conduct, yielding results close to the
> limits
>>> of what is measurable. Unfortunately this isn't the sort of research
> that
>>> can be conducted by an amateur in a shed in the back yard. Unless
> commercial
>>> applications for experimental findings are found, funds are rapidly
> switched
>>> to other areas of research looking for a new discovery that might make a
>>> profit.
>>>
>>> It's just the way that capitalism works.
>>>
>>> Mike G0ULI
>>>
>>>
>> And yet they are done all the time by Universities and commercial labs.
>> Sorry, I don't buy your excuse. If you were a slashdot.org regular,
>> you would have noticed that reports on exactly this subject come through
>> every 2 weeks to a month. And many other science news sources report
>> the same events.
>>
>> Again, I don't buy your excuse.
>>
>> tom
>> K0TAR
>
> Tom,
>
> University research is largely financed by commercial interests. A
> university project uncovers some new phenomena or result. The financiers ask
> what use can be made of the result in producing something that can be sold
> at a profit. If the discovery has no immediate application, the funding
> dries up. There are many areas of research that are currently languishing
> for lack of funds even though they are important for the advancement of
> scientific knowledge.
>

> Discoveries with military or national security implications are moved to
> secure research establishments and the results are withheld from general
> circulation. This is just common sense, you don't need every tin pot
> dictator with an oil well setting up their own starwars type missle defence
> program. I am NOT talking about the conspiracy theorist ideas of flying
> saucers actually existing, and similar fictions.
>
> If some research team announce that the have detected/measured/discovered
> some phenomena and the explanation is credible. Once the results have been
> independently confirmed by a second source, is there really any need to keep
> reinventing the wheel. If there's no profit in it, that's where the research
> stops.
>
> Perhaps I am becoming just too jaded and cynical as I get older...
>
> Mike G0ULI
>
>
>

Ah, now the conspiracy theories pop out.

B as in B, S as in S.

tom
K0TAR

1707. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 01:28:28 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <467099b1$0$21258$39cecf19@news.twtelecom.net>
Source record: 40211

Cecil Moore wrote:
> John Smith I wrote:
>> Get real ... fairy tales are best used to amuse children ...
>
> Consider that the earth is about 4.5 billion years old
> while the Milky Way galaxy may be about 12 billion years
> old, not much younger than the universe itself. Some early
> evolved intelligent life forms could possibly have been
> seeding our galaxy for billions of years.
>
> We are also discovering "nanobes" so small (20 nm) that
> we never realized that they were alive before now. These
> critters contain only about 10 DNA molecules.
>
> http://www.nytimes.com/library/national/science/011800sci-space-nanobes.html
>

Impossible in the first generation if they are carbon based, since you
need a generation of supernovas followed by star forming for that.
There would be a significant delay, very likely about as long as it took
to make us. Of course all bets are off if they are based on some other
chemical starting point.

tom
K0TAR

1708. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 01:43:50 UTC
From: amdx <amdx@knology.net>
Message-ID: <e7fd2$46709d4e$18d6b40c$16325@KNOLOGY.NET>
Source record: 40212

"Tom Ring" <news0003@taring.org> wrote in message
news:46708fa0$0$21247$39cecf19@news.twtelecom.net...
> Dave wrote:
>>> I am wondering what type of antenna has -19 or -23 dBi gain. I would
>>> speculate that they are quite omnidirectional, and the patterns wouldn't
>>> be significantly different.
>>>
>>> It's tough to get gain that low unintentionally. If they are
>>> commercial, could you please point me at a web site? I'd love to see
>>> why they made these.
>>>
>>> tom
>>> K0TAR
>>
>> but 0dBi would be perfectly omnidirectional by definition. either he is
>> reading the scale wrong or is looking at f/b ratio instead of gain, or
>> maybe looking at depth of a null or sidelobes.
>
> Actually they could have gain that low and still be directional. It would
> probably be silly to do so, but with nice lossy components, quite
> possible.
>
> Heck, I bet someone here may have even done something like it for some
> reasonable engineering design.
>
> tom
> K0TAR

Do a little research on the Flag or pennant antenna.
It's a rotatable antenna that has a good f/b ratio at low
frequencies. I've measured 40db f/b at 1430khz.
I have a variable termination.
Mike

1709. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 02:24:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <FF1ci.29539$JZ3.2899@newssvr13.news.prodigy.net>
Source record: 40213

Mike Coslo wrote:
> Wow, who said that, Cecil?. They would be quite wrong.

Don't remember who said that a scientific theory
is not discarded but simply becomes a subset of
some new theory.
--
73, Cecil http://www.w5dxp.com

1710. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 02:30:20 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <1L1ci.3563$c06.1314@newssvr22.news.prodigy.net>
Source record: 40214

Try this (with Eznec 5)

Step 1 Open (or write) your file.
Step 2 Do farfield plot , then save
this file as (Tracefile (.pdf,pdf3)
You need to name this file!.

Step 3 Do the SAME steps for Antenna #2 (and
3,4,5, ect) be sure to use diff names!>

Now, Step 4,go to (view, traceview), and this

will give a warning.Run , under the "traceview
window, the FIRST FILE you named.

Step 5 Now , click on "Add trace". insert the name of
the SECOND file you saved (Warning- both must be in
SAME direction, AZMATH, or ELEVATION for this to
overlay) , and both ants pointing the SAME WAY!

Step 6 either print it, or add another file .
Think you find this works pretty well .
NOTE: this DOESN'T set yhe max gain to BOTH
antennas, but is great for comparison purposes.
Think its pg 93 in the pdf manual (not to be confused
with 93 on the adobe screen!
Jim NN7K

amdx wrote:

>
> Hi Jim,
> I tried this and it's not working for me.
> I can only get one trace in the view.
> Can you walk me through your sequence of clicks?
> Thanks, Mike
>
>

1711. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 02:45:33 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4qa4hctq1@nnrp.linuxfan.it>
Source record: 40215

Cecil Moore wrote:
> John Smith I wrote:
>> Get real ... fairy tales are best used to amuse children ...
>
> Consider that the earth is about 4.5 billion years old
> while the Milky Way galaxy may be about 12 billion years
> old, not much younger than the universe itself. Some early
> evolved intelligent life forms could possibly have been
> seeding our galaxy for billions of years.
>
> We are also discovering "nanobes" so small (20 nm) that
> we never realized that they were alive before now. These
> critters contain only about 10 DNA molecules.
>
> http://www.nytimes.com/library/national/science/011800sci-space-nanobes.html

Cecil:

There are many possibilities ...

I am just awestruck (think shock and awe here!) that so many jump on the "evolution bandwagon"--apparently tossing logic out the window with the bath water and the baby--even occams' razor is missing. DNA and its' complexity, yet simplicity, is amazing, (some search this DNA for "Gods Signature") logic leads me away from viewing it as "just happened." Mankind appears to serve nature in no meaningful way, yet some maintain that nature went to extraordinary means to create/evolve us ... and, claiming that the similarity of DNA between all species "proves" evolution. Heck, if that argument holds water, then all structures which man has ever lived in show signs of evolution--only a handful of materials have ever been used in the construction of buildings, notably stone, dirt, plant material, metal and most recently plastic--DNA and its' span across all life here only demonstrates that the same "building materials" were used in lifes' creation(s).

One haunting phrase found in the bible, and dealing with God, and paraphrased here: "... is and always has been ..." This deals with Gods' apparent explanation of his own beginning/existence, obviously, one could guess, he doesn't know his creator either!

Indeed, logic would lead me to think the necessary microbe(s)/cell(s)/virus-thingy(s) "came through" with the big bang, perhaps an intended "life seeding" (experiment?) of this universe--maybe that is where "heaven" is--outside this universe.

However, count on new theories/discoveries coming on down the road ...
that is something we CAN have faith in. I don't find any of the current
explanations to our existence acceptable--proof of one will correct that.

Regards,
JS

1712. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 02:51:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <g32ci.19143$C96.4735@newssvr23.news.prodigy.net>
Source record: 40216

Tom Ring wrote:
> Cecil Moore wrote:
>> http://www.nytimes.com/library/national/science/011800sci-space-nanobes.html
>>
> Impossible in the first generation if they are carbon based, since you
> need a generation of supernovas followed by star forming for that.

Of course, impossible in the first generation. But we
can observe the remains of supernovas that are 8 billion
years old. Supernovas probably occurred a couple of billion
years after the Big Bang. That means some other life forms
may have a 4 billion year head start on us.
--
73, Cecil http://www.w5dxp.com

1713. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 02:57:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4qaqectq2@nnrp.linuxfan.it>
Source record: 40217

Cecil Moore wrote:
> Mike Coslo wrote:
>> Wow, who said that, Cecil?. They would be quite wrong.
>
> Don't remember who said that a scientific theory
> is not discarded but simply becomes a subset of
> some new theory.

Hmmm ...

So, Abiogenesis/"spontaneous generation"/autogenesis have just become incorporated into "evolution theory", yanno what, I can believe that!

Frankly, I subscribe to a belief in Biogenesis ... and wonder where "first life" (or God, or his predecessors) did "happen?"

See: http://www.answers.com/topic/abiogenesis

Regards,
JS

1714. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 03:06:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gh2ci.19147$C96.17106@newssvr23.news.prodigy.net>
Source record: 40218

John Smith I wrote:
> One haunting phrase found in the bible, and dealing with God, and
> paraphrased here: "... is and always has been ..." This deals with
> Gods' apparent explanation of his own beginning/existence, obviously,
> one could guess, he doesn't know his creator either!

People who believe in "first cause" have to grapple with
the question of "What caused God?" If God doesn't have to
have a cause, why does the universe have to have a cause? :-)

The Bible proves that God understood relativity. A day for
God (in his fast starship) is like 1000 years for man on
earth. :-) We can calculate the speed of God's starship
from that information.
--
73, Cecil http://www.w5dxp.com

1715. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 04:26:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4qg2e$c9p$1@nnrp.linuxfan.it>
Source record: 40219

Cecil Moore wrote:
> John Smith I wrote:
>> One haunting phrase found in the bible, and dealing with God, and
>> paraphrased here: "... is and always has been ..." This deals with
>> Gods' apparent explanation of his own beginning/existence, obviously,
>> one could guess, he doesn't know his creator either!
>
> People who believe in "first cause" have to grapple with
> the question of "What caused God?" If God doesn't have to
> have a cause, why does the universe have to have a cause? :-)
>
> The Bible proves that God understood relativity. A day for
> God (in his fast starship) is like 1000 years for man on
> earth. :-) We can calculate the speed of God's starship
> from that information.

Its' all how 'ya look at it ...

Could be that God is living in the entangled particle universe (just down the block a spell.) Could explain why his vision/expectation of time seems a tad bit faster ...

I heard a rumor that the color of God is grey; and, he is alive and well and living in Roswell, NM ... :-)

But then, another guy told me the military captured him and got him out a Groom Lake ... ya never know, ya just never know ...

Regards,
JS

1716. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 06:01:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cam173ttj3jp5vip6guddkvvid4mcqr7u9@4ax.com>
Source record: 40220

On Wed, 13 Jun 2007 19:45:35 -0500, Tom Ring <news0003@taring.org>
wrote:

>Actually they could have gain that low and still be directional.
...
>Heck, I bet someone here may have even done something like it for some
>reasonable engineering design.

... tsk, tsk, tsk. Such a fall from grace for the fractal antenna.
Gone, and long forgotten.

73's
Richard Clark, KB7QHC

1717. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 06:46:50 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <2O6F5BDaROcGFA1I@ifwtech.co.uk>
Source record: 40221

FYI, Roy will be at the Friedrichshafen hamfest in Germany next week, so he may already be traveling.

Like most travelers, he may have access to e-mail, but is unlikely to have a newsgroup feed.

--

73 from Ian GM3SEK

1718. Re: glass mounted antennas..

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 07:27:42 UTC
From: Jeff <jeff@local.host>
Message-ID: <4670f1d0$0$1351$834e42db@reader.greatnowhere.com>
Source record: 40222

>>Through glass antennas do work very well, but they are sensitive to the
>>composition of the glass; tinting and reflective metal coatings have a
>>detrimental effect on performance. I have used and made several home brew
>>versions with results similar to a mag mount on the roof.
>
> I've never seen any effect from simple blue/green/gray tinting, but
> metalized glass - whether for reflectance or for wireless
> defogging/defrosting is an issue.
>

I did see some degradation in performance after a windscreen change, no obvious difference in tinting etc except that with the new screen the antenna did not perform as well as it did before. The mounting position was identical and the antenna matched ok.

73
Jeff

1719. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 11:16:15 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181819775.709318.177790@x35g2000prf.googlegroups.com>
Source record: 40223

>
> Indeed, logic would lead me to think the necessary
> microbe(s)/cell(s)/virus-thingy(s) "came through" with the big bang,
> perhaps an intended "life seeding" (experiment?) of this universe--maybe
> that is where "heaven" is--outside this universe.

Have we considered that viruses need complex cells in order to
procreate and survive... Perhaps animals were created simply to
provide that service...
It may be that the prodrome of a viral infection, such as the common
cold with its aches, pains and sniffles, is merely a byproduct of
billions of tiny, viral orgasms...

So, who is the higher order of evolution here?

Might I recommend that you all read Richard Dawkin's, THE SELFISH
GENE..
It will give you a new perspective...

denny

1720. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 11:17:18 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181819838.680955.9860@i13g2000prf.googlegroups.com>
Source record: 40224

>
> Don't remember who said that a scientific theory
> is not discarded but simply becomes a subset of
> some new theory.
> --
> 73, Cecil http://www.w5dxp.com

It's called recycling...

denny / k8do

1721. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 11:55:27 UTC
From: richardharrison@webtv.net
Message-ID: <2573-46712CAF-12@storefull-3253.bay.webtv.net>
Source record: 40225

Art wrote:
"Surprises me that nobody has made reference to dissimilar abtennas as possible contributors----."

Yes. The original questioner, Al Lorona did not rule out separate antennas for transmission and reception as a possible cause of "one way propagation".

Art has ridiculed books as sources of answers for questions such as this, but often they give reliable answers. Kraus writes on page 252 of his 1950 edition of "Antennas":
"If an emf is applied at the terminals of an antenna A and the current measured at the terminals of another antenna B, then an equal current (in both amplitude and phase) will be obtained at the terminals of antenna A if the same emf is applied to the terminals of antenna B, It is assumed that the emfs are of the same frequency and that the medium is linear, passive, and also isotropic."

I think reciprocity is why Al doesn`t find sites about one way propagation.

Best regards, Richard Harrison, KB5WZI

1722. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 13:25:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4rfkr$n09$1@nnrp.linuxfan.it>
Source record: 40226

Denny wrote:
>> Indeed, logic would lead me to think the necessary
>> microbe(s)/cell(s)/virus-thingy(s) "came through" with the big bang,
>> perhaps an intended "life seeding" (experiment?) of this universe--maybe
>> that is where "heaven" is--outside this universe.
>
> Have we considered that viruses need complex cells in order to
> procreate and survive... Perhaps animals were created simply to
> provide that service...
> It may be that the prodrome of a viral infection, such as the common
> cold with its aches, pains and sniffles, is merely a byproduct of
> billions of tiny, viral orgasms...
>
> So, who is the higher order of evolution here?
>
> Might I recommend that you all read Richard Dawkin's, THE SELFISH
> GENE..
> It will give you a new perspective...
>
>
> denny
>

When I mentioned "virus-thingy", I was referring to the organism Cecil
had mentioned earlier, his text:

"We are also discovering "nanobes" so small (20 nm) that
we never realized that they were alive before now. These
critters contain only about 10 DNA molecules."

JS

1723. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 16:37:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <clr273tfpgmm5p7mblurfakrr8c3c278q3@4ax.com>
Source record: 40227

On Thu, 14 Jun 2007 09:35:39 -0700, art <aunwin@insightbb.com> wrote:

>On 13 Jun, 23:01, Richard Clark <kb7...@comcast.net> wrote:
>> ... tsk, tsk, tsk. Such a fall from grace for the fractal antenna.
>> Gone, and long forgotten.

> That was another antenna that amateurs tried to remove from the
>face of the earth because it provided a new aproach to antennas.

Hi Arthur,

Your soap box would carry more weight if you actually contributed to
the design.

73's
Richard Clark, KB7QHC

1724. when does a vertical become vertical dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 18:33:53 UTC
From: greg mushial <gmushial@gmdr.com>
Message-ID: <a91373d53jsvf79v0ol42ul2j7r1l7tre1@4ax.com>
Source record: 40228

Been out of ham radio since the '60's (raising a family etc) and am slowly coming back (though given the noise I see in r.r.a.misc I wonder if I really want to :-( ).

My question is one of trying to understand propagation - with a ground mounted vertical, if I remember correctly, one treats it as if it's a half wave dipole, where one leg is above ground and the other is virtual and is a "ground reflection", hence the importance of good ground/radials etc. I assume if I had a balloon up several thousands of feet and dropped a half wave dipole (still center fed, but hung from one end), then it would behave like a ground based horizontal dipole, other than being polarized vertically (ie, no virtual / ground reflection for the lower half). The question is: when does one make the transition btwn the two modes, how far off the ground (in terms of wavelengths)? If a vertical dipole is 10 wavelengths above the ground, does one still have to consider the ground as part of the antenna? how about 2 wavelengths? If someone could walk me through a thought experiment on this I'd appreciate it.

thanks,
greg

ps. yes I've Googled this and found nothing, likewise have and read ARRL big antenna book + several of their long wire books, likewise, no mention.

1725. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 18:47:20 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f4s2fp$9ge$1@aioe.org>
Source record: 40129

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2573-46712CAF-12@storefull-3253.bay.webtv.net...

Kraus writes on page 252 of
> his 1950 edition of "Antennas":
> "If an emf is applied at the terminals of an antenna A and the current
> measured at the terminals of another antenna B, then an equal current
> (in both amplitude and phase) will be obtained at the terminals of
> antenna A if the same emf is applied to the terminals of antenna B, It
> is assumed that the emfs are of the same frequency and that the medium
> is linear, passive, and also isotropic."
>

That is fine and guaranteed in ideal cases or when antennas "see" each other. But when signals are going through the ionosphere and considerable distances, things don't jive exactly like that. I had cases when at particular opening I would receive say OK2 at the lower angle and UA0 at higher angle, which is not "normal" but on transmit the situation would be just opposite, indicating that ionosphere (ether :-) would be behaving differently at the ends of the paths. This definitely was not the result of the local noise masking signals "explaining" disparity.
Again, I summarized my finding in my article in CQ. I came to the conclusion that about 60% of propagating is not reciprocal RX vs. TX. That was done using my stacked Razor antennas. Believe it or not, but that is like person with reading glasses (dipole) will not see what person with telescope (Razors) can see.

73 Yuri, www.K3BU.us

1726. Re: when does a vertical become vertical dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 18:51:51 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f4s2o7$ac6$1@aioe.org>
Source record: 40130

"greg mushial" <gmushial@gmdr.com> wrote in message
news:a91373d53jsvf79v0ol42ul2j7r1l7tre1@4ax.com...
> Been out of ham radio since the '60's (raising a family etc) and am
> slowly coming back (though given the noise I see in r.r.a.misc I
> wonder if I really want to :-( ).
>
> My question is one of trying to understand propagation - with a ground
> mounted vertical, if I remember correctly, one treats it as if it's a
> half wave dipole, where one leg is above ground and the other is
> virtual and is a "ground reflection", hence the importance of good
> ground/radials etc. I assume if I had a balloon up several thousands
> of feet and dropped a half wave dipole (still center fed, but hung
> from one end), then it would behave like a ground based horizontal
> dipole, other than being polarized vertically (ie, no virtual / ground
> reflection for the lower half). The question is: when does one make
> the transition btwn the two modes, how far off the ground (in terms of
> wavelengths)? If a vertical dipole is 10 wavelengths above the ground,
> does one still have to consider the ground as part of the antenna? how
> about 2 wavelengths? If someone could walk me through a thought
> experiment on this I'd appreciate it.
>
> thanks,
> greg
>
> ps. yes I've Googled this and found nothing, likewise have and read
> ARRL big antenna book + several of their long wire books, likewise, no
> mention.

The main difference is the interaction between the antenna and the ground in
forming the lobes. Ground mounted vertical will have one fat lobe, as you
start increasing the height the lobes will start splitting, more of them,
with different magnitudes. Also "looking" out for the ground for reflections
further out.
Using demo version of EZNEC and modeling it will demonstrate the effect.

73 Yuri, www.K3BU.us

1727. Re: when does a vertical become vertical dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 19:50:44 UTC
From: nm5k@wt.net
Message-ID: <1181850644.750074.254020@j4g2000prf.googlegroups.com>
Source record: 40131

On Jun 14, 1:33 pm, greg mushial <gmush...@gmdr.com> wrote:
If a vertical dipole is 10 wavelengths above the ground,
> does one still have to consider the ground as part of the antenna? how
> about 2 wavelengths? If someone could walk me through a thought
> experiment on this I'd appreciate it.
>

Any vertical that is complete, and is clear of the ground qualifies.
Even a 1/4 wave ground plane with radials.
No properly built elevated verticals rely on the ground to complete
the
antenna.
Of course, you can still be effected by ground loss though, if you
are low to the ground, or don't have enough radials for the height
in wavelength you are at.
But a horizontal dipole can suffer the same losses, usually to a
lesser degree. The extra lobes are mainly a function of height above
ground more than anything.
You can have a monopole at 5 ft off the ground, and if it has it's
own elevated radial set, it's a complete antenna and does not
rely on ground to provide the lower half of the antenna.
Of course at that height, you need a lot of radials to avoid the
ground losses, but that's not quite the same as using the ground
itself as the lower half of the antenna, with no elevated radials.
MK

1728. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 20:29:00 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181852940.155076.194040@e9g2000prf.googlegroups.com>
Source record: 40132

On 13 Jun, 23:46, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> FYI, Roy will be at the Friedrichshafen hamfest in Germany next week, so
> he may already be traveling.
>
> Like most travelers, he may have access to e-mail, but is unlikely to
> have a newsgroup feed.
>
> --
>
> 73 from Ian GM3SEK

Gee. I wonder if he will comment on the state of education in Germany
relative to his own American education. He may well be returning
now by swimming the pond in desparation.

1729. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 20:33:02 UTC
From: richardharrison@webtv.net
Message-ID: <24271-4671A5FE-7@storefull-3252.bay.webtv.net>
Source record: 40134

Yuri, Kk3BU wrote:
"But when signals are going throug the ionosphere and considerable distances, things don`t jive exactly like that."

Yuri is nost likely correct. Even line-of-sight paths experience strange things.

Isotropic material has the same characteristics along any axis. Kraus left himself an out by saying:
"It is assumed that the emfs are of the same frequency, and the medium is linear, passive, and also isotropic." I think he implies that reciprocity may not rule when the medium is as screwed up as it often is in the ionosphere.

I had one nonreciprocal microwave path among a countless total in my experience. It connected a rooftop in downtown Houston with the company`s aircraft hanger at Houston International (now Bush) Airport. The path ran from the company headquarters northward right up the street in a canyon between skyscrapers, several of which had more than our 33 floors. The signal at the airport was stronger than that at headquarters by several dB. As we had more than 40 dB fade margin in both directions, I scratched my head but lost no sleep.

I have HF radio experience between Germany and Portugal while working in shortwave broadcasting. We used HF for an order-wire between locations. Signal strengths and path losses seemed to be nearly identical in both directions. Transmitters were 3.5 KW Collins Auto-Tune all-purpose AM/CW/MCW with a rotary phone dial to select mode and frequency. Receivers were Hammerlund SP 600Xs.

Best regards, Richard Harrison, KB5WZI

1730. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 20:35:51 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181853351.062668.145200@n15g2000prd.googlegroups.com>
Source record: 40133

On 14 Jun, 06:25, John Smith I <assemblywiz...@gmail.com> wrote:
> Denny wrote:
> >> Indeed, logic would lead me to think the necessary
> >> microbe(s)/cell(s)/virus-thingy(s) "came through" with the big bang,
> >> perhaps an intended "life seeding" (experiment?) of this universe--maybe
> >> that is where "heaven" is--outside this universe.
>
> > Have we considered that viruses need complex cells in order to
> > procreate and survive... Perhaps animals were created simply to
> > provide that service...
> > It may be that the prodrome of a viral infection, such as the common
> > cold with its aches, pains and sniffles, is merely a byproduct of
> > billions of tiny, viral orgasms...
>
> > So, who is the higher order of evolution here?
>
> > Might I recommend that you all read Richard Dawkin's, THE SELFISH
> > GENE..
> > It will give you a new perspective...
>
> > denny
>
> When I mentioned "virus-thingy", I was referring to the organism Cecil
> had mentioned earlier, his text:
>
> "We are also discovering "nanobes" so small (20 nm) that
> we never realized that they were alive before now. These
> critters contain only about 10 DNA molecules."
>
> JS- Hide quoted text -
>
> - Show quoted text -

John,
Water does burn. It has been years that I have felt the
sensation of my body throbbing with so much passion.

1731. Dloyd Lavies, Usenet Moron and Thread Hi-Jacke, Blackmailer and Supreme hypocrtie

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 21:01:30 UTC
From: Mark@k4yz.org
Message-ID: <l4b373h5328odjrpk0n3sm6o691dvon40n@4ax.com>
Source record: 40135
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
so get a life Larry

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1732. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 21:35:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <orb373554j7sb7he7it89f6u01n9iensao@4ax.com>
Source record: 40136

On Thu, 14 Jun 2007 11:24:18 -0700, art <aunwin@insightbb.com> wrote:

>My point is that it is not "gone and long forgotten" despite
>the venom from you and Roy in you attempts to devalue the idea.

Hi Arthur,

Unfortunately you don't understand the technology, so you lack the
authority to make this anything more than a sentimental statement.

My website contains more than 300 pages of results from real Fractal
antennas and it remains the largest website in the world devoted to
that topic alone. It even supports examples of fractal designs that
you couldn't beat.

Care to compare examples? Mine will be far more length efficient than
anything you could offer. They will be non-planar. They will offer a
better turning radius than yours.

No, comparison would quickly reveal all this and thus I will leave you
with the last gasping denial. ;-)

73's
Richard Clark, KB7QHC

1733. Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:11:10 UTC
From: "MSpiv001@gmail.com" <MSpiv001@gmail.com>
Message-ID: <1181859070.399871.37430@n15g2000prd.googlegroups.com>
Source record: 40137

I was a ham operator in the early 1960s and my call sign was KN1VTR.
I have lost all proof of that over the years and was wondering if
anyone knows of an "archive" where i might be able to find "proof". I
think if I can find it, I might be able to Grandfather 5 WPM CW.

Thanks

1734. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:13:07 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <1181859187.468815.325940@q19g2000prn.googlegroups.com>
Source record: 40138

On Jun 14, 3:11 pm, "MSpiv...@gmail.com" <MSpiv...@gmail.com> wrote:
> I was a ham operator in the early 1960s and my call sign was KN1VTR.
> I have lost all proof of that over the years and was wondering if
> anyone knows of an "archive" where i might be able to find "proof". I
> think if I can find it, I might be able to Grandfather 5 WPM CW.
>
> Thanks

Are you aware CW is no longer a requirement for a ham license?

Paul, KD7HB

1735. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:16:56 UTC
From: amdx <amdx@knology.net>
Message-ID: <49b18$4671be4c$18d6b40c$2197@KNOLOGY.NET>
Source record: 40139

"Jim - NN7K" <NN7K@NOWAY.NET> wrote in message
news:1L1ci.3563$c06.1314@newssvr22.news.prodigy.net...
> Try this (with Eznec 5)
>
> Step 1 Open (or write) your file.
> Step 2 Do farfield plot , then save
> this file as (Tracefile (.pdf,pdf3)
> You need to name this file!.
>
> Step 3 Do the SAME steps for Antenna #2 (and 3,4,5, ect) be sure to use
> diff names!>
>
> Now, Step 4,go to (view, traceview), and this
>
> will give a warning.Run , under the "traceview window, the FIRST FILE you
> named.
>
> Step 5 Now , click on "Add trace". insert the name of
> the SECOND file you saved (Warning- both must be in
> SAME direction, AZMATH, or ELEVATION for this to overlay) , and both ants
> pointing the SAME WAY!
>
> Step 6 either print it, or add another file .
> Think you find this works pretty well .
> NOTE: this DOESN'T set the max gain to BOTH
> antennas, but is great for comparison purposes.

Ok, thanks Jim, I have done this and add a trace does just
that, but as you say,
"this DOESN'T set the max gain to BOTH antennas"
I want to equalize the max gain, So it looks like the copy to
Paint and compare there is the best solution so far.
Thanks, Mike

1736. i biseual ham

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:23:27 UTC
From: kb9rqz <gay@chassell>
Message-ID: <10p4lr.459.19.1@news.alt.net>
Source record: 40140
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

```
----- Original Message -----
From: <Mark@k4yz.org>
Newsgroups:
alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna
Sent: Thursday, June 14, 2007 4:01 PM
Subject: Dloyd Lavies, Usenet Moron and Thread Hi-Jacke, Blackmailer and
Supreme hypocrtie

> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
> <assemblywizard@gmail.com> wrote:
>
> >K4YZ wrote:
> >> Nope.
> >>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
> >>
> >> Sounds like Lennie, to me....
> >>
> >> Steve, K4YZ
> >>
> >
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
> >

Except that Mark hasn't the savvy to do so.

> >You waste my time.

Then stfu.

>Worse, you think us all idiots here.

As you have just proven.

You remind me
"If I want a cock I go for a man if I
want pussy I go fo r a fmeale simple as that [sic]"
```

1737. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:24:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181859883.771488.53940@g37g2000prf.googlegroups.com>
Source record: 40141

On 14 Jun, 14:35, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 14 Jun 2007 11:24:18 -0700, art <aun...@insightbb.com> wrote:
> >My point is that it is not "gone and long forgotten" despite
> >the venom from you and Roy in you attempts to devalue the idea.
>
> Hi Arthur,
>
> Unfortunately you don't understand the technology, so you lack the
> authority to make this anything more than a sentimental statement.
>
> My website contains more than 300 pages of results from real Fractal
> antennas and it remains the largest website in the world devoted to
> that topic alone. It even supports examples of fractal designs that
> you couldn't beat.
>
> Care to compare examples? Mine will be far more length efficient than
> anything you could offer. They will be non-planar. They will offer a
> better turning radius than yours.
>
> No, comparison would quickly reveal all this and thus I will leave you
> with the last gasping denial. ;-)
>
> 73's
> Richard Clark, KB7QHC

Do you think I didn't realise what direction you was heading?
Look at mine not at his!
I remember after you did that work you turned on Chip and
everything he had to say. Heck it then got worse when the
group found out that he was jewish. That was mana for the
group and finally got the job done to get rid of him.
No matter how much shame you feel that will be part of
you forever. Can you remember the last time you said
something nice? That should take a week or so to think about.
You are such a miserable person, always pushing good aside
for the benefit of evil.If your page is the only thing
you can point to as to what you have achieved in the
last twenty years you are indeed in a sorry state.

1738. Dloyd Lavies, Usenet Moron and Thread Hi-Jacke, Blackmailer and Supreme hypocrti

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:25:46 UTC
From: Mark@k4yz.org
Message-ID: <j2g373p3mjqf50kjhs2k2vfcq6gmqo34oo@4ax.com>
Source record: 40142
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Thu, 14 Jun 2007 17:23:27 -0500, "kb9rqz" <gay@chassell> wrote:

>

Dloyd Lavies, Usenet Moron and Thread Hi-Jacke, Blackmailer and
Supreme hypocrti

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1739. Dloyd Lavies, Usenet Moron and Thread Hi-Jacke, Blackmailer and Supreme hypocrti

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:26:10 UTC
From: Mark@k4yz.org
Message-ID: <g3g3731mo3c1hdqrdl9oj706ou0b9go5br@4ax.com>
Source record: 40143
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
larry face facts you have no proof

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

1740. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:45:04 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <Txjci.19321$C96.14082@newssvr23.news.prodigy.net>
Source record: 40145

And, also, that ALL previous licenses are only
grandfathered to (I think) 5 years! (except for
the 20 wpm code credit for the Second Telegraph,
IF you have been Continueously licensed).
However, the good news , is there is indeed a
source of info (By QCWA), which has many of the
old callbooks (they use these to verify
elegibility to join QCWA, in absense of a copy
of your license. Might try them-- Jim NN7K

pdrahn@coinet.com wrote:
> On Jun 14, 3:11 pm, "MSpiv...@gmail.com" <MSpiv...@gmail.com> wrote:
>> I was a ham operator in the early 1960s and my call sign was KN1VTR.
>> I have lost all proof of that over the years and was wondering if
>> anyone knows of an "archive" where i might be able to find "proof". I
>> think if I can find it, I might be able to Grandfather 5 WPM CW.
>>
>> Thanks
>
> Are you aware CW is no longer a requirement for a ham license?
>
> Paul, KD7HB
>

1741. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 22:45:55 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <Bwjci.657$oh3.81@newsfe03.phx>
Source record: 40144

<MSpiv001@gmail.com> wrote in message
news:1181859070.399871.37430@n15g2000prd.googlegroups.com...
>I was a ham operator in the early 1960s and my call sign was KN1VTR.
> I have lost all proof of that over the years and was wondering if
> anyone knows of an "archive" where i might be able to find "proof". I
> think if I can find it, I might be able to Grandfather 5 WPM CW.
>
> Thanks
>

Code is not a requirement any more as of February 2007 the Morse Code
requirement was dropped for ALL amateur licenses

But if you want info on your old call:
Try W5YI Super Site -- The W5YI-VEC will perform exhaustive hand lookups
into their massive collection of old callbooks for a $5 fee. Contact them at
1-800-669-9594. URL: http://www.w5yi.org/

Also W3HF has a very complete collection of callbooks - URL:
http://www.geocities.com/w3hf/

Good Luck
Lamont

1742. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 23:02:58 UTC
From: amdx <amdx@knology.net>
Message-ID: <b6782$4671c915$18d6b40c$7046@KNOLOGY.NET>
Source record: 40146

"art" <aunwin@insightbb.com> wrote in message
news:1181859883.771488.53940@g37g2000prf.googlegroups.com...
> On 14 Jun, 14:35, Richard Clark <kb7...@comcast.net> wrote:
>> On Thu, 14 Jun 2007 11:24:18 -0700, art <aun...@insightbb.com> wrote:
>> >My point is that it is not "gone and long forgotten" despite
>> >the venom from you and Roy in you attempts to devalue the idea.
>>
>> Hi Arthur,
>>
>> Unfortunately you don't understand the technology, so you lack the
>> authority to make this anything more than a sentimental statement.
>>
>> My website contains more than 300 pages of results from real Fractal
>> antennas and it remains the largest website in the world devoted to
>> that topic alone. It even supports examples of fractal designs that
>> you couldn't beat.
>>
>> Care to compare examples? Mine will be far more length efficient than
>> anything you could offer. They will be non-planar. They will offer a
>> better turning radius than yours.
>>
>> No, comparison would quickly reveal all this and thus I will leave you
>> with the last gasping denial. ;-)
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Do you think I didn't realise what direction you was heading?
> Look at mine not at his!
> I remember after you did that work you turned on Chip and
> everything he had to say. Heck it then got worse when the
> group found out that he was jewish. That was mana for the
> group and finally got the job done to get rid of him.
> No matter how much shame you feel that will be part of
> you forever. Can you remember the last time you said
> something nice? That should take a week or so to think about.
> You are such a miserable person, always pushing good aside
> for the benefit of evil.If your page is the only thing
> you can point to as to what you have achieved in the
> last twenty years you are indeed in a sorry state.
>
Hey you two, stop it,
this is my thread about EZNEC modeling and Flag antennas. :-)
Mike

1743. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 23:27:38 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181863658.644452.228260@i13g2000prf.googlegroups.com>
Source record: 40147

On 14 Jun, 16:02, "amdx" <a...@knology.net> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1181859883.771488.53940@g37g2000prf.googlegroups.com...
>
>
>
> > On 14 Jun, 14:35, Richard Clark <kb7...@comcast.net> wrote:
> >> On Thu, 14 Jun 2007 11:24:18 -0700, art <aun...@insightbb.com> wrote:
> >> >My point is that it is not "gone and long forgotten" despite
> >> >the venom from you and Roy in you attempts to devalue the idea.
>
> >> Hi Arthur,
>
> >> Unfortunately you don't understand the technology, so you lack the
> >> authority to make this anything more than a sentimental statement.
>
> >> My website contains more than 300 pages of results from real Fractal
> >> antennas and it remains the largest website in the world devoted to
> >> that topic alone. It even supports examples of fractal designs that
> >> you couldn't beat.
>
> >> Care to compare examples? Mine will be far more length efficient than
> >> anything you could offer. They will be non-planar. They will offer a
> >> better turning radius than yours.
>
> >> No, comparison would quickly reveal all this and thus I will leave you
> >> with the last gasping denial. ;-)
>
> >> 73's
> >> Richard Clark, KB7QHC
>
> > Do you think I didn't realise what direction you was heading?
> > Look at mine not at his!
> > I remember after you did that work you turned on Chip and
> > everything he had to say. Heck it then got worse when the
> > group found out that he was jewish. That was mana for the
> > group and finally got the job done to get rid of him.
> > No matter how much shame you feel that will be part of
> > you forever. Can you remember the last time you said
> > something nice? That should take a week or so to think about.
> > You are such a miserable person, always pushing good aside
> > for the benefit of evil.If your page is the only thing
> > you can point to as to what you have achieved in the

> > last twenty years you are indeed in a sorry state.
>
> Hey you two, stop it,
> this is my thread about EZNEC modeling and Flag antennas. :-)
> Mike- Hide quoted text -
>
> - Show quoted text -

Noted and understood. Its national 'flag" day is it not?
With respect to EZNEC. MANA is much more ambedextrous than
Eznec. It does provide all the old stuff that eznec does
but it also supplies what is new from the last decade.
When you model using optimisation where the program
predetermines direction to take it opens up a whole
new world with respect to antenna design.
Ofcourse even optimisation is not new to antennas
which is why the program is offered for free to
amateurs. There is also a newsgroup based on MANA
so there is no need to search the amateur newsgroups
for the author to report bugs.
I don't think eznec can match it in any way, even
with the allowable number of segments used let
alone the number of variables available. If you
want to design an antenna that is in equilibrium
so that focussed radiation is denied it is just
one type of antenna design that cannot be met
using eznec. A lot of time has passed by since
eznec came on the scene as well as many changes
and additions with respect to antenna programs
so why impede your antenna learning by using
old technology? It certainly cannot be the cost.
Art

1744. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-14 23:49:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d2k373to0p1ra3le2ncteehb2vg86u6e3q@4ax.com>
Source record: 40148

On Thu, 14 Jun 2007 15:24:43 -0700, art <aunwin@insightbb.com> wrote:

>> No, comparison would quickly reveal all this and thus I will leave you
>> with the last gasping denial. ;-)

>Do you think I didn't realise what direction you was heading?
>Look at mine not at his!

Hi Arthur,

Now, if you want us to look at yours, let's compare with something
real and not just your stale boasting that is short on technology:

First point - non planar (you can't beat this)
design fits within a box with a volume of 0.122 by 0.196 by 0.210
wavelength.

Second point - greatest length efficiency (you can't beat this either)

Third point - best TOA in comparison at 10 degrees (you certainly
can't beat that) and at less than 1/8th wave of the highest tip off
the ground!

Fourth point - more than 10dB F/B (you don't even come close)

Fifth point - a fractal! You don't know how to do it, do you?

Home Run!

And now for the full details:
http://www.qsl.net/kb7qhc/antenna/fractal/n1ir/k2/index.htm
(hint, this stuff is so old, it is going on 10 years). Even the EZNEC
file is found here.

Now, you are up to bat. Going to bunt for a sacrifice at first base?

Gasp out another denial and save us a comparison with your pale
designs retread from what Gauss forgot to do. Modern analysis wins
over your grave robbing through books every time. ;-)

73's
Richard Clark, KB7QHC

1745. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 00:06:20 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181865980.689034.284400@d30g2000prg.googlegroups.com>
Source record: 40149

On 14 Jun, 13:33, richardharri...@webtv.net (Richard Harrison) wrote:
> Yuri, Kk3BU wrote:
>
> "But when signals are going throug the ionosphere and considerable
> distances, things don`t jive exactly like that."
>
> Yuri is nost likely correct. Even line-of-sight paths experience strange
> things.
>
> Isotropic material has the same characteristics along any axis. Kraus
> left himself an out by saying:
> "It is assumed that the emfs are of the same frequency, and the medium
> is linear, passive, and also isotropic." I think he implies that
> reciprocity may not rule when the medium is as screwed up as it often is
> in the ionosphere.
>
> I had one nonreciprocal microwave path among a countless total in my
> experience. It connected a rooftop in downtown Houston with the
> company`s aircraft hanger at Houston International (now Bush) Airport.
> The path ran from the company headquarters northward right up the street
> in a canyon between skyscrapers, several of which had more than our 33
> floors. The signal at the airport was stronger than that at headquarters
> by several dB. As we had more than 40 dB fade margin in both directions,
> I scratched my head but lost no sleep.
>
> I have HF radio experience between Germany and Portugal while working in
> shortwave broadcasting. We used HF for an order-wire between locations.
> Signal strengths and path losses seemed to be nearly identical in both
> directions. Transmitters were 3.5 KW Collins Auto-Tune all-purpose
> AM/CW/MCW with a rotary phone dial to select mode and frequency.
> Receivers were Hammerlund SP 600Xs.
>
> Best regards, Richard Harrison, KB5WZI

You just proved my point! You 'cherry picked' a line to quote from
Kraus
to give yourself some sort of authority. The quote starts off with
"It is assumed.." Now you have added "I think"..... and now you
suggest that he "Kraus" "I think he implies" he meant something else.
You then went off subject thinking about the old days when Ham
radio was for real hams before your mind finally succumbed to sleep
again.What do you think you achieved with that posting that
you snitched? Does it reflect on the real you? "Signals strengths
and path losses seemed to be nearly identical" you also state.

Have you now switched back to "reprocity" or are you meaning
something else again? Possibly leaving yourself an "out"

1746. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 00:07:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2jl373dgcspln2mijheg12rotjar2cqhku@4ax.com>
Source record: 40150

On Thu, 14 Jun 2007 18:02:58 -0500, "amdx" <amdx@knology.net> wrote:

> Hey you two, stop it,

Hi Mike,

Aw c'mon now. It's Arthur's favorite game of spitting on everything
to get me wet by chance. I cheat and wear a Nor'Wester. ;-)

> this is my thread about EZNEC modeling and Flag antennas.

Well, you got an EZNEC model from me (if you follow the link); and it
is for a small low antenna which has more gain, less loss than the
flag (woops, Art will be entertaining us with classical phlegm casting
about being un-amurricun now).

73's
Richard Clark, KB7QHC

1747. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 00:18:19 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181866699.023891.291410@o11g2000prd.googlegroups.com>
Source record: 40151

On 14 Jun, 16:49, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 14 Jun 2007 15:24:43 -0700, art <aun...@insightbb.com> wrote:
snip his!
>
> Hi Arthur,
>
snip

SHHHHHus

It is not yours or my thread
I agree with you, that antenna is dead
Now go away.

1748. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 00:27:04 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181867224.084125.273090@q19g2000prn.googlegroups.com>
Source record: 40152

On 14 Jun, 15:11, "MSpiv...@gmail.com" <MSpiv...@gmail.com> wrote:
> I was a ham operator in the early 1960s and my call sign was KN1VTR.
> I have lost all proof of that over the years and was wondering if
> anyone knows of an "archive" where i might be able to find "proof". I
> think if I can find it, I might be able to Grandfather 5 WPM CW.
>
> Thanks

I would imagine that you could use your old licence to get on the air.
They are now like social security numbers, steal one and work the
World.

1749. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 01:10:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <agp373t27vl3ekfk61gbb7m2tbgcuoqmmd@4ax.com>
Source record: 40153

On Thu, 14 Jun 2007 17:18:19 -0700, art <aunwin@insightbb.com> wrote:

>I agree with you, that antenna is dead

Hi Arthur,

As I said, you don't understand what you are criticizing, or why. That antenna is not DEAD, but we can both agree you can't find anything better - I can however, and it was published on the same page. You looked, didn't you? This IS a technical forum afterall, not a fashion runway.

73's
Richard Clark, KB7QHC

1750. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 01:56:29 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181872589.109766.110190@q19g2000prn.googlegroups.com>
Source record: 40154

On 13 Jun, 23:01, Richard Clark <kb7...@comcast.net> wrote:
> On Wed, 13 Jun 2007 19:45:35 -0500, Tom Ring <news0...@taring.org>
> wrote:
>
>
snip
>
> ... tsk, tsk, tsk. Such a fall from grace for the fractal antenna.
> Gone, and long forgotten.

Make up your mind. I'll now change it back to
"It is NOT gone and NOT forgotten"

It will be exhibited at the antenna exposition in Denver this year.
Maybe your name will be mentioned as the one that knew about it
all the time.And you tell me that you are heavily sought after
by entropreneurs to oversee technical propositions before
a committment is made? Brevity is not your strong point, 400
pages of index is way to much, 300 pages on a fractal
is also way to much. Remember your attempt at a patent,
to large to fit into a "shoe", to large to fit in any cabinet
thus placed on the floor never to be found or read and where
pages were sucked in by passing vacuum cleaners.
Hark the phone is ringing again, maybe it is IBM begging you again.

> 73's
> Richard Clark, KB7QHC

1751. Re: when does a vertical become vertical dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 02:55:29 UTC
From: nm5k@wt.net
Message-ID: <1181876129.920172.306650@o11g2000prd.googlegroups.com>
Source record: 40155

On Jun 14, 2:23 pm, art <aun...@insightbb.com> wrote:

>
> Wrong......
>
> There was a study in Australia where the earth's influence on a
> horizontal
> antenna showed where the earths influence disappeared rapidly. That
> cannot be
> said of a short vertical. If it was of full length ,as in dipole, I
> suspect
> the earth's influence would be the same as a horizontal antenna.
> Note: horizontal and vertical referes to polarization not to physical
> orientation of radiators

Well sure, but you can see noticable ground loss with really low
dipoles.
And the vertical examples I've talked about so far, are full size.
When I talk about dipoles suffering from ground loss, I'm talking
about
really low ones.. IE: a 160m dipole at 16 ft usually shows noticable
ground loss vs one at 125 ft, which would be a quarter wave up. Using
close up/down NVIS paths would be the best way to fairly compare..
Running a 160m dipole at 16 ft is like running a 10m dipole at 1 ft
off
the ground as far as height/wavelength... But, some people, due to
restrictions, end up running 160m dipoles at 15-20 ft up and live
with it.. Just cuz they make contacts doesn't mean there are no
ground losses lurking in the program.
MK

1752. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 04:04:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Ldoci.19403$C96.16296@newssvr23.news.prodigy.net>
Source record: 40156

Jim - NN7K wrote:
> However, the good news , is
> there is indeed a
> source of info (By QCWA), which has many of the
> old callbooks (they use these to verify
> elegibility to join QCWA, in absense of a copy
> of your license. Might try them-- Jim NN7K

Also OOTC, the Old Old Timer's Club.
--
73, Cecil http://www.w5dxp.com

1753. Modern Art Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 04:40:41 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4t58d$e3$1@nnrp.linuxfan.it>
Source record: 40157

http://freeweb.supereva.com/dai5tgc.dadacasa/aeri_tgc.htm?p

JS

1754. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 05:36:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2u74735qn0o446jjeo1n0rcjjkjsghrobu@4ax.com>
Source record: 40158

On Thu, 14 Jun 2007 18:56:29 -0700, art <aunwin@insightbb.com> wrote:
> "It is NOT gone and NOT forgotten"
this is simply passing gauss.

Hi Arthur,

When was the last time you SAW one in front of you, and not simply in a book or on the screen? When was the last time you USED one? Have you ever BUILT one? Do you REMEMBER how one works? :-0

Offer us something that could beat my page's 10 year old example that fits within the defined bounds, at a nearly zero height, and demonstrate yours has a better efficiency, smaller turn radius, is non-planar, and the rest....

73's
Richard Clark, KB7QHC

1755. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 05:51:25 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <yNpci.467439$115.277645@newsfe10.phx>
Source record: 40159

"Robert11" <rgsros@notme.com> wrote in message
news:T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com...
> Hi,
>
> I have a Uniden 996 scanner and would really like to pick up some marine
> traffic from Boston Harbor.
> Live about 20 miles due west of the harbor.

< snip >

> No idea what to buy, if you feel it's worth a try ?

< snip >

> Thoughts ?

I googled for <marine band colinear> and got this near the top:
http://buyreliant.com/marine/5102.htm It's way cheaper than some name-brand
competitors, like Shalespeare, but you're not going to be stressing it on a
boat, so give it a try on your rooftop or chimney.

1756. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 05:52:48 UTC
From: richardharrison@webtv.net
Message-ID: <973-46722930-145@storefull-3254.bay.webtv.net>
Source record: 40160

Art wrote:
"What do you think you achieved with that posting that you snitched?"

I gave the book and the page number of an expert`s opinion that reprocity usually rules with antennas.
Kraus says it again in the 3rd edition of "Antennas" on page 829:
"The transmitting and receiving patterns are the same."

"The power flow is the same either way."

Very plain talk.

Art doesn`t like my commentary. That`s his prerogative.

I`m not a typist so I avoid repeating where I can, but I try to be accurate.

I believe there are nonreciprocal paths because I`ve seen one as I wrote in my earlier posting.

I`ve measured hundreds of microwave paths using very accurate instruments. Almost always they were completely reciprocal. I`ve seen as many HF paths but rarely used anything beyond an "S" meter to measure them. Not much point when the medium itself varies so much.You need accuracy to prove a new antenna though. I`ve done that by comparison weith a known standard. I switched between the antennas every 5 minutes while continuously recording the distant signal strength. I then averaged the results and compared them. The results were as predicted by the calculations.

Best regards, Richard Harrison, KB5WZI

1757. Optimal radiation angle.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 08:05:33 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1181894733.966893.223040@k79g2000hse.googlegroups.com>
Source record: 40161

Anybody knowing about a simple freeware package which will show me the optimal radiation angle to reach some destination on a certain time of day ?

Arie.

1758. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 08:18:12 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1181895492.568370.201430@q75g2000hsh.googlegroups.com>
Source record: 40162

> With respect to EZNEC. MANA is much more ambedextrous than
> Eznec. It does provide all the old stuff that eznec does
> but it also supplies what is new from the last decade.
[...]
> Ofcourse even optimisation is not new to antennas
> which is why the program is offered for free to
> amateurs.

Unfortionally however, it uses the old MiniNec 3.13 engine. Those interested in antenna modelling should know the drawbacks and pitfalls as compared to then Nec2 or Nec4 engine used by EZnec and others...

1759. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 11:11:43 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <ReidnYdEvoFt7u_bnZ2dnUVZ_judnZ2d@bright.net>
Source record: 40163

Why bother? Morse is no longer a requirement. Just take the written
tests and get your Extra Class license...

Scott
N0EDV

MSpiv001@gmail.com wrote:
> I was a ham operator in the early 1960s and my call sign was KN1VTR.
> I have lost all proof of that over the years and was wondering if
> anyone knows of an "archive" where i might be able to find "proof". I
> think if I can find it, I might be able to Grandfather 5 WPM CW.
>
> Thanks
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

1760. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 11:14:51 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <2sedndoxGJox6e_bnZ2dnUVZ_jadnZ2d@bright.net>
Source record: 40164

I don't think a callbook listing would be acceptable "proof" for the FCC
to give him credit for having passed the code test in the past. But,
again, since no code test is required anymore, he can simply re-test for
any class license and request his old call as a vanity callsign.

Scott
N0EDV

The Shadow wrote:

> <MSpiv001@gmail.com> wrote in message
> news:1181859070.399871.37430@n15g2000prd.googlegroups.com...
>
>>I was a ham operator in the early 1960s and my call sign was KN1VTR.
>>I have lost all proof of that over the years and was wondering if
>>anyone knows of an "archive" where i might be able to find "proof". I
>>think if I can find it, I might be able to Grandfather 5 WPM CW.
>>
>>Thanks
>>
>
>
> Code is not a requirement any more as of February 2007 the Morse Code
> requirement was dropped for ALL amateur licenses
>
> But if you want info on your old call:
> Try W5YI Super Site -- The W5YI-VEC will perform exhaustive hand lookups
> into their massive collection of old callbooks for a $5 fee. Contact them at
> 1-800-669-9594. URL: http://www.w5yi.org/
>
> Also W3HF has a very complete collection of callbooks - URL:
> http://www.geocities.com/w3hf/
>
> Good Luck
> Lamont
>
>
>
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

1761. Re: Modern Art Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 11:21:28 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1181906488.458435.283780@q66g2000hsg.googlegroups.com>
Source record: 40165

On Jun 15, 12:40 am, John Smith I <assemblywiz...@gmail.com> wrote:
> http://freeweb.supereva.com/dai5tgc.dadacasa/aeri_tgc.htm?p
>
> JS

Those antennas show excellent design and construction skills... They can't possibly work when they are that perfect... Where is the raggedy piece of a beer can, hose clamped to one side for tuning? How come the coils are symmetrical... Jeez, any ham worthy of the name could take one of those and drive over it a couple of times so it looks like a "real" antenna...

Anyway, thanks for the url, I enjoyed perusing the pictures...

denny / k8do

1762. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 11:58:10 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4tusi$15qc$1@f04n12.cac.psu.edu>
Source record: 40166

art wrote:

> John,
> Water does burn. It has been years that I have felt the
> sensation of my body throbbing with so much passion.

To be more precise, water *is* burnt.

- 73 de Mike KB3EIA -

1763. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 11:59:52 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Yavci.164873$_c5.77627@attbi_s22>
Source record: 40168

> MSpiv001@gmail.com wrote:
>> I was a ham operator in the early 1960s and my call sign was KN1VTR.
>> I have lost all proof of that over the years and was wondering if
>> anyone knows of an "archive" where i might be able to find "proof". I
>> think if I can find it, I might be able to Grandfather 5 WPM CW.
>>
>> Thanks
>>
>
> --
> Scott

Scott, the QCWA keeps copies of all call books dating back some 70 years at least. You might drop the secretary a note with your inquiry. With a little kindness he might look you up. Why anyone cares about CW is beyond me. It has never been anything more than a joy for a few and a PITA for everyone not interested in having to feel superior to others who haven't mastered the art. It deserved to be removed as a requirement long before it was.

W4ZCB

1764. From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 12:01:34 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <FPidnTn96oOr4u_bnZ2dnUVZ_qWvnZ2d@comcast.com>
Source record: 40167

Hi,

Thanks for link to the Shakespeare Vertical Antenna.

Know very little about antennas, but was wondering. Is this vertical whip ,
or any vertical, a better bet to try as compared to perhaps a "simple Yagi
for the Marine bands ? Why ?

This Shakespeare vertical whip is described as: It's a 6dB collinear phased
5/8-wave antenna of 8-foot nominal length.

Again, I'm about 25 miles due west of Boston Harbor, but would sure like to
at least try to pick up some Marine VHF comms from the harbor. Hard for me
now at my age to try a whole bunch of antennas, so would like to limit it to
what you experts feel would offer the best "chance".

Thanks again,
Bob

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:yNpci.467439$115.277645@newsfe10.phx...
>
> "Robert11" <rgsros@notme.com> wrote in message
> news:T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com...
>> Hi,
>>
>> I have a Uniden 996 scanner and would really like to pick up some marine
>> traffic from Boston Harbor.
>> Live about 20 miles due west of the harbor.
>
>
> < snip >
>
>> No idea what to buy, if you feel it's worth a try ?
>
> < snip >
>
>> Thoughts ?
>
> I googled for <marine band colinear> and got this near the top:
> http://buyreliant.com/marine/5102.htm It's way cheaper than some
> name-brand
> competitors, like Shalespeare, but you're not going to be stressing it on
> a
> boat, so give it a try on your rooftop or chimney.

>
>
>

1765. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 12:48:47 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f4u1rm$1ee6$1@f04n12.cac.psu.edu>
Source record: 40169

Jim Higgins wrote:
> On Wed, 13 Jun 2007 15:47:30 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Jim Higgins wrote:
>>> On Tue, 12 Jun 2007 15:38:53 -0400, Michael Coslo <mjc5@psu.edu>
>>> wrote:
>>>
>>>> Cecil Moore wrote:
>>>>> Michael Coslo wrote:
>
>>> It's [evolution vs creation] a battle between objective science
>>> and those who believe the Bible is the literal word of God.
>>> Those who believe the Bible is often allegorical tend to have
>>> no real problem with evolution once they understand it never
>>> said that man descended from apes.
>> One of the most interesting things is that the allegorical nature of
>> the Bible was an accepted notion, and the so-called fundamentalist ideas
>> are a relatively new thing, originating in the late 1800's early 1900's.
>> So I guess it took most of two millenium for them to get it right? Old
>> time religion apparently started a long time after it started.
>
>
> Not having studied much of the history of religion(s) (I suppose
> Christianity in this case) this comes as news to me... especially in
> light of the Bible declaring itself to be THE word of God and that if
> any Man shall add to or take away from it God shall add unto him
> plagues and take his name from the book of life. (Revelation 22:18,19
> broadly paraphrased.)

And yet so much has been added and taken away over the years that it is
pretty hard to determine what is what.

> I'm not disagreeing with you at all - and if I were I darn sure
> wouldn't cite a Bible that declares itself to be THE word, and because
> it IS THE word it's accurate on that point, as my reason. I do
> understand the concept of circular logic and the pitfalls of self
> authentication. But it seems to me that the basis for fundamentalism
> is very firmly embedded in the Bible in far more places than
> Revelation 22 and I'm a bit surprised to hear it emerged only
> recently. Perhaps it did so as a reaction to so many other
> denominations (for lack of a better word) within Christianity seeming
> to blow with the wind on matters the Bible seems to hold as absolute.

There was/is a movement called modernism (kind of a lumped category) in which a major part was called "liberalism" - not to be confused with liberal in politics, but the coincidence is juicy. The main strengths of that movement were that there was no need for elaborate explanations of where the floodwaters came from, or where they went. Or why we have so many flavors of the bible, or the other little inconsistencies in the book. The disadvantage of this liberalism or modernism was that there are a lot of people who *want* to be told "this is exactly how it is, there is no wiggle room". Religions in which the adherents set themselves apart from society - like the Shskers or Amish want every aspect of life examined and a determination made as to if it is permissible.

At any rate, fundamentalism arose in opposition to modernism. It has the advantage of a person believing that "this is exactly how it is" and it needs interpreters to wriggle around the inconsistencies and contradictions. Of course there is one nasty flaw, in that an exact interpretation is impossible, due to all the different versions, strange consequences of trying to explain things like the biblical flood (where did the water come from, and where did it go to. Did the kangaroos swim to the Middle East from Australia to get on the Ark so that they wouldn't drown?

So much better to just look at that as a wonderful story about trust, doing right against ridicule and planning ahead to save innocents in harms way of Karma visited on evildoers. We can all debate Karma, but it's still a darn good story that people should know.

> While I don't hold the Bible as being THE word, I look at those who do
> and wonder why they aren't all fundamentalists. More to the point, I
> think the Bible is clear on that point in many places so I wonder why
> any Christians who profess to believe in the Bible as the word of God
> - as almost all do if asked - AREN'T fundamentalists.

The fundamentalists have largely succeeded in getting everyone else to stereotype all Christians as fundamentalists with the only difference being in degree (yeah, I know it seems a contradiction to have degrees of fundamentalism

>
>>> I'd tend to call the whole thing scientific tinkering vs evolution
>>> (natural selection) and I'd characterize Cecil's objections as a near
>>> total non sequitur. You can force fit it if you wish, but I consider
>>> it more charity than anything else to do so. ;-)
>>
>> I think Cecil's point was more along the line of look at the issues
>> with this stuff, so how can you be so sure of what you are talking
>> about. I think that was in response to my noting the interesting
>> universe we would live in should the law of conservation of energy not
>> hold sway. (my best guess is that such a universe would be incompatible
>> with anything living in it, and would immediately destroy itself)
>
>
> I have no clear idea where Cecil is coming from except that it doesn't

> seem to be consistent other than to consistently throw semantical
> monkey wrenches into the works.

There might be some here that would say that Cecil enjoys a "bloody
good row". 8^)

> Cecil seems to be annoyed by the Scientific Method because at some
> point there are competing theories and all can't be correct. Of
> course! That's how science works! Not all scientists are correct and
> this is resolved by peer review. Peer review is trail by fire. Weak
> theories die or are reforged to correct the parts demonstrated to be
> wrong and then retested. It's an iterative process designed to get at
> the Truth (emphasis by capitalization intended) and in the process a
> number of inadequate or totally incorrect theories are expected to
> fall by the wayside. Cecil seems to me to be gloating on the
> sidelines that there be dumbasses amongst scientists holding competing
> points of view because it's obvious they can't all be correct.

At the risk of sounding like a cheerleader, I think the scientific
method is just about the coolest thing to come down the pike. When I
watch someone passionately defend a wrong idea, then have it proven
wrong, then accept a more possible idea without remorse, that is
exhilarating. It's even a thrill to have it happen to ones self.

Who was it that said "Everyone has an idea that is just plain wrong"?

> The process is designed to figure out which is which and Cecil seems
> to be taking a snapshot in time, criticizing the status at that point
> as unresolved and with mutually exclusive components, when the
> emphasis of science isn't on the instantaneous status but on applying
> the process to make progress.

Pretty good analysis.

>
>> But that conservation of energy law is just about as foundational as you
>> can get.
>
>
> Conservation of energy AND matter.
>
> As I think you said earlier, if that weren't The Law, I think the
> universe would be a very unstable place to the point that it would
> VERY rapidly go to the lowest possible entropy state and cease to be a
> changing universe.

Aha, that's a much more eloquent assessment than mine. I keep getting
stuck on the idea of a big kaboom, hehe

>
>
>>> It's [string theory] a work in progress. Even the paintings of the masters looked
>>> like hell at some point before they were finished.

>> Perhaps. My gut on this is that there are so many flavors, all designed
>> to "correct" something else. So I'll look into it from time to time, but
>> I'm not going to hold my breath. 8^) And that math.....
>
>
> Aye... the math is incredibly complex and just properly understanding
> the concepts at the cutting edge of research today - *minus* any
> meaningful understanding of the math - escapes the vast majority of
> people close to the field let alone the far larger majority on the
> periphery. Those fully understanding both cutting edge theory and
> cutting edge math are indeed extremely rare.
>
> Needless to say I'm not in either group. ;-)

I often hope for an eloquent and simple explanation of everything.
Eloquent because it seems like that is how it should be, even without
the idea of symmetry, and simple because that is what I do best.

- 73 de Mike KB3EIA -

1766. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 12:54:12 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <ss25731qi5gid1kolq93r3not9n1mtc0s4@4ax.com>
Source record: 40170

On Fri, 15 Jun 2007 01:18:12 -0700, 4nec2 <4nec2@gmx.net> wrote:

>Unfortionally however, it uses the old MiniNec 3.13 engine. Those
>interested in antenna modelling should know the drawbacks and pitfalls
>as compared to then Nec2 or Nec4 engine used by EZnec and others...

The exception to that is Antenna Model

http://www.antennamodel.com/

Danny, K6MHE

1767. Re: Optimal radiation angle.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 12:57:43 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <v535735lpu1f931ruvug0kmo2anri3nhk8@4ax.com>
Source record: 40171

On Fri, 15 Jun 2007 01:05:33 -0700, 4nec2 <4nec2@gmx.net> wrote:

>Anybody knowing about a simple freeware package which will show me the
>optimal radiation angle to reach some destination on a certain time of
>day ?
>
>Arie.

http://elbert.its.bldrdoc.gov/pc_hf/hfwin32.html

1768. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 12:59:55 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <m73573pgac9fqv9ghg8t9ruk7lkei8o0li@4ax.com>
Source record: 40172

On Fri, 15 Jun 2007 08:01:34 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hi,
>
>Thanks for link to the Shakespeare Vertical Antenna.
>
>Know very little about antennas, but was wondering. Is this vertical whip ,
>or any vertical, a better bet to try as compared to perhaps a "simple Yagi
>for the Marine bands ? Why ?
>
>This Shakespeare vertical whip is described as: It's a 6dB collinear phased
>5/8-wave antenna of 8-foot nominal length.
>
>Again, I'm about 25 miles due west of Boston Harbor, but would sure like to
>at least try to pick up some Marine VHF comms from the harbor. Hard for me
>now at my age to try a whole bunch of antennas, so would like to limit it to
>what you experts feel would offer the best "chance".
>
>Thanks again,
>Bob
>--------------------------------------

A 5/8-wave collinear has 3dBd gain.

Danny

1769. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:04:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <28wci.4086$bP5.3606@newssvr19.news.prodigy.net>
Source record: 40173

Jim Higgins wrote:
> If it isn't a Doppler effect, what is it, and why?

I'm not alone in asserting that the red shift is not
100% Doppler effect. There are many other possibilities
as can be seen from a web search.

Here's one simplified possibility. Assume that for
some undiagnosed reason, the objective length of one
second of earth time is gradually decreasing and we
are not aware of it. When the light from a galaxy was
emitted five billion years ago, it was a certain number
of cycles per second. Now, undetectable by us, we are
measuring the frequency of that light with a reduced
length of second. The measured frequency of the light
would be inversely proportional to the age of the light
and not necessarily attributable to its velocity away
from us.

We know that the length of a second of time varies with
position in the universe and with velocity. The earth's
velocity and position in the universe are probably
continuously changing. There's no reason to believe that
the length of earth's second of time is not also changing.

We once believed that the earth's position was the absolute
and unchanging center position of the entire universe. Now
we believe that earth's time is the absolute and unchanging
center of time for the entire universe. Those two concepts
are equally valid. Maybe an ever expanding universe is just
an illusion caused by our present localized subjective
standards of measurement.

My practical joker technician once repositioned the time
base knob on my oscilloscope off by one position. I adjusted
the length of a one-shot pulse based on the o'scope reading.
He bet me $5 that the pulse was not long enough.
--
73, Cecil http://www.w5dxp.com

1770. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:16:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Wiwci.13920$2v1.7911@newssvr14.news.prodigy.net>
Source record: 40174

Jim Higgins wrote:
> I truly believe - as I'm beginning to suspect you do also - that the
> best fun is had at the expense of others... and if we're in agreement
> on this (disallowing malice) I want to remind you it's much more fun
> if at least one other notices what's happening. Which is not to
> suggest in the slightest that missing the point was anything but a
> total lapse on my part. ;-)

Jim, maybe you were the target of the leg pulling. :-)

When I, as a VP of Koala Technologies, met the VP of
Operations, I told him that my wife, a nurse, would
like to discuss operations with him. He responded:

"What the hell does a nurse know about operations?"

And after it soaked in:

"You SOB, how did you set me up for that?"

We were best friends till death did us part.
--
73, Cecil http://www.w5dxp.com

1771. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:17:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7kwci.13921$2v1.8760@newssvr14.news.prodigy.net>
Source record: 40175

Richard Harrison wrote:
> I believe there are nonreciprocal paths because I`ve seen one as I wrote
> in my earlier posting.

I've never heard anyone talking back to WTAW. :-)
--
73, Cecil http://www.w5dxp.com

1772. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:24:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Hqwci.4097$bP5.2044@newssvr19.news.prodigy.net>
Source record: 40176

Jim Higgins wrote:
> That you can so succinctly summarize evolution theory and still hold
> this view simply boggles the mind. Is your view motivated by an
> application of the scientific method or by something better defined as
> faith?

I put no faith in either theories or religion. The only
thing in which I put my faith is skepticism.

> There's a vast difference between something being "wrong" and simply
> being inadequately developed so that even making a determination of
> its correctness and/or completeness is premature.

A skeptic would call that rationalization. :-)

"To admit that I was wrong would be premature -
I was only developing my latest theory." :-)
--
73, Cecil http://www.w5dxp.com

1773. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:28:47 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <luwci.4098$bP5.4094@newssvr19.news.prodigy.net>
Source record: 40177

Jim Higgins wrote:
> Cecil seems to be annoyed by the Scientific Method because at some
> point there are competing theories and all can't be correct. Of
> course! That's how science works!

Jim, I'm annoyed at people who assert that scientific
theories are never wrong and are simply a subset of
something that is more correct.
--
73, Cecil http://www.w5dxp.com

1774. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 13:31:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9xwci.4099$bP5.2037@newssvr19.news.prodigy.net>
Source record: 40178

Jim Higgins wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Don't remember who said that a scientific theory
>> is not discarded but simply becomes a subset of
>> some new theory.
>
> Doesn't matter who said it because it's wrong as an absolute
> statement.

That's all I am saying, that some scientific theories
are wrong. Not even Einstein could come up with a
scientific theory of everything.
--
73, Cecil http://www.w5dxp.com

1775. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 14:11:02 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf757fm.2giu.bit-bucket@shell.config.com>
Source record: 40079

```
On Fri, 15 Jun 2007 05:54:12 -0700, Danny Richardson wrote:
> On Fri, 15 Jun 2007 01:18:12 -0700, 4nec2 <4nec2@gmx.net> wrote:
>
>
>>Unfortionally however, it uses the old MiniNec 3.13 engine. Those
>>interested in antenna modelling should know the drawbacks and pitfalls
>>as compared to then Nec2 or Nec4 engine used by EZnec and others...
>
> The exception to that is Antenna Model
>
> http://www.antennamodel.com/

"Best viewed at 6400x4800" :-/
```

1776. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 14:26:24 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <q1neZhUQGqcGFAV+@ifwtech.co.uk>
Source record: 40081

Cecil Moore wrote:
>Jim Higgins wrote:
>> Cecil seems to be annoyed by the Scientific Method because at some
>> point there are competing theories and all can't be correct. Of
>> course! That's how science works!
>
>Jim, I'm annoyed at people who assert that scientific
>theories are never wrong and are simply a subset of
>something that is more correct.

I'm sure those straw men of yours are shaking in their boots.

--

73 from Ian GM3SEK

1777. Re: Modern Art Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 14:30:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4u7ps$lh8$1@nnrp.linuxfan.it>
Source record: 40080

Denny wrote:
> On Jun 15, 12:40 am, John Smith I <assemblywiz...@gmail.com> wrote:
>> http://freeweb.supereva.com/dai5tgc.dadacasa/aeri_tgc.htm?p
>>
>> JS
>
> Those antennas show excellent design and construction skills... They
> can't possibly work when they are that perfect... Where is the
> raggedy piece of a beer can, hose clamped to one side for tuning? How
> come the coils are symmetrical... Jeez, any ham worthy of the name
> could take one of those and drive over it a couple of times so it
> looks like a "real" antenna...
>
> Anyway, thanks for the url, I enjoyed perusing the pictures...
>
> denny / k8do
>

Denny:

Darn things remind of things out of a 1950's grade B science fiction
flick! <grin>

However, as you say, he has done a nice job in construction of them.

Regards,
JS

1778. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 15:01:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%Lxci.1304$vi5.877@newssvr17.news.prodigy.net>
Source record: 40082

Ian White GM3SEK wrote:
> I'm sure those straw men of yours are shaking in their boots.

I think if you will check the history of this thread,
someone asserted that scientific theories are very
rarely ever wrong but sometimes have to be boundary
condition limited to become subsets of more accurate
theories.

So I am never wrong - I am just in the process of
defining the boundary conditions for my scientific
theories. :-)
--
73, Cecil, w5dxp.com

1779. Re: Modern Art Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 16:16:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4ue0h$3gr$1@nnrp.linuxfan.it>
Source record: 40083

art wrote:

> ...
> A Japanese admiral once said that they had awakened a sleeping giant,
> so what does
> it take to awaken a Nation from a coma?
>

Art:

I see America quite differently ...

There is a major problem of minorities with special-self-serving interests getting into positions of influence/power. A prime example is gays in politics and the negative effects this is having on home, family, quality of living, American values, etc.

In amateur radio you see the arrl and the effects it has had on the hobby. They are a business/"political entity" in a field which would be better served as amateurs-helping-amateurs. You still see the real importance of amateur radio in open minded individuals still willing to look for new things. And, again, you see it with little individual amateurs with web pages providing information sharing with all other amateurs.

The problem is that the most visible influences are based in tradition/"religion"/profit and a myriad of other self serving motivations.

You see it right here in the news groups, fractions break off and form little klicks and work to sabotage threads which they view as contrary to their purposes. Instead of denying conspiracies, I have began to wonder what people cannot design a conspiracy around!

Hey, in a free country, those are dangers you must learn to live with and survive within ... the only danger is if you comply and are assimilated (think borg here.)

Regards,
JS

1780. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 18:11:36 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181931096.735711.103960@q75g2000hsh.googlegroups.com>
Source record: 40084

On 15 Jun, 01:18, 4nec2 <4...@gmx.net> wrote:
> > With respect to EZNEC. MANA is much more ambedextrous than
> > Eznec. It does provide all the old stuff that eznec does
> > but it also supplies what is new from the last decade.
> [...]
> > Ofcourse even optimisation is not new to antennas
> > which is why the program is offered for free to
> > amateurs.
>
> Unfortionally however, it uses the old MiniNec 3.13 engine. Those
> interested in antenna modelling should know the drawbacks and pitfalls
> as compared to then Nec2 or Nec4 engine used by EZnec and others...

There are many view as what is advantageous and what is not.
In the early days I compared mininec and NEC programs both of
which had pitfalls that you had to be aware of and that really
was the key in achieving most for what you bought. To me EZNEC
is for people who like crossword puzzles in that the progam
tells you that what you have is no good. Where as the other
program puts out a helping hand to show the direction changes
that are needed for success and frankly the majority of program
users need more than the realisation that what they have
designed is no good. It is like the carrot and the stick aproach,
if a bite of the carrot seems implausable you stop trying to
bite and put the program away Now we have NEC programs that
posses optimizers that older programs such as eznec e.t.c.
cannot supply but with the increase of availability of newer
programs such as yours the cost becomes a powerful motivator
such that the modern programs which are more than suitable for
a amateurs needs are now available, for free no less.
To have a program that meets all my needs for the cost of nothing
carries much more weight than owning just a calculator or a
slide rule of yesteryear. True there are many users of the eznec
computor programs by those who purchased many years ago many
of which have tired of it but for a person at the entry level
to fork out hundred of dollars for an antique when he can get
more for free and keep his money to me there is no argument
At the same time should we not inform newcomers to the hobby
of the pitfalls that could delusion those who we need so badly?

1781. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 18:28:32 UTC
From: nm5k@wt.net
Message-ID: <1181932112.155304.137060@q75g2000hsh.googlegroups.com>
Source record: 40085

On Jun 15, 7:54 am, no.s...@no.uce.bellatlantic.net wrote:
> On Fri, 15 Jun 2007 05:59:55 -0700, Danny Richardson
>
>
>
> <n_gr...@k6mhe.com> wrote:
> >On Fri, 15 Jun 2007 08:01:34 -0400, "Robert11" <rgs...@notme.com>
> >wrote:
>
> >>Hi,
>
> >>Thanks for link to the Shakespeare Vertical Antenna.
>
> >>Know very little about antennas, but was wondering. Is this vertical whip ,
> >>or any vertical, a better bet to try as compared to perhaps a "simple Yagi
> >>for the Marine bands ? Why ?
>
> >>This Shakespeare vertical whip is described as: It's a 6dB collinear phased
> >>5/8-wave antenna of 8-foot nominal length.
>
> >>Again, I'm about 25 miles due west of Boston Harbor, but would sure like to
> >>at least try to pick up some Marine VHF comms from the harbor. Hard for me
> >>now at my age to try a whole bunch of antennas, so would like to limit it to
> >>what you experts feel would offer the best "chance".
> >>Thanks again,
> >>Bob
> >>--------------------------------------
>
> >A 5/8-wave collinear has 3dBd gain.
>
> >Danny
>
> However, a 5/8 is only 48inches, that antenna is a stacked 5/8s
> colinear and at 8ft 6db would be correct.
>
> Allison

A stacked dual 5/8 collinear will give appx 3dbd..
A single 5/8 GP will do appx 3.3 dbi give or take..
I recommend a small yagi myself.. It will eat the verticals
for lunch if both are in the attic. Course, you have to
point it though..
MK

1782. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 18:41:19 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181932879.071852.239060@q66g2000hsg.googlegroups.com>
Source record: 40086

On 30 May, 19:13, Tony Jaa <tonyjaa@muay_thai_boxing.org> wrote:
> Water burns!
> Man looking for cancer cure hopes to solve energy crisis
> Posted: May 30, 2007
> 5:00 p.m. Eastern
>
> http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55934
>
> By Joe Kovacs
> © 2007 WorldNetDaily.com
>
> Is the solution to America's energy needs as simple as a trip to the beach?
snip

YES
What is so wrong in applying a governer to all engines. These would be
activated
when an engine has come to a stand still and would regulate the
acceleration rate.
This same governer would also activate again to regulate the rate of
accelaration
after 65 mph is reached. Most of the population live in high density
hot spots
using the vehicle to sit in waiting for traffic to move and it is not
economical
to accellerate to the bumper up front. For inner cities enforce use of
public
transportation for those not willing to pay the price to the
companies front door.
As for trucks the interstates are wide enough to introduce rail
traffic as well
as predicting the needs of product movement. A generaqtion later work
will be
done at home in a psuedo office enfironment memoving the need to get
on the
road in the first place. As for the trip to the beach that won't be
necessary as the water will be way to polluted and the sand will be
taken away
to build developments upon, that will decay in unison with the advance
of science.
If we had to, is the above a total impossibility that it is not doable
because
of the power of those who have cornered the money or the naysayers
that serve them?

directional needs

1783. Re: one way propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 18:45:51 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181933151.397857.206120@g4g2000hsf.googlegroups.com>
Source record: 40087

On 15 Jun, 06:17, Cecil Moore <nos...@w5dxp.com> wrote:
> Richard Harrison wrote:
> > I believe there are nonreciprocal paths because I`ve seen one as I wrote
> > in my earlier posting.
>
> I've never heard anyone talking back to WTAW. :-)
> --
> 73, Cecil http://www.w5dxp.com

A book on Politics is one way to learn about propagation
especially when one side is not listening

1784. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 18:56:30 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yhBci.13947$2v1.9666@newssvr14.news.prodigy.net>
Source record: 40088

art wrote:
> What is so wrong in applying a governer to all engines.

The first time a driver needed to use acceleration
and didn't have it to avoid a fatal accident, the
requirement would be in deep dodo.

For instance, on a long straightaway with no
oncoming traffic, someone decides to pass a
couple of 18-wheelers. The car following that
one decides to do the same thing. Suddenly
ahead, a car pulls into the oncoming lane from
a side road. Emergency acceleration would save
lives but it's not available due to a governor.
Five children are killed. Imagine the outrage.
--
73, Cecil http://www.w5dxp.com

1785. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 19:27:31 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181935651.258667.77340@w5g2000hsg.googlegroups.com>
Source record: 40089

```
On 15 Jun, 11:56, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > What is so wrong in applying a governer to all engines.
>
> The first time a driver needed to use acceleration
> and didn't have it to avoid a fatal accident, the
> requirement would be in deep dodo.
>
> For instance, on a long straightaway with no
> oncoming traffic, someone decides to pass a
> couple of 18-wheelers. The car following that
> one decides to do the same thing. Suddenly
> ahead, a car pulls into the oncoming lane from
> a side road. Emergency acceleration would save
> lives but it's not available due to a governor.
> Five children are killed. Imagine the outrage.
> --
> 73, Cecil http://www.w5dxp.com
```

1786. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 19:41:01 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <gnq5739t4s40o3lm4on6hv9ecivb43h12i@4ax.com>
Source record: 40090

On 15 Jun 2007 14:11:02 GMT, Allodoxaphobia <bit-bucket@config.com>
wrote:

>On Fri, 15 Jun 2007 05:54:12 -0700, Danny Richardson wrote:
>> On Fri, 15 Jun 2007 01:18:12 -0700, 4nec2 <4nec2@gmx.net> wrote:
>>
>>
>>>Unfortionally however, it uses the old MiniNec 3.13 engine. Those
>>>interested in antenna modelling should know the drawbacks and pitfalls
>>>as compared to then Nec2 or Nec4 engine used by EZnec and others...
>>
>> The exception to that is Antenna Model
>>
>> http://www.antennamodel.com/
>
>"Best viewed at 6400x4800" :-/

Well, I don't know what you are using for a browser, but it works fine
for me using Firefox and my screen resolution is 1280 X 1024

1787. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 19:45:40 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <70r57315km4s0jhkfapftm3b6v9ii1ihbn@4ax.com>
Source record: 40091

On Fri, 15 Jun 2007 13:54:29 GMT, no.spam@no.uce.bellatlantic.net
wrote:

>On Fri, 15 Jun 2007 05:59:55 -0700, Danny Richardson
><n_group@k6mhe.com> wrote:
>
>>On Fri, 15 Jun 2007 08:01:34 -0400, "Robert11" <rgsros@notme.com>
>>wrote:
>>
>>>Hi,
>>>
>>>Thanks for link to the Shakespeare Vertical Antenna.
>>>
>>>Know very little about antennas, but was wondering. Is this vertical whip ,
>>>or any vertical, a better bet to try as compared to perhaps a "simple Yagi
>>>for the Marine bands ? Why ?
>>>
>>>This Shakespeare vertical whip is described as: It's a 6dB collinear phased
>>>5/8-wave antenna of 8-foot nominal length.
>>>
>>>Again, I'm about 25 miles due west of Boston Harbor, but would sure like to
>>>at least try to pick up some Marine VHF comms from the harbor. Hard for me
>>>now at my age to try a whole bunch of antennas, so would like to limit it to
>>>what you experts feel would offer the best "chance".
>>
>>
>>>Thanks again,
>>>Bob
>>>---------------------------------------
>>
>>A 5/8-wave collinear has 3dBd gain.
>>
>>Danny
>
>However, a 5/8 is only 48inches, that antenna is a stacked 5/8s
>colinear and at 8ft 6db would be correct.
>
>Allison

A 5/8-wave *collinear* has two 5/8 elements. Otherwise why would it be
call collinear?

Danny, K6MHE

1788. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 19:56:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o6q5739osbvbn9a05gr8s7djl7f8sg0ctk@4ax.com>
Source record: 40093

On Fri, 15 Jun 2007 12:27:31 -0700, art <aunwin@insightbb.com> wrote:

>On 15 Jun, 11:56, Cecil Moore <nos...@w5dxp.com> wrote:
>> art wrote:
>> > What is so wrong in applying a governer to all engines.
>>
>> The first time a driver needed to use acceleration
>> and didn't have it to avoid a fatal accident, the
>> requirement would be in deep dodo.
>>
>> For instance, on a long straightaway with no
>> oncoming traffic, someone decides to pass a
>> couple of 18-wheelers. The car following that
>> one decides to do the same thing. Suddenly
>> ahead, a car pulls into the oncoming lane from
>> a side road. Emergency acceleration would save
>> lives but it's not available due to a governor.
>> Five children are killed. Imagine the outrage.
>> --
>> 73, Cecil http://www.w5dxp.com
>

Hi Arthur,

Your responses are always so insightful.

To add to the confusion, instead of five children killed, the cars are passing twenty two gas tankers when a school bus pulls out near a nuclear facility in the outskirts of Keokuk. The conflagration kills 1345 children (there were more busses behind the first, it was the last day of grade school) and the raging inferno melts down the transmission lines from the nuclear plant that went into immediate overload. This caused the nuclear pile to go into the "China Syndrome" and melt through the containment and disturbing an unknown fault that ran beneath the plant.

The earth rent and sent shock waves through metropolis Keokuk toppling buildings and throwing more school busses (on the road from closing schools) into yawning chasms opening up as the earth quakes. Death toll at this point now stands at slightly less than a million.

The National Guard (which is otherwise away on other, foreign, business) does not show up and famine wipes out two million more in the surrounding country side as the president helicopters over the scene for Fox news commentary coloring.

The stock market plunges and politicians open committees investigating the cause of this calamity. Soon, all cars are stopped at every intersection as the newly instituted Department of School Crossing Security inspects under the hood of every car for contraband governers. Digital examinations up tail pipes are common. The designer of this governer product is known to be hiding somewhere in Texas so we immediately declare war on Canada with a scorch the earth policy (brought to you by Halliburton and Anderson Consulting firms) until he is found.

Four years later and the ice cap has been melted putting out the fires in downtown Keokuk (Chicago, Boston, New York, Tampa, Phoenix....) and the president expresses his support for the governer designer and hails this crowning victory from the Hacienda Blanca.

With apologies for lifting a very old idea from an equally old book By Sinclair Lewis "It Can't Happen Here."

73's
Richard Clark, KB7QHC

1789. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 19:56:27 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1181937387.764361.289180@q69g2000hsb.googlegroups.com>
Source record: 40092

On 15 Jun, 11:56, Cecil Moore <nos...@w5dxp.com> wrote:
> art wrote:
> > What is so wrong in applying a governer to all engines.
>
> The first time a driver needed to use acceleration
> and didn't have it to avoid a fatal accident, the
> requirement would be in deep dodo.
O.K. so you want to be a naysayer. Assuming you
are willing to accept change and adaptation
that change requires let as look at the actual words
without playing word games to gain a gottcha.>
> For instance, on a long straightaway with no
> oncoming traffic, Ok so we say that people
are going the speed limit since speeding is
prohibitive. No don't play word games

someone decides to pass a
> couple of 18-wheelers. So he accelerates
to pass or if it cannot be done without
breaking the speed limits he doesn't do it
tho he could overtake over a period in time
since the governer only regulates not stop.

The car following that
> one decides to do the same thing.
Thats O.K. he now has more time to decide
on his options.

Suddenly

No there is no "suddenly" his vehicle will
not allow him to do that tho it will allow
him to ease into the traffic flow where others
could accommodate his actions.

> ahead, a car pulls into the oncoming lane from
> a side road.
No a car doesn't pull into fast moving traffic
knowing the engine will not respond in such a
dangerous manner. However other cars do not
have a governor to prevent braking while the
other car is moving slowly from a distance

Emergency acceleration would save
> lives

Emergency acceleration is still available over 30 miles an hour
and under 65 miles an hour. Most accidents occur at un expected
changes in direction and judgement and in dense areas thus
giving more time for alternate action including brakes.

but it's not available due to a governor.
he has time, a steering wheel and brakes.

> Five children are killed. Imagine the outrage.

Deaths occur at high speeds in general or non use of seat belts
Studies have shown that setting speed limits and the use of
seat belts saves lives and remember when the work day starts
congestion rules for the majority.

> --
Don't you think you can adapt quickly in dense traffic
even if the motor cycle you ride allows you to ride with
impudence? Remember the intent is to reduce the use of gasolene
for the Nation not to prevent people to take advantage
of others on the road without looking back at the mayhem
caused to others or are you wearing a straw hat again.
Surely you are not promoting the burning of water as
a more logical way to go while the oil supply burns
in anticipation of success.

> 73, Cecil http://www.w5dxp.com

1790. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 20:10:48 UTC
From: Nick <a@b.com>
Message-ID: <cnCci.19$tj3.15@newsfe7-win.ntli.net>
Source record: 40094

I was under the impression that a 1/4 wave was approx 0 dBd, a
5/8ths was approx 3dBd,
and a collinear dual 5/8ths was approaching 6dBd
Nick

1791. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 21:11:14 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f4v1d4$544$1@news.service.uci.edu>
Source record: 40095

Cecil Moore wrote:

> Ian White GM3SEK wrote:
>
>> I'm sure those straw men of yours are shaking in their boots.
>
>
> I think if you will check the history of this thread,
> someone asserted that scientific theories are very
> rarely ever wrong but sometimes have to be boundary
> condition limited to become subsets of more accurate
> theories.

Sounds like someone might have been talking about the theories
ordinarily referred to as Newtonian Mechanics and Quantum Mechanics.

73, ac6xg

1792. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 22:00:05 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <FZDci.98$Rw1.80@newssvr25.news.prodigy.net>
Source record: 40096

Jim Higgins wrote:
> And you can name those people ... and refer to a message where
> this can be verified?

Don't want to name names but here is the assertion with
which I have been disagreeing:

"Hypotheses are discarded all the time, theories aren't."
--
73, Cecil http://www.w5dxp.com

1793. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 22:01:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <e%Dci.100$Rw1.58@newssvr25.news.prodigy.net>
Source record: 40097

Jim Kelley wrote:
> Sounds like someone might have been talking about the theories
> ordinarily referred to as Newtonian Mechanics and Quantum Mechanics.

No, he appeared to be referring to all theories:

"Hypotheses are discarded all the time, theories aren't."
--
73, Cecil http://www.w5dxp.com

1794. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 22:13:42 UTC
From: Dave <someplace@nowhere-nice.com>
Message-ID: <46730f16@212.67.96.135>
Source record: 40098

Ian White GM3SEK wrote:
>
> FYI, Roy will be at the Friedrichshafen hamfest in Germany next week, so
> he may already be traveling.
>
> Like most travelers, he may have access to e-mail, but is unlikely to
> have a newsgroup feed.
>
>

Google groups can be used to send/receive newsgroup messages

1795. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 22:15:46 UTC
From: nm5k@wt.net
Message-ID: <1181945746.365705.310980@m36g2000hse.googlegroups.com>
Source record: 40099

On Jun 15, 2:10 pm, "Nick" <a...@b.com> wrote:
> I was under the impression that a 1/4 wave was approx 0 dBd, a
> 5/8ths was approx 3dBd,
> and a collinear dual 5/8ths was approaching 6dBd
> Nick

Most the textbooks rate the 1/4 wave GP at .3 dbi.
The 1/2 wave at 2.1 dbi or 0 dbd.
The 5/8 GP appx 3.3 dbi, or 1.2 dbd.
The dual 5/8 collinear appx 5.1 dbi or 3 dbd.
But.... If you model the antennas, the sloping radial
1/4 GP actually does a bit better.. Appx 1.8 dbi,
which is within .3 db of the 2.1 dbi you would see
from a 1/2 wave.
BTW, these are "free space" numbers.
I don't like to confuse people by adding ground
effects... Besides, if you do model over ground,
you will see the same comparison spread..
It doesn't really change anything..
The gain from a 5/8 GP can be all over the map depending
on the radial length used.. Most 5/8's use 1/4 wave radials.
No bueno.
At an old page I put up, you can see the effect of radial
length on the performance of the 5/8 GP.
http://web.wt.net/~nm5k/acompari.htm
Many people rag on the 5/8 antenna, but the largest
problem is due to an old lousy obsolete design
which uses the short 1/4 wave radials.
If you use longer radials, such as 5/8 or 3/4 you
will see the rated gain you would expect from a 5/8 GP.
If you use 1/4 wave radials, you can often see less gain
at the desired angles than either the 1/2 wave, or 1/4 GP.
Of course, all these examples assume no common mode
currents on the feedline.. On VHF/UHF, decoupling of the
feedline can be as important as the antenna design itself.
So if I were to build say a dual 5/8 collinear, or a 5/8 GP
with steep 5/8 radials, I would add a decoupling section
below the lower element.
IE: like an isopole, or whatever.. It used a lower 1/4 wave
cone as the decoupling device. You could also add a
section of 1/4 wave radials for decoupling..
6dbd from a dual element vertical?
Good luck..A 3 el NBS yagi is only good for about 7.3 dbd,
and it will thrash a dual 5/8 collinear.

If the height is limited, I would use the highest gain antenna
I could scrape up. Even if you have obstructions, it's going
to do a heck of a lot better than most any vertical at the
same height.
MK

1796. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <gvhbk4-laa.ln1@mail.specsol.com>
Source record: 40100

Cecil Moore <nospam@w5dxp.com> wrote:
> Jim Kelley wrote:
> > Sounds like someone might have been talking about the theories
> > ordinarily referred to as Newtonian Mechanics and Quantum Mechanics.

> No, he appeared to be referring to all theories:

> "Hypotheses are discarded all the time, theories aren't."

If you think that is incorrect, it should be easy for you to name
a theory that was validated by multiple, indendent, reproducible,
experiments and later discarded.

--
Jim Pennino

Remove .spam.sux to reply.

1797. Re: Ham license Archive/License Upgrades

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:05:07 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <46731b28$0$4868$4c368faf@roadrunner.com>
Source record: 40101

You don't need to grandfather 5 wpm CW. The FCC has abolished all CW requirements for testing for US licenses in amateur radio.

Upgrades are now paper exams.

73, Bill W4WNT

<MSpiv001@gmail.com> wrote in message news:1181859070.399871.37430@n15g2000prd.googlegroups.com...
>I was a ham operator in the early 1960s and my call sign was KN1VTR.
> I have lost all proof of that over the years and was wondering if
> anyone knows of an "archive" where i might be able to find "proof". I
> think if I can find it, I might be able to Grandfather 5 WPM CW.
>
> Thanks
>

1798. Re: Antenna Suggestions, Please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:10:04 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <46731c51$0$4658$4c368faf@roadrunner.com>
Source record: 40102

Check out the "Cheap Yagis" site from the Clear Lake Amateur Radio Club in Texas. They have multi element beam construction projects for the UHF/VHF bands that could be adapted for Maritime frequencies. They work well, I've built a 9 el 432 beam that works well. And best of all, they are cheap!

Good luck,

Bill, W4WNT
"Robert11" <rgsros@notme.com> wrote in message
news:JpOdnaKG__5AcfLbnZ2dnUVZ_vumnZ2d@comcast.com...
> Hi,
>
> Thank you all for the very good suggestions and comments re my previous
> post on trying an antenna for receiving Maritime conversations from myt
> location of around 20 miles west of Boston harbor.
> Really good info. I've copied my old post below, for reference.
>
> Think I would like to try a "dedicated" antenna.
>
> I'm in my 70's now, and frankly, even building a really simple antenna is
> probably beyond me. So, I would like to purchase a suitable one, for,
> perhaps, $75 or so, max.
>
> For a variety of reasons, would have to go in attic.
>
> Would want it to be very directional, with "lots" of gain, and essentially
> tuned for the Maritime freq's of around 155 -170 MHz, receiving only
> usage.
>
> And, I guess, not too big, so it would fit reasonably in my attic.
>
> If anyone could suggest a "good" commercial unit, would be most
> appreciative.
>
> BTW: would it be possible to parallel the coax feed from this new
> antenna, with my existing broadband scanner Scantenna antenna (via a
> "splitter", or...?), or would phase differences, etc., louse everything
> up ?
>
> Realize it would undoubtedly be better to use separate coax feeds, but was
> wondering about the practicality of using a single feed from the attic ?
> (again, receiving only)
>
> Thanks,
> Bob

> --------------------------------
> I have a Uniden 996 scanner and would really like to pick up some marine
> traffic from Boston Harbor.
> Live about 20 miles due west of the harbor.
>
> Have a Scantenna antenna which I think is "pretty good". It's up in my
> attic.
>
> It's omni directional, and broadband over the typical scanner ranges
> (supposedly).
>
> I can often pick up coast guard conversations, but very rarely (but
> ooccassionally) ship traffic.
>
> Do you think a dedicated, very directional, and tuned to the marine freq's
> would help, or am I just too far away ?
>
> Any thoughts on, or antenna suggestions would be most appreciated.
> No idea what to buy, if you feel it's worth a try ?
>
> Very interested in the AIS data being transmitted by ships at around 162
> MHz, as well as general marine stuff.
>
>
>
>

1799. Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:11:24 UTC
From: oeguet@gmx.de
Message-ID: <1181949084.433404.62800@n2g2000hse.googlegroups.com>
Source record: 40103

Hello everybody,

I am searching for an antenna programming tool/compiler/preprocessor/
language. To finilize my work with similar subject (based on NEC2/
NEC4, especially on 4NEC2 from Arie Voors), I want to catch some good
ideas for this. Are you knowing some good tools, that provide to model
your antenna with a program code?
It should look like a program source code (like Basic, C or else) with
mathematical equations, variables, etc. It should not a GUI-Program,
where antenna parameters can be given in edit windows. (I hate this.)

So far, I am able to create construction models of antenna, so antenna
parameters can be optimized via 4NEC2. The complete output NEC file
has symbolic parameters instead of hard coded numbers. It supports
many features, that makes antenna modeling easy for you and me.
Especially for old "C"-programmers like me. With this work, it will be
soon able to model very complex antennas.

Please help me, to make a new standard of antenna modeling tool/
language. You will be get an advantage of this soon.

Regards,
Aziz

Some cut of source code (from offset parabolic reflector generator):

```
...snipped..
//--- Intermediate Symbols ---
P_y0 = -P_W/2 // Starting y position

#if (P_Type==3)
P_z0 = -P_Tp // Starting z position for offset parabola
#else //--if (P_Type==3)
P_z0 = -P_Hp/2 // Starting z position for center parabola
#endif //--if (P_Type==3)

P_dy = P_W/P_nsegw // Step width (y)
P_dz = P_Hp/P_nsegh // Step height (z)

//--- Generate Surface Patches or wires ---
for (z=0; z < P_nsegh; z=z+1)
{
for (y=0; y < P_nsegw; y=y+1)
{
// Elliptischer Test, wenn aktiv
#if ( (P_Shape == 1) || (sq(%%z+0.5-P_nsegh/2)/sq(P_nsegh/2) +
sq(%%y+0.5-P_nsegw/2)/sq(P_nsegw/2) <= 1) ) //-- y=%%y, z=%%z
```

```
// if model is constructed with wires, correct wire flags must
be set.
P_wrflags = %%(_P1P2|_P2P3)

#if ( (z == P_nsegh-1) || ( (P_Shape == 2) && (sq(%%(z+1)+0.5-
P_nsegh/2)/sq(P_nsegh/2) + sq(%%y+0.5-P_nsegw/2)/sq(P_nsegw/2) >
1)) )
P_wrflags = %%(P_wrflags | _P3P4)
#endif

#if ( (y == 0) || ( (P_Shape == 2) && (sq(%%z+0.5-P_nsegh/2)/
sq(P_nsegh/2) + sq(%%(y-1)+0.5-P_nsegw/2)/sq(P_nsegw/2) > 1)) )
P_wrflags = %%(P_wrflags | _P4P1)
#endif

#SP4 1 1 P_a*(P_y0+%%y*P_dy)*(P_y0+%%y*P_dy)+P_a*(P_z0+%
%z*P_dz)*(P_z0+%%z*P_dz) P_y0+%%y*P_dy P_z0+%%z*P_dz P_a*(P_y0+%%(y
+1)*P_dy)*(P_y0+%%(y+1)*P_dy)+P_a*(P_z0+%%z*P_dz)*(P_z0+%%z*P_dz) P_y0+
%%(y+1)*P_dy P_z0+%%z*P_dz P_a*(P_y0+%%(y+1)*P_dy)*(P_y0+%%(y+1)*P_dy)
+P_a*(P_z0+%%(z+1)*P_dz)*(P_z0+%%(z+1)*P_dz) P_y0+%%(y+1)*P_dy P_z0+%%
(z+1)*P_dz P_a*(P_y0+%%y*P_dy)*(P_y0+%%y*P_dy)+P_a*(P_z0+%%(z
+1)*P_dz)*(P_z0+%%(z+1)*P_dz) P_y0+%%y*P_dy P_z0+%%(z+1)*P_dz
P_wrflags

#endif

} // for y

} // for z

........
This source code must be compiled and you get some output code like
below...
(note: _8 is not a number but an intermediate variable (symbol))

Some cut off output code of other example:
...snipped..
SY _8 = (0+(BQ_RW)/2-(0+(BQ_RW)/2))/8
SY _9 = (0+(BQ_RH)/2-(0-(BQ_RH)/2))/8
SP 0 3 0+0*_1-0*(_7+0*(_1+_4)/8) 0+(BQ_RW)/2+0*_2-0*(_8+0*(_2+_5)/8)
0+(BQ_RH)/2+0*_3-0*(_9+0*(_3+_6)/8) 0+1*_1-0*(_7+1*(_1+_4)/8) 0+
(BQ_RW)/2+1*_2-0*(_8+1*(_2+_5)/8) 0+(BQ_RH)/2+1*_3-0*(_9+1*(_3+_6)/8)
SC 0 3 0+1*_1-1*(_7+1*(_1+_4)/8) 0+(BQ_RW)/2+1*_2-1*(_8+1*(_2+_5)/8)
0+(BQ_RH)/2+1*_3-1*(_9+1*(_3+_6)/8) 0+0*_1-1*(_7+0*(_1+_4)/8) 0+
(BQ_RW)/2+0*_2-1*(_8+0*(_2+_5)/8) 0+(BQ_RH)/2+0*_3-1*(_9+0*(_3+_6)/8)
...
SP 0 3 P_a*(P_y0+29*P_dy)*(P_y0+29*P_dy)
+P_a*(P_z0+20*P_dz)*(P_z0+20*P_dz) P_y0+29*P_dy P_z0+20*P_dz
P_a*(P_y0+30*P_dy)*(P_y0+30*P_dy)+P_a*(P_z0+20*P_dz)*(P_z0+20*P_dz)
P_y0+30*P_dy P_z0+20*P_dz
SC 0 3 P_a*(P_y0+30*P_dy)*(P_y0+30*P_dy)
+P_a*(P_z0+21*P_dz)*(P_z0+21*P_dz) P_y0+30*P_dy P_z0+21*P_dz
P_a*(P_y0+29*P_dy)*(P_y0+29*P_dy)+P_a*(P_z0+21*P_dz)*(P_z0+21*P_dz)
P_y0+29*P_dy P_z0+21*P_dz
```

...
etc... generates very complex output NEC files...
I am still wondering, that 4NEC2 can handle such complex NEC files.
But it works well.

1800. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:27:38 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9950C6088D6A3mcoslocomcastnet@216.196.97.136>
Source record: 40104

Cecil Moore <nospam@w5dxp.com> wrote in news:luwci.4098$bP5.4094
@newssvr19.news.prodigy.net:

> Jim Higgins wrote:
>> Cecil seems to be annoyed by the Scientific Method because at some
>> point there are competing theories and all can't be correct. Of
>> course! That's how science works!
>
> Jim, I'm annoyed at people who assert that scientific
> theories are never wrong and are simply a subset of
> something that is more correct.

Those who do are definitely not using the scientific method, are
they?

- 73 de Mike KB3EIA -

1801. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:29:13 UTC
From: dplatt@radagast.org
Message-ID: <9vjbk4-giv.ln1@radagast.org>
Source record: 40105

Cecil Moore <nospam@w5dxp.com> wrote:

> > Sounds like someone might have been talking about the theories
> > ordinarily referred to as Newtonian Mechanics and Quantum Mechanics.

> No, he appeared to be referring to all theories:

> "Hypotheses are discarded all the time, theories aren't."

And, I'd say that his statement is true, almost by definition.

Why? Well, it's because scientists don't upgrade a proposal from something generally called a "hypothesis", to something called a "theory", until it has survived quite a lot of technical challenges and numerous attempts to find experimental evidence which disproves it.

In other words, if it were easy (and quick) to disprove it, or if it didn't have substantial predictive power and verifiability, it never would have been called a "theory".

Hypotheses are born in large numbers... and are often easily slain while they're still at the "hypothesis" stage. "Theories" are the ones which are still marching along, churning out useful predictions, after many assaults.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1802. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:32:35 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9950C6DF89F7Fmcoslocomcastnet@216.196.97.136>
Source record: 40106

Cecil Moore <nospam@w5dxp.com> wrote in news:FZDci.98$Rw1.80
@newssvr25.news.prodigy.net:

> Jim Higgins wrote:
>> And you can name those people ... and refer to a message where
>> this can be verified?
>
> Don't want to name names but here is the assertion with
> which I have been disagreeing:
>
> "Hypotheses are discarded all the time, theories aren't."

No one is prevented from holding a theory that is wrong, so the statement is more or less true. There are flat earthers around yet, and I wouldn't be surprised if we could dig up someone who believes in Phlogiston theory yet. There is no law that says we have to be right! ;^)

- 73 de Mike KB3EIA -

1803. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-15 23:36:02 UTC
From: dplatt@radagast.org
Message-ID: <2ckbk4-ke1.ln1@radagast.org>
Source record: 40107

In article <1181949084.433404.62800@n2g2000hse.googlegroups.com>,
<oeguet@gmx.de> wrote:
>Hello everybody,
>
>I am searching for an antenna programming tool/compiler/preprocessor/
>language. To finilize my work with similar subject (based on NEC2/
>NEC4, especially on 4NEC2 from Arie Voors), I want to catch some good
>ideas for this. Are you knowing some good tools, that provide to model
>your antenna with a program code?

I've used a PERL pre-processing script which allows the embedding of
PERL expressions/calculations into a NEC input file, and substitution
of the results of these calculations into the statements in the deck.

It's somewhat simple-minded and doesn't have all of the flexibility
that you seem to be shooting for, but it might get you started.

Google for nec_param_util.Z - it's in most of the NEC2 archive
repositories, I believe.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1804. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:14:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ila673l1i5pp0c0v1doaohaigp79u07jdc@4ax.com>
Source record: 40108

On Fri, 15 Jun 2007 16:11:24 -0700, oeguet@gmx.de wrote:
from
>I am searching for an antenna programming tool/compiler/preprocessor/
>language.
to
>Especially for old "C"-programmers like me.
suggests defining your language using BNF and building the compiler
with YACC. Anyway, how I've done similar projects for 30 years. You
could gussy it up with Prolog, but who wants to go down that path (at
least if you want it distributable)?

73's
Richard Clark, KB7QHC

1805. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:34:28 UTC
From: oeguet@gmx.de
Message-ID: <1181954068.857080.200660@m36g2000hse.googlegroups.com>
Source record: 40109

Hello Dave,

thanks for your hint. I know the problem with perl scripts. What I am searching is, that no text or symbol replacement or calculating symbols is done on your source nec file. I am searching for a compiler/pre-processor, that makes from source file (antenna model) a compatible nec file (still left in symbolic 4nec2-format).
I am sick off, to code many symbolic lines of nec code. It is boring and difficult, when your model gets complex and has much more segments.
Therefore I started with my pre-processor few month ago, that makes the code for me automatically. It supports primitive object and complex structures. It also let you "to program" your antenna model.
But the most advantage of letting the nec file symbolic, you can optimize the antenna parameters.
I tried and constructed many antenna models and wont miss the optimizer tool from 4nec2.

I am wondering, that nobody made such a tool till now.

Aziz

1806. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:46:07 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <467332bf$0$21251$39cecf19@news.twtelecom.net>
Source record: 40110

Nick wrote:
> I was under the impression that a 1/4 wave was approx 0 dBd, a
> 5/8ths was approx 3dBd,
> and a collinear dual 5/8ths was approaching 6dBd
> Nick
>
>

5/8ths isn't what it's advertised it to be. I'd explain it, but I have to finish watching SG1 and then F1 practice session 2.

It has to do with "ground planes" and the fact that they are mostly fictional in this case. And that the second 5/8ths doesn't have the needed "ground plane".

I'm sure someone else will explain fully.

tom
K0TAR

1807. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:49:41 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46733395$0$21251$39cecf19@news.twtelecom.net>
Source record: 40111

Richard Clark wrote:
> On Fri, 15 Jun 2007 16:11:24 -0700, oeguet@gmx.de wrote:
> from
>> I am searching for an antenna programming tool/compiler/preprocessor/
>> language.
> to
>> Especially for old "C"-programmers like me.
> suggests defining your language using BNF and building the compiler
> with YACC. Anyway, how I've done similar projects for 30 years. You
> could gussy it up with Prolog, but who wants to go down that path (at
> least if you want it distributable)?
>
> 73's
> Richard Clark, KB7QHC

Prolog.

Been a long while since I heard that. I thought it was long buried.

tom
K0TAR

1808. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:51:56 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vc7ilpk1@nnrp.linuxfan.it>
Source record: 40112

jimp@specsol.spam.sux.com wrote:

> ...
> If you think that is incorrect, it should be easy for you to name
> a theory that was validated by multiple, indendent, reproducible,
> experiments and later discarded.
>
>

Just to get you started, mind you:

http://en.wikipedia.org/wiki/Obsolete_scientific_theories

JS

1809. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 00:54:02 UTC
From: oeguet@gmx.de
Message-ID: <1181955242.103482.303610@o61g2000hsh.googlegroups.com>
Source record: 40113

On 16 Jun., 02:14, Richard Clark <kb7...@comcast.net> wrote:
> On Fri, 15 Jun 2007 16:11:24 -0700, oeg...@gmx.de wrote:
>
> from>I am searching for an antenna programming tool/compiler/preprocessor/
> >language.
> to
> >Especially for old "C"-programmers like me.
>
> suggests defining your language using BNF and building the compiler
> with YACC. Anyway, how I've done similar projects for 30 years. You
> could gussy it up with Prolog, but who wants to go down that path (at
> least if you want it distributable)?
>
> 73's
> Richard Clark, KB7QHC

Due to the similarity to 4nec2 and nec2 format, I implemented a very simple line based parser. Of course, it looks like C, but the pre-processer has limitations. It is kept left simple except the expression parser for calculation (fully c compatible). I started with very simple one and the implementation growed up till now. It is not finished yet - a big mile stone for documentation must be realized. Also testing is not finished. And I found new bugs, when I implemented a regression test model. But it is a good time now, to implement some usefull features or ideas.

Regard,
Aziz

1810. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:00:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GCGci.19669$C96.6481@newssvr23.news.prodigy.net>
Source record: 40114

jimp@specsol.spam.sux.com wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> "Hypotheses are discarded all the time, theories aren't."
>
> If you think that is incorrect, it should be easy for you to name
> a theory that was validated by multiple, indendent, reproducible,
> experiments and later discarded.

The theory that independent organisms smaller than 1 um
are impossible has recently been discarded. Up until they
identified a 10 nm independent organism, that theory was
validated multiple times.
--
73, Cecil http://www.w5dxp.com

1811. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:10:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZLGci.19671$C96.7397@newssvr23.news.prodigy.net>
Source record: 40115

Mike Coslo wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Jim, I'm annoyed at people who assert that scientific
>> theories are never wrong and are simply a subset of
>> something that is more correct.
>
> Those who do are definitely not using the scientific method, are
> they?

Well, let's take an example. There was a theory that
the smallest independent organism couldn't be smaller
than ~1 um. Using the scientific method, no organism
smaller than that was discovered for decades.
Now we have apparently discovered an independent
organism 50 times smaller than the theory allowed.
Was the theory right or wrong?
--
73, Cecil http://www.w5dxp.com

1812. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:13:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <XOGci.19673$C96.7263@newssvr23.news.prodigy.net>
Source record: 40116

Mike Coslo wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> "Hypotheses are discarded all the time, theories aren't."
>
> No one is prevented from holding a theory that is wrong, so the statement
> is more or less true. There are flat earthers around yet, and I wouldn't
> be surprised if we could dig up someone who believes in Phlogiston theory
> yet. There is no law that says we have to be right! ;^)

Well, that shines a whole new light on the discussion.
Theories are never discarded even when they are proved
to be incorrect. I think I understand now.
--
73, Cecil http://www.w5dxp.com

1813. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:16:28 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vdli$oj2$1@nnrp.linuxfan.it>
Source record: 40117

Mike Coslo wrote:
> Cecil Moore <nospam@w5dxp.com> wrote in news:luwci.4098$bP5.4094
> @newssvr19.news.prodigy.net:
>
>> Jim Higgins wrote:
>>> Cecil seems to be annoyed by the Scientific Method because at some
>>> point there are competing theories and all can't be correct. Of
>>> course! That's how science works!
>> Jim, I'm annoyed at people who assert that scientific
>> theories are never wrong and are simply a subset of
>> something that is more correct.
>
> Those who do are definitely not using the scientific method, are
> they?
>
> - 73 de Mike KB3EIA -

The most vilest lie is sometimes successful--IF it contains at least one element of truth, least it be recognized for what it is and discarded immediately.

JS

1814. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <upqbk4-nd5.ln1@mail.specsol.com>
Source record: 40118

John Smith I <assemblywizard@gmail.com> wrote:
> jimp@specsol.spam.sux.com wrote:

> > ...
> > If you think that is incorrect, it should be easy for you to name
> > a theory that was validated by multiple, indendent, reproducible,
> > experiments and later discarded.
> >
> >

> Just to get you started, mind you:

> http://en.wikipedia.org/wiki/Obsolete_scientific_theories

Let's do the physics ones:

Aristotelian theory of gravity: no experimental confirmation; discarded.

Classical mechanics: experimentally verified; superseded and still used
within appropriate boundaries.

Classical electrodynamics: experimentally verified; superceded and still
used within appropriate boundaries.

Ether: no experimental confirmation; discarded.

Caloric theory: no experimental confirmation; discarded.

Emitter theory: no experimental confirmation; discarded.

Persistence of vision: no experimental confirmation; still debated.

Let's do astronomical and cosmological theories:

Ptolemaic system/Geocentric universe: no experimental confirmation;
discarded.

Copernican system: no experimental confirmation; discarded.

Newtonian gravity: experimentally verified; superseded and still used
within appropriate boundaries.

--
Jim Pennino

Remove .spam.sux to reply.

1815. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <93rbk4-nd5.ln1@mail.specsol.com>
Source record: 40119

Mike Coslo <mcoslo@youknow.comcast.net> wrote:
> Cecil Moore <nospam@w5dxp.com> wrote in news:luwci.4098$bP5.4094
> @newssvr19.news.prodigy.net:

> > Jim Higgins wrote:
> >> Cecil seems to be annoyed by the Scientific Method because at some
> >> point there are competing theories and all can't be correct. Of
> >> course! That's how science works!
> >
> > Jim, I'm annoyed at people who assert that scientific
> > theories are never wrong and are simply a subset of
> > something that is more correct.

> Those who do are definitely not using the scientific method, are
> they?

Obviously since Newton isn't good enough to build an airplane, a
bridge, or even a one hole out house and the relativistic effects
MUST be concidered in all cases.

--
Jim Pennino

Remove .spam.sux to reply.

1816. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:49:30 UTC
From: nm5k@wt.net
Message-ID: <1181958570.124248.303980@m36g2000hse.googlegroups.com>
Source record: 40120

On Jun 15, 6:46 pm, Tom Ring <news0...@taring.org> wrote:

>
> 5/8ths isn't what it's advertised it to be. I'd explain it, but I have
> to finish watching SG1 and then F1 practice session 2.
>
> It has to do with "ground planes" and the fact that they are mostly
> fictional in this case. And that the second 5/8ths doesn't have the
> needed "ground plane".
>
> I'm sure someone else will explain fully.
>
> tom
> K0TAR

In my opinion, a 5/8 vertical should be set up to be a complete
antenna, which means it needs 5/8 on the "other" side..
Running a 5/8 over 1/4 wave radials is fairly perverted.. It's no
wonder it doesn't live up to expectations.
But a dual 5/8 collinear is a pretty stout vertical, as far as
verticals go. I think 5/8 ground planes should use either
3/4 or 5/8 wave radials if one uses actual radials, to
more closely simulate a collinear.
A dual 5/8 collinear is a complete antenna, and requires
no radials at all.
I compared all the usual types "lengths" on 10m a few years
ago, and my 5/8 GP with four 3/4 wave radials handily beat
a base fed half wave, with and without decoupling. I used
3/4 wl radials because I wanted a low Z.. But if I made one
with real steeply sloped radials, I think I would make them
5/8 wave.
But, I never got around to trying one with 5/8 radials, so
not sure how it would compare to my last version.
BTW, all my tests were done using "ground/space" wave
locally, and were pretty accurate as far as telling which
was best. I'm using a low angle path for that type of thing
too.. Many of the people I talked to were 20-30-40 miles
away.
MK

1817. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 01:59:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vg5euk1@nnrp.linuxfan.it>
Source record: 40121

jimp@specsol.spam.sux.com wrote:

> ...
> Newtonian gravity: experimentally verified; superseded and still used
> within appropriate boundaries.
>
>

Yep. Plenty enough for argument to keep an open mind on the theories
still in use today ...

And, ether has NOT been discarded, indeed, Einstein recognized that
space is NOT truly empty ... whatever that "something" is, it deserves
the title ether ...

However, it will be interesting to watch the pseudo-logic which will now
flow as rivers within this newsgroup in an attempt to say all current
theories are, without doubt, without error(s.)

JS

1818. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 02:01:27 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vga1uk2@nnrp.linuxfan.it>
Source record: 40122

nm5k@wt.net wrote:

> ...
> In my opinion, a 5/8 vertical should be set up to be a complete
> antenna, which means it needs 5/8 on the "other" side..
> ...

Obviously, OCF antennas must set you off also.

JS

1819. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 02:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <8gubk4-mge.ln1@mail.specsol.com>
Source record: 40123

John Smith I <assemblywizard@gmail.com> wrote:
> jimp@specsol.spam.sux.com wrote:

> > ...
> > Newtonian gravity: experimentally verified; superseded and still used
> > within appropriate boundaries.
> >
> >

> Yep. Plenty enough for argument to keep an open mind on the theories
> still in use today ...

Is that babble supposed to mean something?

--
Jim Pennino

Remove .spam.sux to reply.

1820. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 02:39:26 UTC
From: nm5k@wt.net
Message-ID: <1181961566.484612.205410@u2g2000hsc.googlegroups.com>
Source record: 40124

On Jun 15, 8:01 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
> > ...
> > In my opinion, a 5/8 vertical should be set up to be a complete
> > antenna, which means it needs 5/8 on the "other" side..
>
> > ...
>
> Obviously, OCF antennas must set you off also.
>
> JS

Fer sure...
MK

1821. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 02:40:54 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vijs$8lh$1@nnrp.linuxfan.it>
Source record: 40125

jimp@specsol.spam.sux.com wrote:

> ...
> Is that babble supposed to mean something?
>

Your first tactic of "whamboozling" has been duly noted, let the rivers
flow ...

JS

1822. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 02:53:24 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vjba$8lh$2@nnrp.linuxfan.it>
Source record: 40126

John Smith I wrote:
> nm5k@wt.net wrote:
>
>> ...
>> In my opinion, a 5/8 vertical should be set up to be a complete
>> antenna, which means it needs 5/8 on the "other" side..
> > ...
>
> Obviously, OCF antennas must set you off also.
>
> JS

Yes, they are certainly counter-intuitive ... there is form and beauty
in symmetry alright.

JS

1823. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 03:04:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <grlci.4259$bP5.2521@newssvr19.news.prodigy.net>
Source record: 40127

jimp@specsol.spam.sux.com wrote:
> Ether: no experimental confirmation; discarded.
> Caloric theory: no experimental confirmation; discarded.
> Emitter theory: no experimental confirmation; discarded.

So many scientific theories have been discarded
down through history.
--
73, Cecil http://www.w5dxp.com

1824. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 03:35:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <p12ck4-hkn.ln1@mail.specsol.com>
Source record: 40128

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Ether: no experimental confirmation; discarded.
> > Caloric theory: no experimental confirmation; discarded.
> > Emitter theory: no experimental confirmation; discarded.

> So many scientific theories have been discarded
> down through history.

Yes, people that don't understand what a theory is do say that.

And people that want to play symantic games.

--
Jim Pennino

Remove .spam.sux to reply.

1825. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 03:43:25 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <y%Ici.4113$c06.2232@newssvr22.news.prodigy.net>
Source record: 40029

jimp@specsol.spam.sux.com wrote:
> Yes, people that don't understand what a theory is do say that.

Theory: There is no life on Mars. If life is eventually
discovered, it wasn't a wrong theory because it wasn't
a theory. How convenient.
--
73, Cecil http://www.w5dxp.com

1826. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 04:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bc4ck4-aps.ln1@mail.specsol.com>
Source record: 40030

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Yes, people that don't understand what a theory is do say that.

> Theory: There is no life on Mars. If life is eventually
> discovered, it wasn't a wrong theory because it wasn't
> a theory. How convenient.

Semantic games; calling a hypothesis a theory doesn't make it a
theory.

--
Jim Pennino

Remove .spam.sux to reply.

1827. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 05:16:47 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vro4$t0r$1@nnrp.linuxfan.it>
Source record: 40031

jimp@specsol.spam.sux.com wrote:

> ...
> Semantic games; calling a hypothesis a theory doesn't make it a
> theory.
>

I do believe this is the first time I have ever seen a man create a
"God" from a word and establish a whole religion surrounding it! Will
wonders never cease?

THEORY:
a well-substantiated explanation of some aspect of the natural world;
an organized system of accepted knowledge that applies in a variety of
circumstances to explain a specific set of phenomena; "theories can
incorporate facts and laws and tested hypotheses"; "true in fact and theory"
hypothesis: a tentative theory about the natural world; a concept that
is not yet verified but that if true would explain certain facts or
phenomena; "a scientific hypothesis that survives experimental testing
becomes a scientific theory"; "he proposed a fresh theory of alkalis
that later was accepted in chemical practices"
a belief that can guide behavior; "the architect has a theory that
more is less"; "they killed him on the theory that dead men tell no tales"
wordnet.princeton.edu/perl/webwn

A theory can survive complete testing by present understandings and
knowledge--only to be found in error at later dates ...

You make a fatal mistake when you establish beliefs on present knowledge
and not allow for future discovery ...

Try thinking out-of-the-box a bit more ...

JS

1828. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 06:02:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f4vue8$t0r$2@nnrp.linuxfan.it>
Source record: 40032

John Smith I wrote:

> ...
> Try thinking out-of-the-box a bit more ...
>
> JS

We are drowning in theories filled with holes and errors ... for example:

To restate, to the point of boring repetition, time is a only a theory.
It is a theory that can be proved to be false, and with the use of
sheer logic only. Time is a figment of mans imagination. For all mans
endeavors of establishing time, all he has ever done is measure
movement. From the first stick stuck in the sand to measure the
movement of the earth and sun, to the hourglass which measures the
movement of sand though a small orifice, to the cesium clock which
measures the movement (loss of particles) from an element, etc.
Movement is real, time is not (at least not in the way we think of it),
time is only a convenient tool/model for man to use to attempt to make
sense of his world, and only an imaginary tool at that.

Example:
We say we "age." However, we don't age in the way we think, that time
has some "aging" effect upon us. We age because, just like a xerox
machine makes copies, so are the cells of our bodies making copies of
themselves. Just as there are new errors introduced in the copies made
for previous copies with a xerox machine, so are errors in the cells of
our bodies introduced, until fatal errors are being made ... death
occurs as result.

Mountains crumble and fall into the sea, but not because of time,
because of movement. Whatever time is, movement is married to it,
whatever movement is, time is married to it. They are one and the same ...

When our antenna equations have a "time element" in them, they are quite
obviously in error. Time is but a placeholder for some other
phenomenon, most likely some aspect of movement ... it may even be the
unseen, undetectable, and unknown movement of the ether--the only thing
for sure, we don't understand it.

Time is only a theory which waits its' demise ... and a prime example of
a yet-to-be discarded theory.

JS

1829. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 06:35:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <un0773lqvv5mne3cocrpolc26mrcgg782t@4ax.com>
Source record: 40033

On Fri, 15 Jun 2007 17:54:02 -0700, oeguet@gmx.de wrote:

>Of course, it looks like C, but the pre-
>processer has limitations.

Hi Aziz,

A syntax looking like C for the purpose of describing an antenna design engine meta-language is not a particularly good match. The difference is between it being procedural whereas the meta-language would, in my estimation, be more useful if it was declarative. BNF is very simple to implement either, so it would seem the effort should be invested in a tool that was oriented towards the user rather than a programmer. Besides, C is a pretty crummy language with even more horrid library syntaxes (assembler is far more elegant).

73's
Richard Clark, KB7QHC

1830. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 06:37:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l61773lcl1bpln3fgi0lhu2t5sn11qrqs0@4ax.com>
Source record: 40034

On Fri, 15 Jun 2007 19:49:41 -0500, Tom Ring <news0003@taring.org>
wrote:

>Prolog.
>
>Been a long while since I heard that. I thought it was long buried.

Hi Tom,

The current iteration is so vastly removed from the early days as to
be unrecognizable.

73's
Richard Clark, KB7QHC

1831. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 07:13:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f502j7$t0r$3@nnrp.linuxfan.it>
Source record: 40035

Richard Clark wrote:

> ...
> programmer. Besides, C is a pretty crummy language with even more
> horrid library syntaxes (assembler is far more elegant).
>
> 73's
> Richard Clark, KB7QHC

A lot of people like to think themselves programmers, real programmers use C/C++. (Weekend programmers use visual basic)

C is simply a macro language which calls assembler procedures and functions--Dennis Richie was a real assembly language programmer, he simply designed a "shorthand" language for using assembler--C itself was written in assembler--nowadays C can compile and link itself ... a real C programmer will add to the C libraries and include files using assembler definitions, procedures and functions. While every subroutine of a C program is a function, they can be written as procedures which are only cloaked as functions. Example:

```
#include <iostream>

void helloworldprocedure(void)
{
cout << "hello world!" << endl;
}

void main(void)
{
helloworldprocedure();
}
```

... takes no parameters, returns none ...

I think most C programmers prefer to program in assembly (but with windows allowing NO direct access of devices, peripherals, memory or disk--why bother, assembly can only be used as a wrapper to call windows libs/dlls/activex/scripts/etc., or custom ones--linux can be made to allow direct access), however, C adds a productivity factor of magnitudes over assembly.

No other language offers the efficiency of program "character text" (source code) to actual binary code compiled/linked by C. Indeed, any C compiler I have ever seen gives a option to spit out assembler source ... and the assembler source so generated is quite capable of being assembled/linked by an assembler/linker for the platform in question.

C simply has no rules which cannot be broken, even if it breaks all programming rules, and you want to override them, go ahead! (bill gates won't let you break windows rules though :-( )--C is only structured if you program in a structured style. For that reason alone, it is not a good language for newbie programmers ...

JS

1832. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 09:22:44 UTC
From: Nick <a@b.com>
Message-ID: <EZNci.1407$ri2.1234@newsfe5-win.ntli.net>
Source record: 40036

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f4vjba$8lh$2@nnrp.linuxfan.it...
> John Smith I wrote:
>> nm5k@wt.net wrote:
>>
>>> ...
>>> In my opinion, a 5/8 vertical should be set up to be a complete
>>> antenna, which means it needs 5/8 on the "other" side..
>> > ...
>>
>> Obviously, OCF antennas must set you off also.
>>
>> JS
>
> Yes, they are certainly counter-intuitive ... there is form and
> beauty in symmetry alright.
>
> JS

...and how about OFC antennas ?

Nick

1833. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 12:02:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PjQci.13991$2v1.6853@newssvr14.news.prodigy.net>
Source record: 40037

jimp@specsol.spam.sux.com wrote:
> Semantic games; calling a hypothesis a theory doesn't make it a
> theory.

Using hindsight to deny the existence of discarded
theories doesn't change reality.

I agree that semantic games are being played but
most likely not by Wikipedia who lists a number
of scientific theories that have been discredited
and discarded.

My Dad was taught the atomic theory, the theory
that an atom is the smallest indivisible discrete
unit of matter.

Global warming is being called a theory by virtually
everyone. I predict that's one more theory that will
be discredited.
--
73, Cecil http://www.w5dxp.com

1834. Re: From OP: Vertical Or Yagi ? Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 13:50:50 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50ps0$n0a$1@nnrp.linuxfan.it>
Source record: 40038

Nick wrote:

>> ...
>> JS
>
> ...and how about OFC antennas ?
>
> Nick

Surprisingly functional? An ugly duckling?

JS

1835. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 13:58:39 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50qam$n0a$2@nnrp.linuxfan.it>
Source record: 40039

Cecil Moore wrote:

> ...
> Global warming is being called a theory by virtually
> everyone. I predict that's one more theory that will
> be discredited.

Cecil:

I would hold back just a bit on that "theory."

When I was young, there was a "theory" that garbage just decayed back into the environment--no harm done. Many years later, when poisons began showing up in wells and the environment we began paying much more attention to releasing garbage into the environment ...

Apparently, today, there is a theory that filling the air with garbage is OK. That it is just decaying back into the environment ...

Well, once burned is twice warned ...

Regards,
JS

1836. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <r37dk4-ma3.ln1@mail.specsol.com>
Source record: 40040

Cecil Moore <nospam@w5dxp.com> wrote:

> Global warming is being called a theory by virtually
> everyone. I predict that's one more theory that will
> be discredited.

If my wife calls her cat a lion, does that make it a lion?

--
Jim Pennino

Remove .spam.sux to reply.

1837. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:08:45 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50qtk$n0a$3@nnrp.linuxfan.it>
Source record: 40041

jimp@specsol.spam.sux.com wrote:

> ...
> If my wife calls her cat a lion, does that make it a lion?
>

While keeping an open mind on that one is difficult, I just don't know?

What is your theory on that? :-)

JS

1838. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:08:55 UTC
From: Dave <noone@nowhere.com>
Message-ID: <X9Sci.67$0j5.24@trndny03>
Source record: 40042

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:PjQci.13991$2v1.6853@newssvr14.news.prodigy.net...
> jimp@specsol.spam.sux.com wrote:
>> Semantic games; calling a hypothesis a theory doesn't make it a
>> theory.
>
> Global warming is being called a theory by virtually
> everyone. I predict that's one more theory that will
> be discredited.

talk about semantic games... 'global warming' is most likely happening. we are still coming out of the little ice age and there are other factors that are contributing... the game being played is blaming it on human activities... and the bigger game is convincing people that we can stop it. thats all a conspiracy to shut down 'big oil' and coal and the global economy that depends on cheap energy.

1839. Re: New Antenna Worth Trying ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:13:06 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4673eff2$0$28180$4c368faf@roadrunner.com>
Source record: 40043

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:TYAbi.3722$O15.28@trnddc03...
>
> "Robert11" <rgsros@notme.com> wrote in message
> news:T8KdndrRCZlDB_PbnZ2dnUVZ_iydnZ2d@comcast.com...
>> Hi,
>>
>> I have a Uniden 996 scanner and would really like to pick up some marine
>> traffic from Boston Harbor.
>> Live about 20 miles due west of the harbor.
>>
>> Have a Scantenna antenna which I think is "pretty good". It's up in my
>> attic.
>>
>> It's omni directional, and broadband over the typical scanner ranges
>> (supposedly).
>>
>> I can often pick up coast guard conversations, but very rarely (but
>> ooccassionally) ship traffic.
>>
>> Do you think a dedicated, very directional, and tuned to the marine
>> freq's would help, or am I just too far away ?
>>
>> Any thoughts on, or antenna suggestions would be most appreciated.
>> No idea what to buy, if you feel it's worth a try ?
>>
>> Very interested in the AIS data being transmitted by ships at around 162
>> MHz, as well as general marine stuff.
>>
>> BTW: really surprised that I hear the CG at all. I would have thought
>> that their antennas would be "focused" out to sea, with any propagation
>> going the other way (towards me) minimized to maximize the effectiveness
>> of their radiated power in the direction that it's needed.
>>
>> Thoughts ?
>>
>> Thanks,
>> Bob
>
> Hi Bob
>
> Do you want to try building your own antenna? If so, I'd think a simple
> antenna like a J-pole (http://www.hamuniverse.com/jpole.html) would be
> worth trying.

>
> Jerry
>
>
>
>
>

Yes it is worth trying. I can pick a telemetry transmitter nearly 30 miles away that only puts out about 5 watts on just above 400Mhz. There are 2 transmitters there and I can only pick up one .The one I cant pick up has its antenna at about 20ft above the ground , the other is a 50 ft. Just an example of what a difference heigth makes.

Jimmie

1840. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:26:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <blSci.19753$C96.3758@newssvr23.news.prodigy.net>
Source record: 40044

John Smith I wrote:
> I would hold back just a bit on that "theory."

Quoted from: http://www.globalwarming.org/article.php?uid=221

"Three scientific studies that have recently appeared may well
spell the beginning of the end of global warming theory:"
--
73, Cecil, w5dxp.com

1841. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:31:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mvSci.40737$5j1.7930@newssvr21.news.prodigy.net>
Source record: 40045

jimp@specsol.spam.sux.com wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>
>> Global warming is being called a theory by virtually
>> everyone. I predict that's one more theory that will
>> be discredited.
>
> If my wife calls her cat a lion, does that make it a lion?

If a billion people called a cat a lion, it would be a
lion by definition. Incidentally, a lion *is* a cat.
From Webster's: "cat - any animal of the family that
includes domestic cats, lions, tigers, and leopards."

From: globalwarming.org

"Three scientific studies that have recently appeared may
well spell the beginning of the end of global warming theory:"
--
73, Cecil, w5dxp.com

1842. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <mm8dk4-i18.ln1@mail.specsol.com>
Source record: 40046

John Smith I <assemblywizard@gmail.com> wrote:
> jimp@specsol.spam.sux.com wrote:

> > ...
> > If my wife calls her cat a lion, does that make it a lion?
> >

> While keeping an open mind on that one is difficult, I just don't know?

> What is your theory on that? :-)

Genetic testing indicates it is a common house cat, ergo the
hypothesis that it is a lion was proven incorrect and the theory
that it is a cat is confirmed.

--
Jim Pennino

Remove .spam.sux to reply.

1843. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:43:00 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4673f706$0$17206$39cecf19@news.twtelecom.net>
Source record: 40047

Richard Clark wrote:
> On Fri, 15 Jun 2007 19:49:41 -0500, Tom Ring <news0003@taring.org>
> wrote:
>
>> Prolog.
>>
>> Been a long while since I heard that. I thought it was long buried.
>
> Hi Tom,
>
> The current iteration is so vastly removed from the early days as to
> be unrecognizable.
>
> 73's
> Richard Clark, KB7QHC

Any open source version(s) you would recommend? I may have to have a
look again.

Thanks.

tom
K0TAR

1844. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:45:28 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50t2f$jq1$1@nnrp.linuxfan.it>
Source record: 40048

Cecil Moore wrote:
> John Smith I wrote:
>> I would hold back just a bit on that "theory."
>
> Quoted from: http://www.globalwarming.org/article.php?uid=221
>
> "Three scientific studies that have recently appeared may well
> spell the beginning of the end of global warming theory:"
> --
> 73, Cecil, w5dxp.com
>

Cecil:

In my biology classes, taken decades ago, I was taught plants were the main recycling process of carbon dioxide.

Today, it is known the ocean is storing vast quantities of carbon dioxide, indeed, in my readings, the limestone reefs being created by the death and accumulation of shelled organisms is possibly the major player ...

One thing I do know, politics is playing much too large a role in science, and when there is such a partnership between big oil and politics, I am only twice as apprehensive to the availability of real facts. Politics appear to dominate all in todays world. Having even crossed the church-state separation barrier and defining even marriage! (a God created institution which gov't. has no place in. Drawing images in the mind of when it was a kings right to sleep with your bride first!)

The present world, in my view, has left the confines of sanity and reality--setting up a fantasy world where a sirens' song is being sung to trap the unwary ...

I draw no firm conclusions on global warming and have little hope science will prevail in the near future. Of course, Rush Limbaugh has determined it is false, and everyone knows, if rush said it, it is as good as truth! ;-)

Regards,
JS

1845. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:48:25 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50t80$jq1$2@nnrp.linuxfan.it>
Source record: 40049

jimp@specsol.spam.sux.com wrote:

> ...
> Genetic testing indicates it is a common house cat, ergo the
> hypothesis that it is a lion was proven incorrect and the theory
> that it is a cat is confirmed.
>

Jim:

Well, if you are ever at my home when it is the cats feeding time, you
may revise that theory!

The cat is king of this jungle ... :-(

Regards,
JS

1846. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 14:50:09 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f50tb7$jq1$3@nnrp.linuxfan.it>
Source record: 40050

John Smith I wrote:

> ...
> The cat is king of this jungle ... :-(
>
> Regards,
> JS

Yep, I am afraid I will have to side with your wife on that one ... LOL!

JS

1847. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 15:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bfadk4-jaa.ln1@mail.specsol.com>
Source record: 40051

Cecil Moore <nospam@w5dxp.com> wrote:

> If a billion people called a cat a lion, it would be a
> lion by definition. Incidentally, a lion *is* a cat.
> From Webster's: "cat - any animal of the family that
> includes domestic cats, lions, tigers, and leopards."

But common usage is that "cat" means those thing usually found
shredding drapes when they aren't hanging out on the window sill
just as common usage is that theory...

So which definition do you use for a given word Cecil, the common,
usually abiguous one, the precise, context based one, or whichever
leads to the most semantic games?

--
Jim Pennino

Remove .spam.sux to reply.

1848. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 15:20:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <edTci.14001$2v1.2035@newssvr14.news.prodigy.net>
Source record: 40052

John Smith I wrote:
> I draw no firm conclusions on global warming and have little hope
> science will prevail in the near future.

Here's probably all you need to know.

http://en.wikipedia.org/wiki/Image:Ice_Age_Temperature.png

Note the temperature today is ~6 deg *below* the peak
temperature of 130,000 years ago, ~3 deg below the
peak of 240,000 years ago, ~5 deg below the peak of
340,000 years ago, and ~2 degrees below the peak of
410,000 years ago. As far as natural global warming
cycle peak temperatures go, the present one is
relatively cool - plus the fact that it peaked 8000
years ago indicating that we are already in the
next ice age cycle. Just ask the folks in Denver. :-)
--
73, Cecil http://www.w5dxp.com

1849. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 15:34:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MpTci.14002$2v1.11816@newssvr14.news.prodigy.net>
Source record: 40053

jimp@specsol.spam.sux.com wrote:
> But common usage is that "cat" means those thing usually found
> shredding drapes ...

Yet there are none of that species in the "Cat House"
at the local zoo, also common usage.

"Felis silvestris" will leave no doubt as to the
species being referenced although "domestic cat"
will do.

For scientific theories extremely unlikely to be proved
wrong, maybe you use the word, "principle", instead
of "theory"?
--
73, Cecil http://www.w5dxp.com

1850. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 15:54:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ob18731gt87fml8sss5lidbuni2qkidd6e@4ax.com>
Source record: 40055

On Sat, 16 Jun 2007 09:43:00 -0500, Tom Ring <news0003@taring.org>
wrote:

>Any open source version(s) you would recommend? I may have to have a
>look again.

Hi Tom,

I would like to say Trilogy, which is also a declarative language, but
long gone by nearly 20 years.

On the active front, there is XPCE/Prolog (google this) out of
Amsterdam. It appears to be the product of a one-man show and to my
mind suffers from what he thinks the language should be (and not what
it was). I suppose my attitude would be better if I could have read
the users manual which, unfortunately, mimics all the poorly written
user manuals that have come down the pike since PL/M.

73's
Richard Clark, KB7QHC

1851. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 15:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5cddk4-1dj.ln1@mail.specsol.com>
Source record: 40054

Cecil Moore <nospam@w5dxp.com> wrote:

> Yet there are none of that species in the "Cat House"
> at the local zoo, also common usage.

The closest "Cat House" that I know of is just outside Las Vegas.

> For scientific theories extremely unlikely to be proved
> wrong, maybe you use the word, "principle", instead
> of "theory"?

But what if the post gets cross posted to a group such as
sci.physics.research where there is a greater percentage of educated
readers than r.r.a.a and semantic game playing isn't allowed?

--
Jim Pennino

Remove .spam.sux to reply.

1852. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 16:02:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <dQTci.14004$2v1.10189@newssvr14.news.prodigy.net>
Source record: 40056

jimp@specsol.spam.sux.com wrote:
> But what if the post gets cross posted to a group such as
> sci.physics.research where there is a greater percentage of educated
> readers than r.r.a.a and semantic game playing isn't allowed?

Sounds like you shouldn't bother trying to post there.
--
73, Cecil http://www.w5dxp.com

1853. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 16:31:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k22873hm9vink1mq6gqc2qain4bgr19ho1@4ax.com>
Source record: 40057

```
On Sat, 16 Jun 2007 00:13:37 -0700, John Smith I
<assemblywizard@gmail.com> wrote:
>Example:
>
>#include <iostream>
>
>void helloworldprocedure(void)
> {
> cout << "hello world!" << endl;
> }
>
>void main(void)
> {
> helloworldprocedure();
> }
>
>... takes no parameters, returns none ...

Horrid examples of language, these are like the proverbial turds in
the punch bowl at a party.

>I think most C programmers prefer to program in assembly (but with
>windows allowing NO direct access of devices, peripherals, memory or
>disk--why bother, assembly can only be used as a wrapper to call windows
>libs/dlls/activex/scripts/etc., or custom ones--linux can be made to
>allow direct access),

Most C programmers are Neanderthals with their skills frozen in the
70s. There is at least one Windows Assembler out there, it's free and
has been available for years from Steve Gibson at:
http://www.grc.com/smgassembly.htm
His executables perform network connections in file sizes of barely
more than 5K up to a massive 22K.

>however, C adds a productivity factor of
>magnitudes over assembly.

Bull Looney. This kind of syrupy rationale was composed to sooth the
nerves of Dilbert's pointy haired boss. It merely reveals that many
coders need training wheels to allow them to ride faster when
designers could have walked there in half the time.

C is NOT a user language.

73's
Richard Clark, KB7QHC
```

1854. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 16:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <87gdk4-dnr.ln1@mail.specsol.com>
Source record: 40058

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > But what if the post gets cross posted to a group such as
> > sci.physics.research where there is a greater percentage of educated
> > readers than r.r.a.a and semantic game playing isn't allowed?

> Sounds like you shouldn't bother trying to post there.

With topics like "Water burns" and "Gaussian antennas", I seldom do.

--
Jim Pennino

Remove .spam.sux to reply.

1855. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 17:24:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1182014647.154062.307690@w5g2000hsg.googlegroups.com>
Source record: 40059

On Jun 16, 8:05 am, j...@specsol.spam.sux.com wrote:

> So which definition do you use for a given word Cecil, the common,
> usually abiguous one, the precise, context based one, or whichever
> leads to the most semantic games?

It usually turns out that he used the one which allows whatever he
said to be true in some context.

73, ac6xg

1856. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 17:39:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1182015583.725911.260960@g4g2000hsf.googlegroups.com>
Source record: 40060

On 16 Jun, 09:45, j...@specsol.spam.sux.com wrote:
> Cecil Moore <nos...@w5dxp.com> wrote:
> > j...@specsol.spam.sux.com wrote:
> > > But what if the post gets cross posted to a group such as
> > > sci.physics.research where there is a greater percentage of educated
> > > readers than r.r.a.a and semantic game playing isn't allowed?
> > Sounds like you shouldn't bother trying to post there.
>
> With topics like "Water burns" and "Gaussian antennas", I seldom do.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Jim,
you have posted 1000+ in newsgroups starting with "sci" and as with
this group
you have never met a person that you could like. Seems like the word
babble,idiot
a few swear words, moron,etc is what you base your posts around. It
does appear
to me that the aviation people took you at your word when you said
you wanted
to be buried in Chicago when you said you would not post in that
newsgroup again.
Now you have rissen from the dead where you can hurt as many people as
you can
in this newsgroup with your own style of babble. Why do you wake up in
the morning?
There surely something in the World where you could be happy instead
of hanging
around here. Find out where that place is and go there and this time
work on
building up some credability in your enunciations if your ideals are
to have a
sensible conversation instead of abusive one liners that you now
thrive upon.
To use a life like the way you are squandering yours is a very sad
thing to watch.

1857. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 18:15:09 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1182017709.319525.161510@n60g2000hse.googlegroups.com>
Source record: 40061

On 15 jun, 14:54, Danny Richardson <n_gr...@k6mhe.com> wrote:

> The exception to that is Antenna Model
>
> http://www.antennamodel.com/

Yes, you are correct. I did not mention 'old mininec 3.13 engine' by
accident. :-)

Arie.

1858. Re: Optimal radiation angle.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 18:20:46 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1182018046.694412.174460@q69g2000hsb.googlegroups.com>
Source record: 40062

On 15 jun, 14:57, Danny Richardson <n_gr...@k6mhe.com> wrote:

> http://elbert.its.bldrdoc.gov/pc_hf/hfwin32.html

Yes, I know. 4nec2 already contains a tight interface towards the
VOACAP/ICEPAC propagation prediction package. However I was wondering
if there would be a more simpla approach availabe.

1859. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 18:46:37 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951966473B75mcoslocomcastnet@216.196.97.136>
Source record: 40063

Cecil Moore <nospam@w5dxp.com> wrote in news:ZLGci.19671$C96.7397
@newssvr23.news.prodigy.net:

> Mike Coslo wrote:
>> Cecil Moore <nospam@w5dxp.com> wrote:
>>> Jim, I'm annoyed at people who assert that scientific
>>> theories are never wrong and are simply a subset of
>>> something that is more correct.
>>
>> Those who do are definitely not using the scientific method, are
>> they?
>
> Well, let's take an example. There was a theory that
> the smallest independent organism couldn't be smaller
> than ~1 um. Using the scientific method, no organism
> smaller than that was discovered for decades.
> Now we have apparently discovered an independent
> organism 50 times smaller than the theory allowed.
> Was the theory right or wrong?

I believe that the hypothesis was wrong. minimum size for a life form
doesn't make it quite as far as a theory to me. Based on what we knew t
the time, it wasn't a bad guess.

- 73 de Mike KB3EIA -

1860. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 19:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <lipdk4-0tl.ln1@mail.specsol.com>
Source record: 40064

art <aunwin@insightbb.com> wrote:
> On 16 Jun, 09:45, j...@specsol.spam.sux.com wrote:
> > Cecil Moore <nos...@w5dxp.com> wrote:
> > > j...@specsol.spam.sux.com wrote:
> > > > But what if the post gets cross posted to a group such as
> > > > sci.physics.research where there is a greater percentage of educated
> > > > readers than r.r.a.a and semantic game playing isn't allowed?
> > > Sounds like you shouldn't bother trying to post there.
> >
> > With topics like "Water burns" and "Gaussian antennas", I seldom do.
> >
> > --
> > Jim Pennino
> >
> > Remove .spam.sux to reply.

> Jim,
> you have posted 1000+ in newsgroups starting with "sci" and as with
> this group
> you have never met a person that you could like. Seems like the word
> babble,idiot
> a few swear words, moron,etc is what you base your posts around. It
> does appear
> to me that the aviation people took you at your word when you said
> you wanted
> to be buried in Chicago when you said you would not post in that
> newsgroup again.
> Now you have rissen from the dead where you can hurt as many people as
> you can
> in this newsgroup with your own style of babble. Why do you wake up in
> the morning?
> There surely something in the World where you could be happy instead
> of hanging
> around here. Find out where that place is and go there and this time
> work on
> building up some credability in your enunciations if your ideals are
> to have a
> sensible conversation instead of abusive one liners that you now
> thrive upon.
> To use a life like the way you are squandering yours is a very sad
> thing to watch.

It's nice to see a babbler like you is so obsessed with what I may
have posted to USENET that you have spent the time to research me.

Now, if only you were able to read...

Actually, it was in sci.physics where I said:

"Personally, I'm going to be buried in Chicago because that's where the dead rise from the grave every election day."

Since little you post has much of any relation to reality, it is not surprising you botched this also.

--
Jim Pennino

Remove .spam.sux to reply.

1861. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 19:50:12 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951A12C0D6C3mcoslocomcastnet@216.196.97.136>
Source record: 40065

Cecil Moore <nospam@w5dxp.com> wrote in news:blSci.19753$C96.3758
@newssvr23.news.prodigy.net:

> John Smith I wrote:
>> I would hold back just a bit on that "theory."
>
> Quoted from: http://www.globalwarming.org/article.php?uid=221
>
> "Three scientific studies that have recently appeared may well
> spell the beginning of the end of global warming theory:"
> --
> 73, Cecil, w5dxp.com
>
>

As a group whose defined mission is "to dispel the myths of global warming by exposing flawed economic, scientific, and risk analysis", I give them credit for not hiding what they have already decided.

But they are without a doubt a political organization.

Herre is Some info on them:

Formed in 1997, is currently hosted and financed by Consumer Alert, member and organizer of the National Consumer Coalition. The Coalition publishes the bi-weekly "Cooler Heads Newsletter" in conjunction with the Competitve Enterprise Institute. Current members are: 60 Plus Association, The Advancement of Sound Science Coalition (junkscience.com), Alexis de Tocqueville Institution, Americans for Tax Reform, Association of Concerned Taxpayers, Atlas Economic Research Foundation, Capital Research Center, Citizens Against Government Waste, Citizens for a Sound Economy, Committee For A Constructive Tomorrow, Competitive Enterprise Institute, Consumer Alert, Defenders of Property Rights, Foundation for American Liberty, Frontiers of Freedom, Fund for a New Generation, The Heartland Institute, National Center for Policy Analysis, National Center for Public Policy Research, Political Economy Research Center, Public Interest Institute, Small Business Survival Committee, United Seniors Association, and Women for Tax Reform.

Reading the articles was a little like reading Creationist effluvia.

1. Decide your desired outcome.

2. Anything that appears to discredit your opponents position is trotted out to do just that.

3. Pull out old research. The latest on this site was from 2001, although there was stuff that was over 12 years old.

3. But for heavens sake, don't apply the same metric to yourself!

I've issued a challenge before (not that anyone would be paying much attention to my challenges, but whatever.

Heat retention in an atmosphere will vary in relation to the percentage of certain components of that atmosphere. This is an experimentally proven fact. Not a theory nor hypothesis, but a fact.

These gases, which vary in the amount of heat retention they afford, are collectively known as "greenhouse gases".

Given the above as a fact, (unless you wish to dispute the entire concept) perform research that shows that the effect does not exist.

You fail if you call politics. All that is saying is that You are the one with a political agenda. Note that the "you" in this is the group doing the research, not you personally.

Hasn't happened yet. The political groups such as the Cooler Heads Coalition just do the same as the Creationists and Intelligent Design crowd. I'm expecting debate challenges soon. Everyone knows that we can change scientific fact by debate! ;^)

BTW, a most interesting side effect of the Water Vapor feedback, the report from 7 years ago that the CHC calls "new", brings up an interesting dilemma. If the ocean temperature rises, the cloud cover changes to allow more heat to escape. If this mechanism occurs, and prevents temoeratures from rising, why would the oceans rise in temperature at all? Seems like either the feeedback should keep land and ocean temps pretty constant. But the temperature seem to rise, because they know that a 1 deg C ocean temp rise causes clouds to compensate by losing more heat. This cannot happen, because global warming doesn't exist, right?

- 73 de Mike KB3EIA -

1862. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 19:55:05 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951A20029F44mcoslocomcastnet@216.196.97.136>
Source record: 40066

Cecil Moore <nospam@w5dxp.com> wrote in news:edTci.14001$2v1.2035
@newssvr14.news.prodigy.net:

> John Smith I wrote:
>> I draw no firm conclusions on global warming and have little hope
>> science will prevail in the near future.
>
> Here's probably all you need to know.
>
> http://en.wikipedia.org/wiki/Image:Ice_Age_Temperature.png
>
> Note the temperature today is ~6 deg *below* the peak
> temperature of 130,000 years ago, ~3 deg below the
> peak of 240,000 years ago, ~5 deg below the peak of
> 340,000 years ago, and ~2 degrees below the peak of
> 410,000 years ago. As far as natural global warming
> cycle peak temperatures go, the present one is
> relatively cool - plus the fact that it peaked 8000
> years ago indicating that we are already in the
> next ice age cycle. Just ask the folks in Denver. :-)

Cecil, we both know that temperature changes will affect different areas differently. When people trot out specifics, I remember listening to Rush Limbaugh spouting out "So much for Global Warming" during a brief cold snap during one of the warmer winters recently.

Some places, such as Ireland (where palm trees grow in certain places) and Great Britain, could become significantly colder if the Gulf stream is diverted or dissapates due to warming effects.

- 73 de Mike KB3EIA -

1863. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:06:27 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <L9adnca_9I863-nbRVnygAA@bt.com>
Source record: 40067

"Mike Coslo" <mcoslo@youknow.comcast.net> wrote in message
news:Xns9951A20029F44mcoslocomcastnet@216.196.97.136...
> Cecil Moore <nospam@w5dxp.com> wrote in news:edTci.14001$2v1.2035
> @newssvr14.news.prodigy.net:
>
> > John Smith I wrote:
> >> I draw no firm conclusions on global warming and have little hope
> >> science will prevail in the near future.
> >
> > Here's probably all you need to know.
> >
> > http://en.wikipedia.org/wiki/Image:Ice_Age_Temperature.png
> >
> > Note the temperature today is ~6 deg *below* the peak
> > temperature of 130,000 years ago, ~3 deg below the
> > peak of 240,000 years ago, ~5 deg below the peak of
> > 340,000 years ago, and ~2 degrees below the peak of
> > 410,000 years ago. As far as natural global warming
> > cycle peak temperatures go, the present one is
> > relatively cool - plus the fact that it peaked 8000
> > years ago indicating that we are already in the
> > next ice age cycle. Just ask the folks in Denver. :-)
>
> Cecil, we both know that temperature changes will affect different
> areas differently. When people trot out specifics, I remember listening
> to Rush Limbaugh spouting out "So much for Global Warming" during a brief
> cold snap during one of the warmer winters recently.
>
> Some places, such as Ireland (where palm trees grow in certain
> places) and Great Britain, could become significantly colder if the Gulf
> stream is diverted or dissapates due to warming effects.
>
> - 73 de Mike KB3EIA -

The UK is currently enjoying record high temperatures and lots of fine
weather, when it isn't raining. If the Gulf Stream or North Atlantic Drift
disipate, we'll just have to go back to building coal fired power stations
to warm the place up a bit more. Hey, we're an island, we don't have to
worry about the rest of the world.

Mike G0ULI

1864. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:19:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <dBXci.1484$vi5.1292@newssvr17.news.prodigy.net>
Source record: 40068

Jim Kelley wrote:
> It usually turns out that he used the one which allows whatever he
> said to be true in some context.

You are the pot calling the kettle black, Jim.
Your narrow definitions from the field of physics
are not even accepted within the RF engineering
community.
--
73, Cecil http://www.w5dxp.com

1865. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:26:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <LHXci.1487$vi5.1267@newssvr17.news.prodigy.net>
Source record: 40069

jimp@specsol.spam.sux.com wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Sounds like you shouldn't bother trying to post there.
>
> With topics like "Water burns" and "Gaussian antennas", I seldom do.

I was talking about s.p.r where your idea of
some Omniscient Supreme Science God handing down
scientific theories that are never wrong might
not be welcome.
--
73, Cecil http://www.w5dxp.com

1866. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:29:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <QKXci.1488$vi5.780@newssvr17.news.prodigy.net>
Source record: 40070

Jim Higgins wrote:
> One might make a pretty good case that since the
> scientific method is inherent to science and to being a scientist that
> those who abandon it are no longer scientists.

OTOH, one might make a pretty good case that those
who worship at the alter of the scientific method
have simply traded one religion for another and
are no longer scientists.
--
73, Cecil http://www.w5dxp.com

1867. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:32:56 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51hdvfub1@nnrp.linuxfan.it>
Source record: 40071

Mike Kaliski wrote:

> ...
> The UK is currently enjoying record high temperatures and lots of fine
> weather, when it isn't raining. If the Gulf Stream or North Atlantic Drift
> disipate, we'll just have to go back to building coal fired power stations
> to warm the place up a bit more. Hey, we're an island, we don't have to
> worry about the rest of the world.
>
> Mike G0ULI

Ever study the dynamics of an ammonia refrigeration system?

These primitive refrigeration units are found in most travel trailers
and land yachts, you actually provide a propane flame to cool the
interior of your refrigerator ...

As parts of the world grow warmer, parts will grow much cooler as
earths' weather dynamics strive to maintain a balance, if you avg out
the warmed vs. the cooled, you will not even be able to note a
significant difference--however, if you live in one or the other, you
will notice it!

JS

1868. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:37:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8SXci.1489$vi5.246@newssvr17.news.prodigy.net>
Source record: 40072

Jim Higgins wrote:
> In any case it strikes me that allowing The Law to be broken
> pretty much wrecks literally everything else ...

The law of conservation of energy that my Dad was taught
was broken by the atomic bomb. Of course, the energy in
matter, that had been previously erroneously omitted, was
quickly added.
--
73, Cecil http://www.w5dxp.com

1869. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:38:06 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51hnkfub2@nnrp.linuxfan.it>
Source record: 40073

art wrote:

> ...
> To use a life like the way you are squandering yours is a very sad
> thing to watch.
>

Art:

You have an excellent approach to logic ...

JS

1870. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:40:20 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51hrrfub3@nnrp.linuxfan.it>
Source record: 40074

jimp@specsol.spam.sux.com wrote:

> ...
> "Personally, I'm going to be buried in Chicago because that's where the
> dead rise from the grave every election day."
> ...

Shall I order the cake and plan the party, or is this going to take
awhile? I don't want to get everyone excited without sufficient cause
... <EVIL SMIRK>

JS

1871. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:40:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sVXci.177$Rw1.89@newssvr25.news.prodigy.net>
Source record: 40075

Jim Higgins wrote:
> I'd say your postulate is flawed because you don't maintain a constant
> frame of reference.

No, I'm saying maintaining a constant frame of reference
is impossible because all possible frames of reference
are constantly changing.

> Those observations are not made from the same frame
> of reference and cannot be directly compared.

My point exactly. Why does man continue to ignorantly
attempt the impossible?
--
73, Cecil http://www.w5dxp.com

1872. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:42:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <cXXci.178$Rw1.115@newssvr25.news.prodigy.net>
Source record: 40076

Jim Higgins wrote:
> Your point being what? That science is screwed up? My point
> regarding that is that science constantly refines and improves.

Doesn't the need for a constant redefinition and
improvement process prove that science is screwed up?
--
73, Cecil http://www.w5dxp.com

1873. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:43:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51i1bfub4@nnrp.linuxfan.it>
Source record: 40077

Mike Coslo wrote:

> ...
> I believe that the hypothesis was wrong. minimum size for a life form
> doesn't make it quite as far as a theory to me. Based on what we knew t
> the time, it wasn't a bad guess.
>
> - 73 de Mike KB3EIA -

A theory is only a guess which appears to have substance and proof
behind it ... too often, this proof and substance evaporates ...

JS

1874. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:46:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51i8afub5@nnrp.linuxfan.it>
Source record: 40078

Richard Clark wrote:

> ...
> C is NOT a user language.
>
> 73's
> Richard Clark, KB7QHC

Quite obviously, you are not a software engineer ... even is someone is willing to pay you for such.

JS

1875. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 20:56:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51ir2fub6@nnrp.linuxfan.it>
Source record: 39979

Cecil Moore wrote:

> ...
>> Those observations are not made from the same frame
> > of reference and cannot be directly compared.
>
> My point exactly. Why does man continue to ignorantly
> attempt the impossible?

Cecil:

Wait a minute bub!

Are you still attempting to apply and use frames of reference NOT
approved by jim? ;-)

Regards,
JS

1876. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 21:31:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sEYci.4241$c06.2868@newssvr22.news.prodigy.net>
Source record: 39980

John Smith I wrote:
> Are you still attempting to apply and use frames of reference NOT
> approved by jim? ;-)

This is similar to the problem that John Harrison faced
when he tried to design a clock for ocean travel. The
frame of reference was continuously changing so he had
to give up on his original design. It is way past time
for homo sapiens to give up on any notion of an absolute
frame of reference in a relativistic universe. The nail
that they drive in the floor under their feet is getting
longer with each passing day. Why can't they see that?

Such a thing as absolute references simply do not exist
in the universe of relativity. That gives a whole new
meaning to, "There are no absolutes!". Of course, I cannot
be absolutely certain ... what will happen on an absolute
foundation of jello ...
--
73, Cecil http://www.w5dxp.com

1877. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 21:47:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51lourkh1@nnrp.linuxfan.it>
Source record: 39981

Cecil Moore wrote:

> ...
> frame of reference in a relativistic universe. The nail
> that they drive in the floor under their feet is getting
> longer with each passing day. Why can't they see that?
> ...

Cecil:

Such is the lot of man, and this certainly includes myself ... from time to time we are lucky to even catch a glimpse of reality ... we move towards the future, albeit it ... slowly.

Regards,
JS

1878. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 21:50:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nom873lbh5ibv0kuakrnbv32h4b5p9i9s8@4ax.com>
Source record: 39982

On Sat, 16 Jun 2007 13:46:59 -0700, John Smith I
<assemblywizard@gmail.com> wrote:
>> C is NOT a user language.
>
>Quite obviously, you are not a software engineer ... even is someone is
>willing to pay you for such.

:-)

73's
Richard Clark, KB7QHC

1879. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 22:08:24 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sbZci.40766$5j1.23337@newssvr21.news.prodigy.net>
Source record: 39983

John Smith I wrote:
> Such is the lot of man, and this certainly includes myself ... from time
> to time we are lucky to even catch a glimpse of reality ... we move
> towards the future, albeit it ... slowly.

Why are some of the supporters of the scientific method
unwilling to apply the scientific method to the scientific
method?
--
73, Cecil http://www.w5dxp.com

1880. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 22:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jl4ek4-c0m.ln1@mail.specsol.com>
Source record: 39984

Cecil Moore <nospam@w5dxp.com> wrote:
> jimp@specsol.spam.sux.com wrote:
> > Cecil Moore <nospam@w5dxp.com> wrote:
> >> Sounds like you shouldn't bother trying to post there.
> >
> > With topics like "Water burns" and "Gaussian antennas", I seldom do.

> I was talking about s.p.r where your idea of
> some Omniscient Supreme Science God handing down
> scientific theories that are never wrong might
> not be welcome.

You mean using the scientific definition of words when talking
science and not the TV cop show definition?

--
Jim Pennino

Remove .spam.sux to reply.

1881. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 22:40:51 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51otq$4ca$1@nnrp.linuxfan.it>
Source record: 39985

Richard Clark wrote:
> On Sat, 16 Jun 2007 13:46:59 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>>> C is NOT a user language.
>> Quite obviously, you are not a software engineer ... even is someone is
>> willing to pay you for such.
>
> :-)
>
> 73's
> Richard Clark, KB7QHC

Richard:

Ahhh, to wise to take the bait, huh? <grin>

Well, you are right, anyone who programs deserves respect, no matter the language--sure beats being to lazy to learn something new ... a scripting language is best for what was first implied--I lied. :-(

We only need steer the app ... I am like y'all, I prefer the command line to the gui.

Warm regards,
JS

1882. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-16 22:45:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f51p67$7i5$1@nnrp.linuxfan.it>
Source record: 39986

John Smith I wrote:

> [stuff]

... err, just for today, to = too :-)

JS

1883. Re: Radio reception, fm,am

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 01:38:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f523aa$rm1$1@nnrp.linuxfan.it>
Source record: 39987

John Smith I wrote:
> Proctologically Violatedï¿½ï¿½ wrote:
>
> If all else fails, an active antenna should give that radio real "ears."
>
> http://guests.antennex.com/rooms/science/new/incred2.pdf
>
> JS

Someone just pointed out to me that antennax now requires a username and
password to access that page.

I placed a copy on a URL of mine:

http://assemblywizard.tekcities.com/incred2.pdf

it is a ~640Kb .pdf file, you will need adobe reader.

JS

1884. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 02:05:59 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <467496f8$0$21250$39cecf19@news.twtelecom.net>
Source record: 39988

Cecil Moore wrote:

> This is similar to the problem that John Harrison faced
> when he tried to design a clock for ocean travel. The
> frame of reference was continuously changing so he had
> to give up on his original design. It is way past time
> for homo sapiens to give up on any notion of an absolute
> frame of reference in a relativistic universe. The nail
> that they drive in the floor under their feet is getting
> longer with each passing day. Why can't they see that?
>
> Such a thing as absolute references simply do not exist
> in the universe of relativity. That gives a whole new
> meaning to, "There are no absolutes!". Of course, I cannot
> be absolutely certain ... what will happen on an absolute
> foundation of jello ...

That is your opinion of Harrison's problem. I think the rest of us would look at it quite differently. He made a clock to carry the reference with the traveler. And the traveler could sync the clock by telescopic observation using Jovian tables they had with them if they were at a stable anchor. Almost an absolute reference I'd say. At least for it's day.

Remember, we aren't talking about high velocity here, just position changes, so the reference is not changing to any great degree.

tom
K0TAR

1885. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 02:11:33 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46749845$0$21250$39cecf19@news.twtelecom.net>
Source record: 39989

jimp@specsol.spam.sux.com wrote:
>
> It's nice to see a babbler like you is so obsessed with what I may
> have posted to USENET that you have spent the time to research me.
>
> Now, if only you were able to read...
>
> Actually, it was in sci.physics where I said:
>
> "Personally, I'm going to be buried in Chicago because that's where the
> dead rise from the grave every election day."
>
> Since little you post has much of any relation to reality, it is not
> surprising you botched this also.
>
>

PLONK!

I love getting rid of idiots.

tom
K0TAR

1886. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 02:19:57 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46749a5f$0$17201$39cecf19@news.twtelecom.net>
Source record: 39990

```
Richard Clark wrote:
> On Sat, 16 Jun 2007 00:13:37 -0700, John Smith I
> <assemblywizard@gmail.com> wrote:
>> Example:
>>
>> #include <iostream>
>>
>> void helloworldprocedure(void)
>> {
>> cout << "hello world!" << endl;
>> }
>>
>> void main(void)
>> {
>> helloworldprocedure();
>> }
>>
>> ... takes no parameters, returns none ...
>
> Horrid examples of language, these are like the proverbial turds in
> the punch bowl at a party.
>
>> I think most C programmers prefer to program in assembly (but with
>> windows allowing NO direct access of devices, peripherals, memory or
>> disk--why bother, assembly can only be used as a wrapper to call windows
>> libs/dlls/activex/scripts/etc., or custom ones--linux can be made to
>> allow direct access),
>
> Most C programmers are Neanderthals with their skills frozen in the
> 70s. There is at least one Windows Assembler out there, it's free and
> has been available for years from Steve Gibson at:
> http://www.grc.com/smgassembly.htm
> His executables perform network connections in file sizes of barely
> more than 5K up to a massive 22K.
>
>> however, C adds a productivity factor of
>> magnitudes over assembly.
>
> Bull Looney. This kind of syrupy rationale was composed to sooth the
> nerves of Dilbert's pointy haired boss. It merely reveals that many
> coders need training wheels to allow them to ride faster when
> designers could have walked there in half the time.
>
> C is NOT a user language.
```

>
> 73's
> Richard Clark, KB7QHC

Richard

You may not like C programmers in general. However, some of us document our code (my "code" is probably 80% comments) and don't declare (assuming they declare at all) our functions as void. Unless they really are. Sorry about the sentence structure there, I am very tired, and also watching F1 qualifying at the same time. CPU idle time nonexistent. ;)

tom
K0TAR

1887. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 02:55:48 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f527rr$l1a$1@nnrp.linuxfan.it>
Source record: 39991

Tom Ring wrote:

> ...
> PLONK!
>
> I love getting rid of idiots.
>
> tom
> K0TAR

Could be dangerous in your particular case, hope it doesn't lead to any self-destructive behavior ... however, I can understand, my enjoyment is the sound of idiots leaving--don't let the door hit 'ya on the bum.

JS

1888. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 03:07:54 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951EB617C280mcoslocomcastnet@216.196.97.136>
Source record: 39992

Cecil Moore <nospam@w5dxp.com> wrote in news:8SXci.1489$vi5.246
@newssvr17.news.prodigy.net:

> Jim Higgins wrote:
>> In any case it strikes me that allowing The Law to be broken
>> pretty much wrecks literally everything else ...
>
> The law of conservation of energy that my Dad was taught
> was broken by the atomic bomb. Of course, the energy in
> matter, that had been previously erroneously omitted, was
> quickly added.

What on earth was it that he was taught? I certainly wasn't around
then, but any universe that didn't conserve energy would quickly pull all
the available energy from (probably) the first extraction of energy, and
then would soon enter it's lowest possible energy state. Or else possibly
become a continuous kaboom if unlimited energy was available.

- 73 de Mike KB3EIA -

1889. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 03:20:49 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951ED928B2F0mcoslocomcastnet@216.196.97.136>
Source record: 39993

Cecil Moore <nospam@w5dxp.com> wrote in news:cXXci.178$Rw1.115
@newssvr25.news.prodigy.net:

> Jim Higgins wrote:
>> Your point being what? That science is screwed up? My point
>> regarding that is that science constantly refines and improves.
>
> Doesn't the need for a constant redefinition and
> improvement process prove that science is screwed up?

No, it proves that science is willing to admit when it is
incorrect, and likes to self correct.

Respectfully, I might note that you seem to be trying to have it
both ways in all this. You want certainty, you profess skepticism. But
you insist that because science has been wrong, that it must always be
wrong, or at least we must assume that it is probably wrong, so don't
believe it.some science somewhere must be correct at some point.
Otherwise we might as well say things are like they are because God wants
them that way. We are then sure, and all is well

Skepticism when taken to extremes, bears an unsettling resemblance to
faith.
- 73 de Mike KB3EIA -

1890. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 03:27:04 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951EEA198F7Emcoslocomcastnet@216.196.97.136>
Source record: 39994

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in
news:L9adnca_9I863-nbRVnygAA@bt.com:

>
> "Mike Coslo" <mcoslo@youknow.comcast.net> wrote in message
> news:Xns9951A20029F44mcoslocomcastnet@216.196.97.136...
>> Cecil Moore <nospam@w5dxp.com> wrote in news:edTci.14001$2v1.2035
>> @newssvr14.news.prodigy.net:
>>
>> > John Smith I wrote:
>> >> I draw no firm conclusions on global warming and have little hope
>> >> science will prevail in the near future.
>> >
>> > Here's probably all you need to know.
>> >
>> > http://en.wikipedia.org/wiki/Image:Ice_Age_Temperature.png
>> >
>> > Note the temperature today is ~6 deg *below* the peak
>> > temperature of 130,000 years ago, ~3 deg below the
>> > peak of 240,000 years ago, ~5 deg below the peak of
>> > 340,000 years ago, and ~2 degrees below the peak of
>> > 410,000 years ago. As far as natural global warming
>> > cycle peak temperatures go, the present one is
>> > relatively cool - plus the fact that it peaked 8000
>> > years ago indicating that we are already in the
>> > next ice age cycle. Just ask the folks in Denver. :-)
>>
>> Cecil, we both know that temperature changes will affect
>> different
>> areas differently. When people trot out specifics, I remember
>> listening to Rush Limbaugh spouting out "So much for Global Warming"
>> during a brief cold snap during one of the warmer winters recently.
>>
>> Some places, such as Ireland (where palm trees grow in certain
>> places) and Great Britain, could become significantly colder if the
>> Gulf stream is diverted or dissapates due to warming effects.
>>
>> - 73 de Mike KB3EIA -
>
> The UK is currently enjoying record high temperatures and lots of fine
> weather, when it isn't raining. If the Gulf Stream or North Atlantic
> Drift disipate, we'll just have to go back to building coal fired
> power stations to warm the place up a bit more. Hey, we're an island,
> we don't have to worry about the rest of the world.

Well, let us hope that it doesn't happen, and you folks across the pond enjoy decent weather for years to come. But I'm sure it isn't lost on you all just how far north you are! If the Gulf stream relocates or dissapates, the results could be pretty devastating!

1891. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 03:30:07 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9951EF262D8A8mcoslocomcastnet@216.196.97.136>
Source record: 39995

Cecil Moore <nospam@w5dxp.com> wrote in news:QKXci.1488$vi5.780
@newssvr17.news.prodigy.net:

> Jim Higgins wrote:
>> One might make a pretty good case that since the
>> scientific method is inherent to science and to being a scientist that
>> those who abandon it are no longer scientists.
>
> OTOH, one might make a pretty good case that those
> who worship at the alter of the scientific method
> have simply traded one religion for another and
> are no longer scientists.

That is a common argument of Creationists, Cecil. Many even clims
that Evolutionism is a religion. Seems weird to me. I wouldn't pay a whole
lot of attention to it beyond my considered opinion that it is coorect,
but the fundies keep yappin' about it! 8^)

- 73 de Mike KB3EIA -

1892. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 03:32:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f52a18$nc3$1@nnrp.linuxfan.it>
Source record: 39996

Tom Ring wrote:

> ...
> our code (my "code" is probably 80% comments) and don't declare
> (assuming they declare at all) our functions as void. Unless they
> ...
> tom
> K0TAR

I certainly would not go about bragging in that style, dead sign of lack of structure/logic in the code leading to obfuscation and requiring extraordinary effort of documentation ...

The comments in source are only meant for other programmers, they already know how to program, you don't have to teach 'em, nor attempt to impress them with your brilliance--if such is present--they'll know.

With the proper use of significant names for variables, structs, defines, etc. and programming for a "logical flow" of code, few comments are needed (approx. 10-20% comments should be more than sufficient--if the source is structured and non-obfuscated.)

Krist, they pay me to engineer software, not write books ... (if management had their way--they'd screw that up ...)

SIMPLIFIED EXAMPLE:

```
// call at any point to debug/check variables
(void) debug_printout_of_variables_used(float whip_self-capacitance_pf,
float coil_self-capacitance_pf,
float coil_inductance_uh,
...)
{
cout << "Whip self capacitance (pf): " << whip_self-capacitance_pf
<< endl;
cout << ...
...
}
```

JS

1893. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 04:09:52 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1182053392.825386.301390@q75g2000hsh.googlegroups.com>
Source record: 39997

On 16 Jun, 20:27, Mike Coslo <mco...@youknow.comcast.net> wrote:
> "Mike Kaliski" <michael.kali...@tesco.net> wrote innews:L9adnca_9I863-nbRVnygAA@bt.com:
>
>
>
>
>
>
>
> > "Mike Coslo" <mco...@youknow.comcast.net> wrote in message
> >news:Xns9951A20029F44mcoslocomcastnet@216.196.97.136...
> >> Cecil Moore <nos...@w5dxp.com> wrote in news:edTci.14001$2v1.2035
> >> @newssvr14.news.prodigy.net:
>
> >> > John Smith I wrote:
> >> >> I draw no firm conclusions on global warming and have little hope
> >> >> science will prevail in the near future.
>
> >> > Here's probably all you need to know.
>
> >> >http://en.wikipedia.org/wiki/Image:Ice_Age_Temperature.png
>
> >> > Note the temperature today is ~6 deg *below* the peak
> >> > temperature of 130,000 years ago, ~3 deg below the
> >> > peak of 240,000 years ago, ~5 deg below the peak of
> >> > 340,000 years ago, and ~2 degrees below the peak of
> >> > 410,000 years ago. As far as natural global warming
> >> > cycle peak temperatures go, the present one is
> >> > relatively cool - plus the fact that it peaked 8000
> >> > years ago indicating that we are already in the
> >> > next ice age cycle. Just ask the folks in Denver. :-)
>
> >> Cecil, we both know that temperature changes will affect
> >> different
> >> areas differently. When people trot out specifics, I remember
> >> listening to Rush Limbaugh spouting out "So much for Global Warming"
> >> during a brief cold snap during one of the warmer winters recently.
>
> >> Some places, such as Ireland (where palm trees grow in certain
> >> places) and Great Britain, could become significantly colder if the
> >> Gulf stream is diverted or dissapates due to warming effects.
>
> >> - 73 de Mike KB3EIA -
>

> > The UK is currently enjoying record high temperatures and lots of fine
> > weather, when it isn't raining. If the Gulf Stream or North Atlantic
> > Drift disipate, we'll just have to go back to building coal fired
> > power stations to warm the place up a bit more. Hey, we're an island,
> > we don't have to worry about the rest of the world.
>
> Well, let us hope that it doesn't happen, and you folks across the
> pond enjoy decent weather for years to come. But I'm sure it isn't lost
> on you all just how far north you are! If the Gulf stream relocates or
> dissapates, the results could be pretty devastating!- Hide quoted text -
>
> - Show quoted text -

In the middle of the 19 century the River Thames which is a tidal
river
froze over in London. The ice was so thick that a fair was held on the
ice.
If I remember correctly water height varies about 13 feet due to tide
change
so you can imagine how thick the ice was to hold the tides back.

1894. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 04:18:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mrb9735pbddq7q4vbuq1921u1mlbkqopje@4ax.com>
Source record: 39998

On Sat, 16 Jun 2007 21:19:57 -0500, Tom Ring <news0003@taring.org>
wrote:

>You may not like C programmers in general. However, some of us document
>our code (my "code" is probably 80% comments) and don't declare
>(assuming they declare at all) our functions as void. Unless they
>really are. Sorry about the sentence structure there, I am very tired,
>and also watching F1 qualifying at the same time. CPU idle time
>nonexistent. ;)

Hi Tom,

Documenting code (any language, and even more so for "self
documenting" languages) is a necessary talent, and the first casualty
often abandoned to schedule.

This has nothing to do with "liking" C programmers in general;
however, C as a language is wholly inappropriate for a user's
interface to antenna design engines. The intersection of C
programmers and Antenna designers is so marginal that the focus on C
is six sigma to the left of the bell curve (and, of course, these
comments can be extended to assembler).

I've designed parsers and compilers - no easy chore certainly - and I
have enough experience in the matter to know that expressing the
user's need in BNF and pushing it through YACC would present something
vastly better than C; with the libraries stripped out, is nothing more
than simple conditionals and loops (and again, since the assembler set
for the 80x86, ASM could do that just as well). C programmers'
fluency through brute force attention does not elevate these opaque
libraries' troglodyte style.

With the advent of C++, things only got worse. I was doing that in
the late 80s and when Java came along, I jettisoned that baggage.

73's
Richard Clark, KB7QHC

1895. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 04:29:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f52db3$3lp$1@nnrp.linuxfan.it>
Source record: 39999

Richard Clark wrote:

> [stuff]

> Richard Clark, KB7QHC

Richard,

Yes, a simplified script language to feed the logic in the app from the commandline and a backup gui for those desiring it would be most appreciated by those having to learn it and use the app ...

C programmers will participate by writing the app ... :-)

Regards,
JS

1896. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 12:06:25 UTC
From: oeguet@gmx.de
Message-ID: <1182081985.955860.226000@k79g2000hse.googlegroups.com>
Source record: 40000

Again,

my intention is, not to re-invent the programming language "C". My intention is, to describe in a prooven language an antenne. I decided the programming language C, because it is most used language on the world.

I have not given any name for my language to the pre-processor. Lets call this as SNEC - just for "Symbolic NEC". The commands for the pre-processor has similar syntax to the programming language C. But not exactly the same. It has many limitations.

As an example, I show you one of the source code of a horn antenna for WLAN. It has three modules. As you can see, the language is as superset of NEC2 and 4NEC2. It can be adapted easily to any other antenne defining formats. If the pre-processor detects an unknowing command, it will do nothing. Just taking the line of code and writing to output file. A special set of commands will be interpreted by the pre-processor. It will translate it into the 4NEC2/NEC2 commands.
That is all. It is a very simple language, but you can design very complex antenna model with few lines of "code".
The output file has a lot of kilobytes of code! It will split surface patches into many segments or wires. The main module is Horn1.txt.

Aziz

```
--------------- File: Horn1.txt -------------------------
CM Horn Antenna Model at 2.437 GHz (C) 2007 by Aziz Oeguet
CE

#include "Common.txt"
#include "PP4NEC2Defs.txt"

#ifndef H_wrmode
H_wrmode = 0 // Drahtmodus (0=Surface-Path, 1=Wire-Modus)
#endif

#if (H_wrmode)
// Parameter für Wire-Modus
#pragma mode = _MODE_WR, wrnumseg = 1, wrtagstart=5000, wrtaginc =
1, wrradius = 0.00075
#pragma symode = _SYMODE_REUSE
#else
#pragma mode= _MODE_SP
#pragma symode = _SYMODE_REUSE
#endif
```

```
//--- Biquad-Parameter definieren ---
BQ_nsegw = 8 // Number of segments for width
BQ_nsegh = 8 // Number of segments for height
BQ_RW = 0.10 // Reflector width (y-axis)
BQ_RH = 0.10 // Reflector height (z-axis)

// Erreger-Antenne einfügen
#include "FeedBiQ.txt"

refdist = 0.014617 // Reflector distance to antenna

// Box parameters
B_Px = -refdist // Position of box (x-Axis)
B_Py = 0 // Position of box (y-Axis)
B_Pz = 0 // Position of box (z-Axis)

#if (H_wrmode)
B_lseg = 25 // Number of segments for length (x-axis)
B_wseg = 21 // Number of segments for width 2 (y-axis)
B_hseg = 18 // Number of segments for height 2 (z-axis)
#else
B_lseg = 30 // Number of segments for length (x-axis)
B_wseg = 24 // Number of segments for width 2 (y-axis)
B_hseg = 20 // Number of segments for height 2 (z-axis)
#endif

B_W1 = BQ_RW // Box width 1 (y-axis)
B_H1 = BQ_RH // Box height 1 (z-axis)

// Opt. simuliert
B_L = 0.385216 // 0.398 // Box length (x-axis)
B_W2 = 0.40 // Box width 2 (y-axis)
B_H2 = 0.291 // Box height 2 (z-axis)

#if (H_wrmode)
B_nBox = 1 // Number of box divisions for a better
segmentation
#else
B_nBox = 10 // Number of box divisions for a better
segmentation
#endif

#if B_nBox == 1
B_wseg1 = B_wseg // Number of segments for width 1 (y-axis)
B_hseg1 = B_hseg // Number of segments for height 1 (z-axis)
#else
B_wseg1 = 2+B_W1/(B_W2/B_wseg) // Number of segments for width 1 (y-
axis)
B_hseg1 = 2+B_H1/(B_H2/B_hseg) // Number of segments for height 1 (z-
axis)
#endif

// Deltas for box divisions
B_DH = (B_H2-B_H1)/B_nBox
```

```
B_DW = (B_W2-B_W1)/B_nBox
B_DL = B_L/B_nBox

//--- Horn Reflektor ---

B_dws = (B_wseg - B_wseg1)/B_nBox
B_dhs = (B_hseg - B_hseg1)/B_nBox

for (i=0; i < B_nBox; i=i+1)
{
#if i==0
#Box %%(B_wseg1+i*B_dws) %%(B_hseg1+i*B_dhs) %%(B_lseg/B_nBox)
(B_Px+%%i*B_DL) B_Py B_Pz (B_W1+%%i*B_DW) (B_W1+%%(i+1)*B_DW) (B_H1+%
%i*B_DH) (B_H1+%%(i+1)*B_DH) B_DL BLRUD _8ALL
#else
#Box %%(B_wseg1+i*B_dws) %%(B_hseg1+i*B_dhs) %%(B_lseg/B_nBox)
(B_Px+%%i*B_DL) B_Py B_Pz (B_W1+%%i*B_DW) (B_W1+%%(i+1)*B_DW) (B_H1+%
%i*B_DH) (B_H1+%%(i+1)*B_DH) B_DL LRUD _8ALL-_4ALL
#endif

} // for i

ofsx = -B_L-B_Px // Offset structure

// Achsen-Transformation (verschieben, um aus dem Nahfeld
rauszukommen)
GM 0 0 0 0 0 ofsx 0 0 0

// End-Of-Geometry
GE 0

//--- Wire-Load (HF-Speisung) ---
EX 0 Ant_Feed_Tagnr Ant_Feed_Segnr 0 1.0 0.0
LD 5 0 0 0 62900000

// Extended-Wire-Kernel einschalten
EK 1

//--- Frequency Parameter and Execute ---
FR 0 1 0 0 freq 1
EN
-------------------File: Common.txt ----------------------
CM
CM File: Common.txt
CM
CM Antenna Model at 2.437 GHz (C) 2007 by Aziz Oeguet
CM
CM --- General parameters ---
CE

freq = 2437.0 // Operating frequency in MHz
pi = 3.14159265358979 // famous pi
c0 = 299792.458 // Light speed km/s
lambda = c0/freq/1000 // One wave length in m
```

```
lambda2= lambda/2 // Half wave length in m
lambda4= lambda/4 // Fourth wave length in m

CM End of File Common.txt
CE
-----------------File: PP4NECDefs.txt ----------------------
CM
CM File: PP4NEC2Defs.txt
CM
CM PP4NEC2 Constant Definitions (C) 2007 by Aziz Oeguet
CM

//--- Modus-Arten definition (Bit-Flag, Number-Codes) ---
_MODE_SP = 0 // #pragma mode=_MODE_SP -> Surface Patch Modus
(Metallflächen)
_MODE_WR = 1 // #pragma mode=_MODE_WR -> Wire Modus
(Drahtmodell)

_SYMODE_UNIQUE = 1 // #pragma symode = _SYMODE_UNIQUE -> interne
Symbole einzigartig (keine Mehrfachverwendung)
_SYMODE_REUSE = 0 // #pragma symode = _SYMODE_REUSE -> interne
Symbole mehrfach verwenden (durch Neuzuweisung)

_HS_OUTSIDE = 0 // Struktur nur ausserhalb zulassen (innerhalb des
Hotspots keine Objekte)
_HS_INSIDE = 1 // Struktur nur innerhalb zulassen (ausserhalb des
Hotspots keine Objekte)

//--- Edge definitions (Bit-Flags) (#Sp3 only) ---
_P1P2 = 1 // Kante P1-P2 mit Draht verbinden (nur bei Wire Modus)
_P2P3 = 2 // Kante P2-P3 mit Draht verbinden (nur bei Wire Modus)
_P3P1 = 4 // Kante P3-P1 mit Draht verbinden (nur bei Wire Modus)
_3ALL = 7 // alle Kanten des Dreiecks mit Draht verbinden (nur bei
Wire Modus)

//--- Edge definitions (Bit-Flags) (#Sp4 plus #Sp3) ---
_P3P4 = 4 // Kante P3-P4 mit Draht verbinden (nur bei Wire Modus)
_P4P1 = 8 // Kante P4-P1 mit Draht verbinden (nur bei Wire Modus)
_4ALL = 15 // alle Kanten des Vierecks mit Draht verbinden (nur bei
Wire Modus)

//--- Edge definitions (Bit-Flags) (#Box, #Horn plus #Sp4) ---
_P5P6 = 16 // Kante P5-P6 mit Draht verbinden (nur bei Wire Modus)
_P6P7 = 32 // Kante P6-P7 mit Draht verbinden (nur bei Wire Modus)
_P7P8 = 64 // Kante P7-P8 mit Draht verbinden (nur bei Wire Modus)
_P8P5 = 128 // Kante P8-P5 mit Draht verbinden (nur bei Wire Modus)
_P1P5 = 256 // Kante P1-P5 mit Draht verbinden (nur bei Wire Modus)
_P2P6 = 512 // Kante P2-P6 mit Draht verbinden (nur bei Wire Modus)
_P3P7 = 1024 // Kante P3-P7 mit Draht verbinden (nur bei Wire Modus)
_P4P8 = 2048 // Kante P4-P8 mit Draht verbinden (nur bei Wire Modus)
_8ALL = 4095 // alle Kanten des Objekts mit Draht verbinden (nur bei
Wire Modus)
```

```
//--- Edge definitions (Bit-Flags) (#SpArc and #Tube only) ---
_A1 = 1 // Kante Alpha1 (Startwinkel)
_A2 = 2 // Kante Alpha2 (Endwinkel)
_R1 = 4 // Kante Radius 1 (Startradius)
_R2 = 8 // Kante Radius 2 (Endradius)
_RALL = 15 // alle Kanten des Objekts mit Draht verbinden (nur bei
Wire Modus)

//--- Konvex definition (Bit-Flag) (für Metallflächen (Surface
Patches)) ---
_CONVEX = 65536 // Objekt ist Konvex, alle Normalenvektoren zeigen
nach aussen

CM End of File PP4NEC2Defs.txt
CE
----------------File: FeedBiQ.txt------------
CM
CM File: FeedBiQ.txt
CM
CM BiQuad-Feeder Antenna Model at 2.437 GHz (C) 2007 by Aziz Oeguet
CM
CE

//--- Antenne parameters ---

#ifndef BQ_sgap
BQ_sgap = 0.003 // Soldering gap distance
#endif

#ifndef BQ_wr
BQ_wr = 0.00075 // Wire radius
#endif

#ifndef BQ_wrseg
BQ_wrseg = 5 // Number of segments on partial
antenne wire part
#endif

#ifndef BQ_tagwr
BQ_tagwr = 1000 // Antenna Tag-Start
#endif

BQ_elemlen = lambda/4 // Antenna element length
BQ_ea = BQ_elemlen/sqr(2) // Projected axis length of antenna
element

//--- Antenne (BiQuad) ---

GW BQ_tagwr 1 0 0 BQ_sgap/2 0 0 -
BQ_sgap/2 BQ_sgap/6
GW BQ_tagwr+1 BQ_wrseg 0 0 BQ_sgap/2 0 BQ_ea
BQ_ea BQ_wr
GW BQ_tagwr+2 BQ_wrseg 0 BQ_ea BQ_ea 0 2*BQ_ea
0 BQ_wr
```

```
GW BQ_tagwr+3 BQ_wrseg 0 2*BQ_ea 0 0 BQ_ea -
BQ_ea BQ_wr
GW BQ_tagwr+4 BQ_wrseg 0 BQ_ea -BQ_ea 0 0 -
BQ_sgap/2 BQ_wr
GW BQ_tagwr+5 BQ_wrseg 0 0 -BQ_sgap/2 0 -BQ_ea -
BQ_ea BQ_wr
GW BQ_tagwr+6 BQ_wrseg 0 -BQ_ea -BQ_ea 0 -2*BQ_ea
0 BQ_wr
GW BQ_tagwr+7 BQ_wrseg 0 -2*BQ_ea 0 0 -BQ_ea
BQ_ea BQ_wr
GW BQ_tagwr+8 BQ_wrseg 0 -BQ_ea BQ_ea 0 0
BQ_sgap/2 BQ_wr

//--- Wire-Load Punkt definieren (HF-Speisepunkt) ---

Ant_Feed_Tagnr = BQ_tagwr
Ant_Feed_Segnr = 1

CM End of File FeedBiQ.txt
CE

--------------------END----------------
```

1897. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 13:07:29 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46753210$1$8066$4c368faf@roadrunner.com>
Source record: 40001

"Mike Coslo" <mcoslo@youknow.comcast.net> wrote in message
news:Xns9951EB617C280mcoslocomcastnet@216.196.97.136...
> Cecil Moore <nospam@w5dxp.com> wrote in news:8SXci.1489$vi5.246
> @newssvr17.news.prodigy.net:
>
>> Jim Higgins wrote:
>>> In any case it strikes me that allowing The Law to be broken
>>> pretty much wrecks literally everything else ...
>>
>> The law of conservation of energy that my Dad was taught
>> was broken by the atomic bomb. Of course, the energy in
>> matter, that had been previously erroneously omitted, was
>> quickly added.
>
> What on earth was it that he was taught? I certainly wasn't around
> then, but any universe that didn't conserve energy would quickly pull all
> the available energy from (probably) the first extraction of energy, and
> then would soon enter it's lowest possible energy state. Or else possibly
> become a continuous kaboom if unlimited energy was available.
>
> - 73 de Mike KB3EIA -

I t was often taught that matter was matter and energy was energy even after
the developementof the atomic bomb and nuclear reactors..

1898. Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 13:34:22 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com>
Source record: 40002

I need some help me with a decision on which coax to purchase. I'm a new General Class ham and am planning my HF setup.

The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X (9258), will there be that much difference in performance at about 100' of coax as compared to using RG-8? I want to use the RG-8X because the smaller diameter coax will allow me to feed the coax easier into my house. I suppose I could try to get the RG-8 in the house, but the place where I want to bring it in only has minimal space and the RG-8X will fit just right.

Thanks.

1899. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 14:19:12 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Apbdi.3095$015.1604@trndny05>
Source record: 40003

go for it. 8x is just fine for hf unless maybe you are planning to run
1500w rtty ragchewing on 10m on a hot day.

"NotMe" <NotMe@Oops.edu> wrote in message
news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>I need some help me with a decision on which coax to purchase. I'm a new
>General Class ham and am planning my HF setup.
>
> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> (9258), will there be that much difference in performance at about 100' of
> coax as compared to using RG-8? I want to use the RG-8X because the
> smaller diameter coax will allow me to feed the coax easier into my house.
> I suppose I could try to get the RG-8 in the house, but the place where I
> want to bring it in only has minimal space and the RG-8X will fit just
> right.
>
> Thanks.
>

1900. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 14:25:37 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <E92dnSeAZuj72ejbnZ2dnUVZ_vqpnZ2d@comcast.com>
Source record: 40004

"Dave" <noone@nowhere.com> wrote in message
news:Apbdi.3095$015.1604@trndny05...
> go for it. 8x is just fine for hf unless maybe you are planning to run
> 1500w rtty ragchewing on 10m on a hot day.
>
> "NotMe" <NotMe@Oops.edu> wrote in message
> news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>>I need some help me with a decision on which coax to purchase. I'm a new
>>General Class ham and am planning my HF setup.
>>
>> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
>> (9258), will there be that much difference in performance at about 100'
>> of coax as compared to using RG-8? I want to use the RG-8X because the
>> smaller diameter coax will allow me to feed the coax easier into my
>> house. I suppose I could try to get the RG-8 in the house, but the place
>> where I want to bring it in only has minimal space and the RG-8X will fit
>> just right.
>>
>> Thanks.
>>
>
>

My setup now only has the stock radio at 100 watts.

1901. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 14:36:21 UTC
From: Tom Stack <wq5j@airmail.net>
Message-ID: <137ahn7ikkm273f@corp.supernews.com>
Source record: 40005

I have used the 8X for 10 years on 40 and 80 meters with no negatives ... works fine and if convenient for you it is fine ... I have run 1500 watts at times and the only concern you might have is a little higher loss factor but pretty negligible overall ...

I have 500 ft rolls of 8X for $109 and 100 ft runs with silver plated 259 connectors for $34 ....

Tom

WQ5J

wq5j@arrl.net

"NotMe" <NotMe@Oops.edu> wrote in message news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>I need some help me with a decision on which coax to purchase. I'm a new
>General Class ham and am planning my HF setup.
>
> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> (9258), will there be that much difference in performance at about 100' of
> coax as compared to using RG-8? I want to use the RG-8X because the
> smaller diameter coax will allow me to feed the coax easier into my house.
> I suppose I could try to get the RG-8 in the house, but the place where I
> want to bring it in only has minimal space and the RG-8X will fit just
> right.
>
> Thanks.
>

1902. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 14:37:46 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <_Gbdi.732$iz5.141@newsread4.news.pas.earthlink.net>
Source record: 40006

"Dave" <noone@nowhere.com> wrote in message
news:Apbdi.3095$015.1604@trndny05...
> go for it. 8x is just fine for hf unless maybe you are planning to run
> 1500w rtty ragchewing on 10m on a hot day.
>
> "NotMe" <NotMe@Oops.edu> wrote in message
> news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>>I need some help me with a decision on which coax to purchase. I'm a new
>>General Class ham and am planning my HF setup.
>>
>> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
>> (9258), will there be that much difference in performance at about 100'
>> of coax as compared to using RG-8? I want to use the RG-8X because the
>> smaller diameter coax will allow me to feed the coax easier into my
>> house. I suppose I could try to get the RG-8 in the house, but the place
>> where I want to bring it in only has minimal space and the RG-8X will fit
>> just right.
>>
>> Thanks.
>>

I agree, I use rg8x for the wire antennas on the low bands and only use the larger coax for the triband beam. There will not be a noticable loss differance at frequencies below 30 mhz. Not sure how much power the 8x will take but seems ok at the power my sb 200 puts out (around 700 watts). For runs of over 100 feet and frequencies of 50 mhz and above I use the larger low loss types.

1903. Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 15:19:32 UTC
From: no@spam.net
Message-ID: <41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com>
Source record: 40007

I'm building a turnstile in the 1GHz range. The length of the coax for the 90* phasing loop is too short to work with easily. Would I get the same results using a phasing loop 270* in length?

Ralph

1904. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 15:29:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hbja73t9vdsud1tmv9dn6enllojnt3i643@4ax.com>
Source record: 40008

On Sun, 17 Jun 2007 05:06:25 -0700, oeguet@gmx.de wrote:

>Again,
>
>my intention is, not to re-invent the programming language "C".

Hi Aziz,

Unfortunately that is exactly what you have done, re-invent C. The source you provide makes sense mostly to the C programming community, not antenna designers.

>MY intention is, to describe in a prooven language an antenne. I decided
>the programming language C, because it is most used language on the
>world.

Antenna designers are not C programmers, usually. As this post proves through your contribution, English is far more universal - hence designing an antenna pre-processing language with a natural language interface makes far more sense.

You don't know BNF or YACC, do you?

>I have not given any name for my language to the pre-processor. Lets
>call this as SNEC - just for "Symbolic NEC". The commands for the pre-
>processor has similar syntax to the programming language C. But not
>exactly the same. It has many limitations.

The first limitation is the source you provide is not a symbolic language, it is a procedural language. Just giving it the name symbolic does not make it one.

Please reference SNOBOL for symbolic languages, or Pascal records, or if you insist C, then C's structs (I notice you don't use structs).

Mainstream symbolic languages still in use are AWK and Perl. Either of these languages could be implemented in C, but neither look like C.

Do you know AWK? Perl?

Professional software C programmers have skills with the UNIX toolkit since C was designed in BNF created by YACC and its product used to build AWK.

>As an example, I show you one of the source code of a horn antenna for
>WLAN. It has three modules. As you can see, the language is as
>superset of NEC2 and 4NEC2. It can be adapted easily to any other
>antenne defining formats. If the pre-processor detects an unknowing

>command, it will do nothing.

This is called a "silent failure" and YACC can easily provide a not so silent warning. "Silent failures" are very poor design.

>Just taking the line of code and writing
>to output file. A special set of commands will be interpreted by the
>pre-processor. It will translate it into the 4NEC2/NEC2 commands.
>That is all. It is a very simple language, but you can design very
>complex antenna model with few lines of "code".
>The output file has a lot of kilobytes of code! It will split surface
>patches into many segments or wires. The main module is Horn1.txt.

You should also consult (by googling the term) XLZIZL.zip.

You have done a lot of work. You obviously know what you want from your code. You clearly know what the product is going to be. To be useful, you need to wrap it in a truly symbolic language of your own design.

Using the appropriate tools, LEX and YACC, you can preserve your investment with the code you have written, and build a natural language (or symbolic) interface to it.

Research the term BNF (Backus Naur Form). BNF is the ultimate symbolic code and has stood the test of time in some version for 50 years.

73's
Richard Clark, KB7QHC

1905. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 15:34:05 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46755469$1$3181$4c368faf@roadrunner.com>
Source record: 40009

<no@spam.net> wrote in message
news:41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com...
> I'm building a turnstile in the 1GHz range. The length of the coax
> for the 90* phasing loop is too short to work with easily. Would I
> get the same results using a phasing loop 270* in length?
>
> Ralph

Yes, I am curious, what are you using to verify that your harness has the proper delay. At these frequencies I would want a vector voltmeter or network analyzer to check.

Jimmie

1906. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 15:34:36 UTC
From: Dave <noone@nowhere.com>
Message-ID: <gwcdi.2738$Sm5.2160@trndny04>
Source record: 40010

yes, but it will rotate the opposite way.

<no@spam.net> wrote in message
news:41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com...
> I'm building a turnstile in the 1GHz range. The length of the coax
> for the 90* phasing loop is too short to work with easily. Would I
> get the same results using a phasing loop 270* in length?
>
> Ralph

1907. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 15:54:09 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182094868_13351@sp12lax.superfeed.net>
Source record: 40011

NotMe wrote:
> I need some help me with a decision on which coax to purchase. I'm a new
> General Class ham and am planning my HF setup.
>
> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> (9258), will there be that much difference in performance at about 100' of
> coax as compared to using RG-8? I want to use the RG-8X because the smaller
> diameter coax will allow me to feed the coax easier into my house. I
> suppose I could try to get the RG-8 in the house, but the place where I want
> to bring it in only has minimal space and the RG-8X will fit just right.
>
> Thanks.
>
>
As others have pointed out, performance
will be fine. The RG-8X has a foam core
that some have found will deform when
subjected to a sharp bend, changing the
characteristic impedance of the cable.

If you anticipate sharp bends, a solid
dieletric might be preferred. For long
straight runs, the RG-8x is fine.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

1908. Self capacitance/inductance ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 16:25:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f53naflsp1@nnrp.linuxfan.it>
Source record: 40012

TWIMC:

I have been using the following formula to find the self-inductance of a whip in free space:

$$L = 5.08 * l\left(\ln\frac{4l}{d} - 1\right)$$

Anyone have a more accurate equation?

Also, I need to compute the self-capacitance of a whip. Anyone have a reasonably accurate equation for such?

Regards,
JS

1909. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 16:47:34 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1182098854.847030.235110@g4g2000hsf.googlegroups.com>
Source record: 40013

On Jun 16, 1:19 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > It usually turns out that he used the one which allows whatever he
> > said to be true in some context.
>
> You are the pot calling the kettle black, Jim.
> Your narrow definitions from the field of physics
> are not even accepted within the RF engineering
> community.
> --
> 73, Cecil http://www.w5dxp.com

Hi Cecil -

I am not in the business of defining physical phenomena. I do occasionally refer to the definitions published in physics books though. From my perspective, these definitions are uniformly consistent with those used in engineering. In any instance where you find them to differ, I would like to suggest that a re-examination of your understanding of the phenomena might help resolve those differences.

73, Jim AC6XG

1910. Re: Self capacitance/inductance ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 16:56:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ogpa73deq5av305fctro4cjhontqm463rq@4ax.com>
Source record: 40014

On Sun, 17 Jun 2007 09:25:43 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Anyone have a reasonably accurate equation for such?

This does not work for structures with any significant size in
relation to wavelength.

A simple example reveals this with your inductance formula for a 1mm
thick 10 meter whip in the 20M band which suggests it "should be" 50.8
(whatever units your formula reveals). Experience informs us it is
not. This formula similarly fails throughout HF (and in fact would
lead us to the conclusion it was capacitive, not inductive at all).

Such formulas are generally useful at 1Khz (or where otherwise
specified).

73's
Richard Clark, KB7QHC

1911. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 17:08:58 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <KUddi.5714$Fk7.5054@trnddc01>
Source record: 40015

<no@spam.net> wrote in message
news:41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com...
> I'm building a turnstile in the 1GHz range. The length of the coax
> for the 90* phasing loop is too short to work with easily. Would I
> get the same results using a phasing loop 270* in length?
>
> Ralph

Hi Ralph

Could you consider constructing your Turnstile so the "phasing loop" is a straight length of coax, about 2 inches long seperating the two (crossed) dipoles?

Jerry

1912. Re: Self capacitance/inductance ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 17:31:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f53r57lsp2@nnrp.linuxfan.it>
Source record: 40016

Richard Clark wrote:

> ...
> Such formulas are generally useful at 1Khz (or where otherwise
> specified).
>
> 73's
> Richard Clark, KB7QHC

Yes Richard, those are the exact problems I am running into when attempting to put together a small utility to get me in the ballpark on some antenna computations/designs ...

I tossed that question out fishing for responses which might provide methods, ideas, clues, hints on accomplishing the task ...

But, you reaffirm the difficulties in obtaining suitable accuracy ...

Regards,
JS

1913. Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 17:35:06 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1182101706.245402.67070@j4g2000prf.googlegroups.com>
Source record: 40017

Putting in some new ground rods today.

Dirt in the yard (Maryland) is semi-rocky. House is on a hill and certainly well above the water table.

I sank 5/8" copper-clad 8-foot ground rods around the yard. Some went in fairly easy others required some pretty good sledgehammer action. No two ground rods are closer than 16 feet apart.

Random measurements between two nearish (20 to 25 feet) ground rods give resistances in the 50 to 100 ohm range. The ones that went in easiest seem to have highest resistance. (Possibly construction fill near the house foundation?)

Paralleling a bunch on one side of the yard, and a bunch on the other side of the yard, gives resistances between the bunches in the 15-20 ohm range.

Resistance measurements done with homebrew fall-of-potential tester that puts about 100mA between the probes. Tested both polarities and results seem similar. If I scope the potential between the probes there's clearly already a fair amount of 60Hz AC current flowing in the ground as well as a DC component (there is a substation across the street and about 100 yards down if that means anything...)

I'm guessing this means that when I tie everything together I can guesstimate the resistance to "true" ground being in the 10 to 20 ohm range.

I kinda wonder why I spent money on all this heavy 6 AWG copper wire to hook everything together, when the resistance of the ground itself is bigger than the resistance of the wire. I mean, it wouldn't feel right wiring it with 22 gauge hookup wire, but isn't 6 AWG overkill? 10 Ohms of 6AWG is like 5 miles of copper that I can't afford :-(.

Tim KA0BTD

1914. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 17:58:49 UTC
From: no@spam.net
Message-ID: <3vsa731vu3vdnq0nn8lk08aelrni0p8cbl@4ax.com>
Source record: 40018

On Sun, 17 Jun 2007 17:08:58 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

>
><no@spam.net> wrote in message
>news:41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com...
>> I'm building a turnstile in the 1GHz range. The length of the coax
>> for the 90* phasing loop is too short to work with easily. Would I
>> get the same results using a phasing loop 270* in length?
>>
>> Ralph
>
> Hi Ralph
>
> Could you consider constructing your Turnstile so the "phasing loop" is a
>straight length of coax, about 2 inches long seperating the two (crossed)
>dipoles?>
> Jerry

I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
pipe cap so there isn't much room to work. Also, am I correct to
assume the 1.8 is the total length, including what is stripped back to
make the connection?
Ralph

1915. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 18:41:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <egva73ps7s8tsidp3rng62t2vsr3cqia0g@4ax.com>
Source record: 40019

On Sun, 17 Jun 2007 10:35:06 -0700, Tim Shoppa
<shoppa@trailing-edge.com> wrote:

>I kinda wonder why I spent money on all this heavy 6 AWG copper wire
>to hook everything together, when the resistance of the ground itself
>is bigger than the resistance of the wire. I mean, it wouldn't feel
>right wiring it with 22 gauge hookup wire, but isn't 6 AWG overkill?
>10 Ohms of 6AWG is like 5 miles of copper that I can't afford :-(.

Hi Tim,

The choice of 6 AWG, I suppose, was driven (or should have been
driven) by code.

The alternative to your 10 Ohms would be infinite Ohms. In that
sense, quite an improvement. Driving it down to 1 Ohm will take much
more effort (and grief).

Yet and all, it has nothing to do with RF ground (sorry). What you
have accomplished serves your safety from lighting strokes. On the
plus side (when we get beyond survival techniques) you also gain from
removing a lot of ground currents getting into your gear. This can be
especially painful in the sense of Signal to Noise ratio. Worse, if
untreated, it can lead to component failure or shock hazards (you DID
connect all these grounds together, didn't you?).

Laying radials would have reduced your ground resistance, faster, and
lower - but this is not conventional code. Radials will help with
near RF ground, but will not otherwise help with obtaining those low
DX launch angles (not, unless you invest in 5 mile radials).

The discussion of the benefits/pay-back for radials drives a lot of
discussion. Simple advice (if you are building a vertical) is to make
them as long as your antenna is high, and plant a dozen or two about
an inch below the soil, or beneath the grass above the soil.

73's
Richard Clark, KB7QHC

1916. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 18:47:29 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <5lfdi.263$tl5.55@trnddc08>
Source record: 40020

<no@spam.net> wrote in message
news:3vsa731vu3vdnq0nn8lk08aelrni0p8cbl@4ax.com...
>
> On Sun, 17 Jun 2007 17:08:58 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
>>
>><no@spam.net> wrote in message
>>news:41ka73lsblmh83btbeae2lqmhfomvgnkki@4ax.com...
>>> I'm building a turnstile in the 1GHz range. The length of the coax
>>> for the 90* phasing loop is too short to work with easily. Would I
>>> get the same results using a phasing loop 270* in length?
>>>
>>> Ralph
>>
>> Hi Ralph
>>
>> Could you consider constructing your Turnstile so the "phasing loop" is
>> a
>>straight length of coax, about 2 inches long seperating the two (crossed)
>>dipoles?>
>> Jerry
>
>
> I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
> pipe cap so there isn't much room to work. Also, am I correct to
> assume the 1.8 is the total length, including what is stripped back to
> make the connection?
> Ralph

Hi Ralph

I dont know what your needs are for this Turnstile antenna, so my input
may be of no value. But, a Turnstile can be made to work by feeding both
dipoles with one feed point. No phasing harness is needed. Make one
dipole a little short so it is capacitive and the other dipole a little long
so it is inducvtive.

Jerry

1917. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 19:09:15 UTC
From: nm5k@wt.net
Message-ID: <1182107355.445284.308300@m36g2000hse.googlegroups.com>
Source record: 40021

On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:

>
> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
> > pipe cap so there isn't much room to work. Also, am I correct to
> > assume the 1.8 is the total length, including what is stripped back to
> > make the connection?
> > Ralph
>
> Hi Ralph
>
> I dont know what your needs are for this Turnstile antenna, so my input
> may be of no value. But, a Turnstile can be made to work by feeding both
> dipoles with one feed point. No phasing harness is needed. Make one
> dipole a little short so it is capacitive and the other dipole a little long
> so it is inducvtive.
>
> Jerry

The only problem with that is the antenna will still have basically a
dipole
pattern. I assume he is wanting the usual omni pattern with circular
polarization at the higher angles..
But maybe not... You need the phase line if you want a true omni
"turnstile"
pattern.
But saying that , I have used turnstiles with no line.. But usually on
80m..
And it does change the pattern a bit from the original single dipole,
but not
quite the same as using a phase line.
MK

1918. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 19:16:27 UTC
From: Philo <philo@nospampse.be>
Message-ID: <fMfdi.19502$P51.1564847@phobos.telenet-ops.be>
Source record: 40022

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:1182101706.245402.67070@j4g2000prf.googlegroups.com...
> Putting in some new ground rods today.
>
> Dirt in the yard (Maryland) is semi-rocky. House is on a hill and
> certainly well above the water table.
>
> I sank 5/8" copper-clad 8-foot ground rods around the yard. Some went
> in fairly easy others required some pretty good sledgehammer action.
> No two ground rods are closer than 16 feet apart.
>
> Random measurements between two nearish (20 to 25 feet) ground rods
> give resistances in the 50 to 100 ohm range. The ones that went in
> easiest seem to have highest resistance. (Possibly construction fill
> near the house foundation?)
>
> Paralleling a bunch on one side of the yard, and a bunch on the other
> side of the yard, gives resistances between the bunches in the 15-20
> ohm range.
>
> Resistance measurements done with homebrew fall-of-potential tester
> that puts about 100mA between the probes. Tested both polarities and
> results seem similar. If I scope the potential between the probes
> there's clearly already a fair amount of 60Hz AC current flowing in
> the ground as well as a DC component (there is a substation across the
> street and about 100 yards down if that means anything...)
>
> I'm guessing this means that when I tie everything together I can
> guesstimate the resistance to "true" ground being in the 10 to 20 ohm
> range.
>
> I kinda wonder why I spent money on all this heavy 6 AWG copper wire
> to hook everything together, when the resistance of the ground itself
> is bigger than the resistance of the wire. I mean, it wouldn't feel
> right wiring it with 22 gauge hookup wire, but isn't 6 AWG overkill?
> 10 Ohms of 6AWG is like 5 miles of copper that I can't afford :-(.
>
> Tim KA0BTD
>
Ground rods have to "settle" for a few weeks - at least - before
measurements make some sense. Give them water, as you would do with plants.
Borrow a genuine earth resistance "Megger" (or similar) and operate it by
the rules.

1919. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 20:02:04 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <0rgdi.1444$AR5.104@trnddc06>
Source record: 40023

<nm5k@wt.net> wrote in message
news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
> On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>
>>
>> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
>> > pipe cap so there isn't much room to work. Also, am I correct to
>> > assume the 1.8 is the total length, including what is stripped back to
>> > make the connection?
>> > Ralph
>>
>> Hi Ralph
>>
>> I dont know what your needs are for this Turnstile antenna, so my input
>> may be of no value. But, a Turnstile can be made to work by feeding
>> both
>> dipoles with one feed point. No phasing harness is needed. Make one
>> dipole a little short so it is capacitive and the other dipole a little
>> long
>> so it is inducvtive.
>>
>> Jerry
>
> The only problem with that is the antenna will still have basically a
> dipole
> pattern. I assume he is wanting the usual omni pattern with circular
> polarization at the higher angles..
> But maybe not... You need the phase line if you want a true omni
> "turnstile"
> pattern.
> But saying that , I have used turnstiles with no line.. But usually on
> 80m..
> And it does change the pattern a bit from the original single dipole,
> but not
> quite the same as using a phase line.
> MK

Hi MK

I may have screwed up, but I think that a pair of dipoles on the same
plane, configured like a pair of non-symetrical Vs could be fed with one
feed point to produce a free space cardiod pattern. That would be one
short dipole and one one longer dipole fed in parallel.

Jerry

Jerry

1920. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 20:02:14 UTC
From: Dave <noone@nowhere.com>
Message-ID: <argdi.3999$u65.3869@trndny07>
Source record: 40024

the idea on 6ga is to have something heavy enough to handle the current of a power line fault or lightning surge. so yes, use the 6ga. note that as you bury the wire it will also reduce the total resistance some more, so its not a total waste to take what you have left over and add it as buried radials... don't do the tuck them into the grass trick though, trench or make a good slit for them so they are in contact with solid dirt, the deeper the better.

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message news:1182101706.245402.67070@j4g2000prf.googlegroups.com...
> Putting in some new ground rods today.
>
> Dirt in the yard (Maryland) is semi-rocky. House is on a hill and
> certainly well above the water table.
>
> I sank 5/8" copper-clad 8-foot ground rods around the yard. Some went
> in fairly easy others required some pretty good sledgehammer action.
> No two ground rods are closer than 16 feet apart.
>
> Random measurements between two nearish (20 to 25 feet) ground rods
> give resistances in the 50 to 100 ohm range. The ones that went in
> easiest seem to have highest resistance. (Possibly construction fill
> near the house foundation?)
>
> Paralleling a bunch on one side of the yard, and a bunch on the other
> side of the yard, gives resistances between the bunches in the 15-20
> ohm range.
>
> Resistance measurements done with homebrew fall-of-potential tester
> that puts about 100mA between the probes. Tested both polarities and
> results seem similar. If I scope the potential between the probes
> there's clearly already a fair amount of 60Hz AC current flowing in
> the ground as well as a DC component (there is a substation across the
> street and about 100 yards down if that means anything...)
>
> I'm guessing this means that when I tie everything together I can
> guesstimate the resistance to "true" ground being in the 10 to 20 ohm
> range.
>
> I kinda wonder why I spent money on all this heavy 6 AWG copper wire
> to hook everything together, when the resistance of the ground itself
> is bigger than the resistance of the wire. I mean, it wouldn't feel
> right wiring it with 22 gauge hookup wire, but isn't 6 AWG overkill?
> 10 Ohms of 6AWG is like 5 miles of copper that I can't afford :-(.

>
> Tim KA0BTD
>

1921. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 21:25:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99534B744DB2nonenowhere@61.9.191.5>
Source record: 40025

"NotMe" <NotMe@Oops.edu> wrote in
news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com:

> I need some help me with a decision on which coax to purchase. I'm a
> new General Class ham and am planning my HF setup.
>
> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> (9258), will there be that much difference in performance at about
> 100' of coax as compared to using RG-8? I want to use the RG-8X
> because the smaller diameter coax will allow me to feed the coax
> easier into my house. I suppose I could try to get the RG-8 in the
> house, but the place where I want to bring it in only has minimal
> space and the RG-8X will fit just right.

NotMe,

The suitability will depend on the frequency, length, mismatch, cost, physical parameters, and your own threshold for loss.

The line loss calculator at http://www.vk1od.net/tl/tllc.php will allow you to explore Belden 9258 and nearly a hundred other common transmission lines.

Whilst RG-8/X is apparently very popular in the US, it is near unobtainable in Australia... so availability seems to influence "suitability". But then fewer people here purchase ready made wire antennas like dipoles, G5RVs, etc which seem to often be packaged with RG-8/X on US web sites.

Owen

1922. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 21:39:30 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <4-adnVBJ7bdqNOjbnZ2dnUVZ8tKsnZ2d@bt.com>
Source record: 40026

"art" <aunwin@insightbb.com> wrote in message
news:1182053392.825386.301390@q75g2000hsh.googlegroups.com...
<snip>
> In the middle of the 19 century the River Thames which is a tidal
> river
> froze over in London. The ice was so thick that a fair was held on the
> ice.
> If I remember correctly water height varies about 13 feet due to tide
> change
> so you can imagine how thick the ice was to hold the tides back.
>

The ice was 5 feet thick and the river flow was severely obstructed by numerous bridge butresses. The River Thames was so polluted that it was more like liquid mud (actually sewage) than water. The river is now so clean that salmon have been caught swimming in it and the flow is fast enough to prevent a recurrance of the freezing process that allowed the frost fairs to take place. Tidal flow is only rarely interrupted by the Thames Barrier to prevent exceptionally high tidal surges from breaching the river defences in Central London.

Mike G0ULI

1923. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 21:52:18 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <m2idi.1463$W_6.1218@newsread1.news.pas.earthlink.net>
Source record: 40027

"Owen Duffy" <none@no.where> wrote in message
news:Xns99534B744DB2nonenowhere@61.9.191.5...
,
>
> The suitability will depend on the frequency, length, mismatch, cost,
> physical parameters, and your own threshold for loss.
>
> The line loss calculator at http://www.vk1od.net/tl/tllc.php will allow
> you to explore Belden 9258 and nearly a hundred other common transmission
> lines.
>
> Whilst RG-8/X is apparently very popular in the US, it is near
> unobtainable in Australia... so availability seems to influence
> "suitability". But then fewer people here purchase ready made wire
> antennas like dipoles, G5RVs, etc which seem to often be packaged with
> RG-8/X on US web sites.
>
> Owen

Being in the US, I don't know what kind of coax is common in other
countries. The rg-6 is good except for two things, most of it has aluminum
for the shield that will not take solder and it has a solid center
conductor. There seems to be miles of that stuff around that can be had for
almost nothing.
The 8x is about half or less than the cost of the larger coax. Another good
reason for using it if you have several runs of it.

1924. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:11:38 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9952B9275A814mcoslocomcastnet@216.196.97.136>
Source record: 40028

"Jimmie D" <GFENDER@carolina.rr.com> wrote in
news:46753210$1$8066$4c368faf@roadrunner.com:
> I t was often taught that matter was matter and energy was energy even
> after the developementof the atomic bomb and nuclear reactors..

Oy! While that event certainly proved beyond any doubt that th etwo were
transferrable, some of those old books must have been waaaayy out of date.

In my High school, in the early 70's, we were taught not one thing about
anything that would make the world older than around 6000 years. Science
class was very strange.

- 73 de Mike KB3EIA -

1925. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:15:01 UTC
From: w9gb <spam_protect@arrl.net>
Message-ID: <5ZidnZ7a-MP3L-jbnZ2dnUVZ_uKknZ2d@comcast.com>
Source record: 39929

"NotMe" <NotMe@Oops.edu> wrote in message
news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>I need some help me with a decision on which coax to purchase. I'm a new
>General Class ham and am planning my HF setup.
>
> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> (9258), will there be that much difference in performance at about 100' of
> coax as compared to using RG-8? I want to use the RG-8X because the
> smaller diameter coax will allow me to feed the coax easier into my house.
> I suppose I could try to get the RG-8 in the house, but the place where I
> want to bring it in only has minimal space and the RG-8X will fit just
> right.
>
> Thanks.
IF you are in a marine environment or where the coax would be subject to
abuse --- consider the # 117 -- RG-8X from The Wireman.
Press recommended this cable to me about 20 years ago -- it is all I use for
portable and home usage -- one tough cable -- easy to solder PL-259 to as
well due to the polypropylene dielectric!
http://thewireman.com/coax.html

w9gb

CQ MINI 8
Marine-Mobile First with a tough 'walk-on' polypropylene dielectric
and tinned copper shield and tinned stranded center conductor, and now with
a tough, long lived, scuff resistant, jacket. #117

1926. Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:19:59 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182118799.867819.74060@x35g2000prf.googlegroups.com>
Source record: 39930
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Hi:

What is the minimum amount of photons-per-second needed for a 150 KHz AM radio carrier wave to transmit audio signals? Around 20,000-photons-per-second?

Thanks,

Radium

1927. Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:40:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54d8pok1@nnrp.linuxfan.it>
Source record: 39931

Actually, old news from 3 years ago ...

http://www.eetimes.com/showArticle.jhtml?articleID=21600147

JS

1928. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:47:19 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182120439.606157.89300@o61g2000hsh.googlegroups.com>
Source record: 39932

On Jun 16, 9:05 pm, Tom Ring <news0...@taring.org> wrote:
> That is your opinion of Harrison's problem.

No, that is(was) Harrison's opinion of Harrison's problem. He realized
that it was impossible for his first design to work on a ship at sea.
I'm
not nearly smart enough to have figured it out.
--
73, Cecil, w5dxp.com

1929. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:53:30 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182120810.235438.3090@w5g2000hsg.googlegroups.com>
Source record: 39933

On Jun 16, 10:07 pm, Mike Coslo <mco...@youknow.comcast.net> wrote:
> What on earth was it that he was taught?

He was taught that the only energy associated with a mass is kinetic
and potential. Atomic energy was completely omitted from the principle
of conservation of energy back in those days. He was taught: "Energy
cannot be created or destroyed." I was taught: "Energy cannot be
created or destroyed *by ordinary chemical means*". See how the
principle was ammended because it was wrong to begin with?
--
73, Cecil, w5dxp.com

1930. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:56:30 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <cLadnZFVnbKWIejbnZ2dneKdnZydnZ2d@bt.com>
Source record: 39935
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1182118799.867819.74060@x35g2000prf.googlegroups.com...
> Hi:
>
> What is the minimum amount of photons-per-second needed for a 150 KHz
> AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> per-second?
>
>
> Thanks,
>
> Radium
>

The same as the minimum number of data bits required to represent this signal. The number of photons/data bits will vary depending on the complexity, frequency and depth of modulation of the carrier wave.

Mike G0ULI

1931. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:56:39 UTC
From: Dave <noone@nowhere.com>
Message-ID: <H_idi.5553$u65.3433@trndny07>
Source record: 39936
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1182118799.867819.74060@x35g2000prf.googlegroups.com...
> Hi:
>
> What is the minimum amount of photons-per-second needed for a 150 KHz
> AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> per-second?
>
>
> Thanks,
>
> Radium
>
you should have stayed with the alt.sci or sci.physics groups, you don't
know what you are getting your self in for here!

1932. Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:56:40 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <bpWdnacJH8gmJujbnZ2dnUVZ_oqmnZ2d@comcast.com>
Source record: 39934

Hi,

Not very knowledgeable at all re antennas, but let me ask the following, please.

Would like to try a Yagi for up in my attic to hopefully receive maritime comms from the harbor, about 20 miles away, on my scanner (receive only usage).
Presently using a Scantenna, but without much luck.
Probably just a bit too far.

Anyway, i read that a very directional Yagi, with its inherent gain, is probably worth a try. Willing to do so.

Am not able now at my age to build anything, no matter how simple.

So, I tried to find a Yagi antenna I could purchase for perhaps $ 75 or so, max.

I looked all over the web, but the only Yagis I could find around the Marine freq's of
156-163 MHz approx are ones for the 2m bands, which apparently are in the 144 MHz range, and therefore not too suitable for the marine VHF freq's.

Really spent a lot of time looking and searching.

Might anyone know of a suitable Yagi I can consider purchasing for the marine freq's ?

Much thanks,
Bob

1933. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 22:58:04 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182121084.278523.139290@n60g2000hse.googlegroups.com>
Source record: 39937

On Jun 16, 10:20 pm, Mike Coslo <mco...@youknow.comcast.net> wrote:
> No, it proves that science is willing to admit when it is
> incorrect, and likes to self correct.

Aha, but the scientific logic goes like this: We have corrected all
our past mistakes and now we are corrent. When one corrects N mistakes
while an infinity of mistakes go uncorrected, one is not making much
progress.
--
73, Cecil, w5dxp.com

1934. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:01:21 UTC
From: Dave <noone@nowhere.com>
Message-ID: <53jdi.4941$gl4.810@trndny06>
Source record: 39938

"art" <aunwin@insightbb.com> wrote in message
news:1182117138.036020.298490@n60g2000hse.googlegroups.com...
> On 6 Jun, 18:00, Mike Coslo <mco...@youknow.comcast.net> wrote:
>> richardharri...@webtv.net (Richard Harrison) wrote in
>> news:28667-46639927-
>> 4...@storefull-3256.bay.webtv.net:
>>
>> > Jimmy D wrote:
>> > "Wouldn`t it be nice if Art did the comparison?"
>>
>> > Yes. I thought a Gaussian was a 17-sided polygon.
>>
>> heptakaidecagon?
>>
>> 73 de Mike KB3EIA -
>
> Newsgroup members,
> Thought I would give you another example to laugh at.
> Looking at the 17th eddition of the ARRL Antenna handbook
> page 11-18 I came across an optimised 20 metre antenna,
> The shortest boom length was 16 feet for 3 element
> and the spec was >20db F/B, SWR <2:1 and going for
> maximum gain which amateurs seem to think is every
> thing
> The ARRL antenna achieved 7.5 dbi max
> My antenna which is of GAUSSIAN form was also a 3 element
> and achieved an average of 30 F/B and > 20 db worst case.
> SWR was < 2:1 ofcourse ranging from 1.34 :1 worst case.
> Gain figures were 11.45,11.3 and 10.9 dbi
> The main lobe was 62 deg BW and TOA 14 degrees.
> I didn't use the 16 foot boom length as the starting
> point but held the beam to the required 3 elements.
> So instead of using the ARRL 16 foot boom I used a
> 8 foot boom. Again I forced the antenna into a planar
> mode so a reasonable comparison could be made.
> So have at it. Point out the areas of specs that
> the antenna fails and have a laugh at the same time.
> I'll leave you to find the deliberate error if
> there is one so you can have your moment in the sun.
> Art
>

define 'gaussian form'.

1935. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:02:09 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182121329.755977.171640@i38g2000prf.googlegroups.com>
Source record: 39939
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 3:56 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> The same as the minimum number of data bits required to represent this
> signal. The number of photons/data bits will vary depending on the
> complexity, frequency and depth of modulation of the carrier wave.

I am talking about an analog carrier wave. In the analog realm, there
is no such thing as "bits".

1936. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:04:19 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182121459.915213.186810@g4g2000hsf.googlegroups.com>
Source record: 39940

On Jun 17, 11:47 am, Jim Kelley <jwkel...@uci.edu> wrote:
> From my perspective, these definitions are uniformly
> consistent with those used in engineering.

Jim, you and others have disagreed with definitions in the IEEE
Dictionary and implied it is not worth the paper upon which it is
printed. One need only to access Google to verify that fact.
--
73, Cecil, w5dxp.com

1937. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:05:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ioqgk4-if7.ln1@mail.specsol.com>
Source record: 39941
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> Hi:

> What is the minimum amount of photons-per-second needed for a 150 KHz
> AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> per-second?

The answer is not simple because any given photon only has one
frequency and one energy.

So at any given time, you need some number of photons at different
frequencies to get the frequency components and some number of
photons at each frequency component to the the amplitude components
of the total signal.

Did you get tired of everyone calling you a clueless moron on sci.physics
and sci.physics.electromagnetics and think you would try here?

--
Jim Pennino

Remove .spam.sux to reply.

1938. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:05:24 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182121524.472299.114170@o11g2000prd.googlegroups.com>
Source record: 39942
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 3:56 pm, "Dave" <n...@nowhere.com> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1182118799.867819.74060@x35g2000prf.googlegroups.com...> Hi:
>
> > What is the minimum amount of photons-per-second needed for a 150 KHz
> > AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> > per-second?
>
> > Thanks,
>
> > Radium
>
> you should have stayed with the alt.sci or sci.physics groups, you don't
> know what you are getting your self in for here!

Huh?

1939. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:13:59 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <JaidnWq4ZsK_XejbnZ2dnUVZ8t2snZ2d@bt.com>
Source record: 39943

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f54d8pok1@nnrp.linuxfan.it...
> Actually, old news from 3 years ago ...
>
> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> JS

The guy doesn't even seem to realise that height is one of the prime factors in optimising propogation, particularly at medium wave frequencies and vhf. Building a tall mast costs plenty of money and if commercial radio stations could broadcast efficiently from an antenna the size of a bean can, they would have done it years ago.

This is surely just a couple of coils wound in opposite directions with capacitive coupling and a capacity top hat to prevent coronal discharge and maximise current in the top half of the antenna. Basically a form of top loaded, inductively wound whip antenna tapped somewhere up from the base in order to pick up a 50 ohm matching impedence at the design frequency. I don't see any new or innovative principles at work here.

Now if he could make it work efficiently on all frequencies with 50 ohms impedence and with no requirement for further matching or adjustment of any sort, I would be impressed. :-)

Mike G0ULI

1940. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:15:35 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182122135.068664.174620@x35g2000prf.googlegroups.com>
Source record: 39944
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 4:05 pm, j...@specsol.spam.sux.com wrote:

> So at any given time, you need some number of photons at different
> frequencies to get the frequency components and some number of
> photons at each frequency component to the the amplitude components
> of the total signal.

Well, in FM the peak-to-peak amplitude remains constant but the energy
[frequency] varies.

In AM, the frequency remains constant but the peak to peak amplitude
varies.

1941. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:19:08 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182122348.258856.44970@u2g2000hsc.googlegroups.com>
Source record: 39945

On Jun 17, 4:27 pm, Jim Higgins <inva...@invalid.invalid> wrote:
> You are describing the constant advancement of science I was telling
> you about.

My argument is not with you, Jim. It is with the people who assert
that scientific theories are never wrong - they just need new boundary
conditions imposed from time to time. The evolution of the
conservation of energy principle of which I am aware went like this:

1. Energy and matter are separate things and energy cannot be created
or destroyed. (1900)
2. Matter can be turned into energy by splitting the atom so energy
cannot be created or destroyed by ordinary chemical means. (1950)
3. Let's redefine matter as a form of energy - therefore energy cannot
be created or destroyed. (2000)

The theory was never wrong. :-)
--
73, Cecil, w5dxp.com

1942. Re: Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:22:49 UTC
From: James <jnipperxxx@nospamfdn.com>
Message-ID: <zZWdnYY-zMjZX-jbnZ2dnUVZ_o6gnZ2d@comcast.com>
Source record: 39946

Bob, look at this antenna from Arrow Antennas. They are a good company with a good reputation among ham radio operators.

http://www.arrowantennas.com/146-4s.html

73 de Jim K4PYT

1943. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:29:37 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182122977.727370.224290@g4g2000hsf.googlegroups.com>
Source record: 39947

On Jun 17, 4:30 pm, Jim Higgins <inva...@invalid.invalid> wrote:
> Cecil, that was clearly not your point until claiming so was the only
> way to save yourself. You're making it up as you go along and I'm
> tired of playing.

Although not stated in those words, if you will read back you will find that I engaged in a little Primrose Pathing. If we set our present space-time as the reference, it will have changed by tomorrow. By requiring a reference that doesn't exist in reality, we are hardly any closer to the truth than our ancestors who thought the earth was flat and was the center of the universe. Scientists are putting their faith in references that continually change. Don't they realize that their references are just as prone to relativity effects as the universe in which those references exist? A relatively simply mathematical transformation will put the earth back at the center of the universe.
--
73, Cecil, w5dxp.com

1944. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:31:10 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns995360D0D6370nonenowhere@61.9.191.5>
Source record: 39950

Chuck <no.spam@no.spam.at.all> wrote in
news:1182094868_13351@sp12lax.superfeed.net:

...
> As others have pointed out, performance
> will be fine. The RG-8X has a foam core
> that some have found will deform when
> subjected to a sharp bend, changing the
> characteristic impedance of the cable.
>
> If you anticipate sharp bends, a solid
> dieletric might be preferred. For long
> straight runs, the RG-8x is fine.

Yes Chuck. There is an attraction amongst hams for foil / foam coax,
probably driven by the loss figures, but without regard to the many
disadvantages that such a construction brings, or the very poor
implementations of same (not to mention any brands, lest I should be
buried).

Owen

1945. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:31:38 UTC
From: Mike Lucas <w5chr@bellsouth.net>
Message-ID: <ovjdi.3229$s9.1356@bignews6.bellsouth.net>
Source record: 39948

"Dave" <noone@nowhere.com> wrote in message >
"art" <aunwin@insightbb.com> wrote in message
>>> Newsgroup members,
>> Thought I would give you another example to laugh at.

Snip of quasi-technical junk

>> So have at it. Point out the areas of specs that
>> the antenna fails and have a laugh at the same time.
>> I'll leave you to find the deliberate error if
>> there is one so you can have your moment in the sun.
>> Art
>>
>
> define 'gaussian form'.
>
Dave: He cannot define several of the terms that he uses,
but he pretty much defines "blithering idiot"

Mike W5CHR

1946. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:32:25 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182123145.013730.240390@q69g2000hsb.googlegroups.com>
Source record: 39949

On Jun 17, 4:41 pm, Jim Higgins <inva...@invalid.invalid> wrote:
> On Sat, 16 Jun 2007 16:31:03 -0500, Cecil Moore <nos...@w5dxp.com>
> >This is similar to the problem that John Harrison faced
> >when he tried to design a clock for ocean travel. The
> >frame of reference was continuously changing so he had
> >to give up on his original design.
>
> Huh? I recall the story quite differently. He had to give up on his
> original design because it wasn't immune to the gyroscopic effect
> resulting from rotation of the earth and pitching of the ship.

i.e. a changing (physical) frame of reference.
--
73, Cecil, w5dxp.com

1947. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:37:15 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54gjkok2@nnrp.linuxfan.it>
Source record: 39951

Mike Kaliski wrote:

> [stuff]

Quite obviously, you are missing the real point here ... here is more.

http://www.rfglobalnet.com/content/news/article.asp?docid=9f3876f8-62d6-4d90-90b8-c15300bbee23&VNETCOOKIE=NO
http://electronicsweekly.com/Articles/2005/05/12/35201/Antenna+is+half+height+of+monopole.htm
http://www.uri.edu/news/vincent/report05/testreport.pdf
http://ema.arrl.org/article.php?sid=1025&mode=&order=0

JS

1948. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:38:44 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <j8mdnVoBkMd2WOjbRVnyigA@bt.com>
Source record: 39952
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1182121329.755977.171640@i38g2000prf.googlegroups.com...
> On Jun 17, 3:56 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > The same as the minimum number of data bits required to represent this
> > signal. The number of photons/data bits will vary depending on the
> > complexity, frequency and depth of modulation of the carrier wave.
>
> I am talking about an analog carrier wave. In the analog realm, there
> is no such thing as "bits".
>

Radium

If a single photon can represent a single discrete energy level, then at some point you will have to translate your analogue signal into discrete photons. A process similar to digitising an audio signal to produce a CD. The number of photons will depend on the sampling rate chosen, the bandwidth and depth of modulation of the original signal and the fidelity with which you wish to reconstruct a representation of the original signal. 300,000 photons per second should do the trick, as that is the frequency of the original signal and each photon can represent the amplitude of each half of a single sine wave.

It is standard practice to sample at least double the frequency of whatever you are trying to capture.

Mike G0ULI

1949. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:42:55 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54gu8ok3@nnrp.linuxfan.it>
Source record: 39953

John Smith I wrote:

> [stuff]

and more:

http://www.freepatentsonline.com/20060022883.html

JS

1950. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:45:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <t3tgk4-upc.ln1@mail.specsol.com>
Source record: 39954
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jun 17, 3:56 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> > The same as the minimum number of data bits required to represent this
> > signal. The number of photons/data bits will vary depending on the
> > complexity, frequency and depth of modulation of the carrier wave.

> I am talking about an analog carrier wave. In the analog realm, there
> is no such thing as "bits".

In the analog realm, there is no such thing as photons as they are
discrete quanta.

--
Jim Pennino

Remove .spam.sux to reply.

1951. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:45:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <natgk4-upc.ln1@mail.specsol.com>
Source record: 39955
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jun 17, 4:05 pm, j...@specsol.spam.sux.com wrote:

> > So at any given time, you need some number of photons at different
> > frequencies to get the frequency components and some number of
> > photons at each frequency component to the the amplitude components
> > of the total signal.

> Well, in FM the peak-to-peak amplitude remains constant but the energy
> [frequency] varies.

> In AM, the frequency remains constant but the peak to peak amplitude
> varies.

You've never seen what an AM signal looks like on a spectrum analyzer,
have you?

Go look at: http://www.fas.org/man/dod-101/navy/docs/es310/AM.htm

Hot flash for you, the AM modulation process creates other frequencies.

If you only have one frequency, you don't have modulation of any
kind.

--
Jim Pennino

Remove .spam.sux to reply.

1952. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:56:08 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182124568.818424.33430@g37g2000prf.googlegroups.com>
Source record: 39957
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 4:38 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> 300,000
> photons per second should do the trick, as that is the frequency of the
> original signal and each photon can represent the amplitude of each half of
> a single sine wave.

So the amount of photons-per-second should be double the frequency of the carrier-wave? In my first post of the thread, I stated that the carrier frequency for the AM signal is 150 KHz. Each photon in that signal is 150 KHz. It's possible to have one 150 KHz photon, right?

My question was relating the modulator wave. If I have using 150 KHz photons for my carrier-wave on AM radio, what is the minimum amount of photons-per-second I would require to transmit, a modulator-signal [through the 150 KHz carrier-signal] of 20 KHz? I am guessing 40,000 150-KHz-photons-per-seconds. Am I right?

1953. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-17 23:56:30 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <6eidnRlLTrmLV-jbnZ2dnUVZ8sCsnZ2d@bt.com>
Source record: 39956

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f54gjkok2@nnrp.linuxfan.it...
> Mike Kaliski wrote:
>
> > [stuff]
>
> Quite obviously, you are missing the real point here ... here is more.
>
>
http://www.rfglobalnet.com/content/news/article.asp?docid=9f3876f8-62d6-4d90-90b8-c15300bb
ee23&VNETCOOKIE=NO
>
http://electronicsweekly.com/Articles/2005/05/12/35201/Antenna+is+half+height+of+monopole.
htm
> http://www.uri.edu/news/vincent/report05/testreport.pdf
> http://ema.arrl.org/article.php?sid=1025&mode=&order=0
>
> JS

John

That is one beautifully constructed antenna and the antenna test facility is
to die for. All those radials and salt water!

Mike G0ULI

1954. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:02:46 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9952CBFE420BFmcoslocomcastnet@216.196.97.136>
Source record: 39958

Cecil Moore <w5dxp@hotmail.com> wrote in news:1182121084.278523.139290
@n60g2000hse.googlegroups.com:

> On Jun 16, 10:20 pm, Mike Coslo <mco...@youknow.comcast.net> wrote:
>> No, it proves that science is willing to admit when it is
>> incorrect, and likes to self correct.
>
> Aha, but the scientific logic goes like this: We have corrected all
> our past mistakes and now we are corrent. When one corrects N mistakes
> while an infinity of mistakes go uncorrected, one is not making much
> progress.

I don't know anyone who makes that logic. It seems like you are
dragging out a strawman here. I think that an awful lot of what we know is
correct, and a pretty good chunk of what we think we know is incomplete.
There is another grouping of things that we think we know that are wrong.
It is almost certainly shrinking though.

Might it just be simpler to say that you don't care for those who believe
that we've discovered it all?

- 73 de Mike KB3EIA -

1955. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:04:06 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <7tib731ouqsnltl9svi9l7fje1e47vh3nm@4ax.com>
Source record: 39959

On Sun, 17 Jun 2007 17:15:01 -0500, "w9gb" <spam_protect@arrl.net>
wrote:

>"NotMe" <NotMe@Oops.edu> wrote in message
>news:LL6dnT9Jk4HDpejbnZ2dnUVZ_qKqnZ2d@comcast.com...
>>I need some help me with a decision on which coax to purchase. I'm a new
>>General Class ham and am planning my HF setup.
>>
>> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
>> (9258), will there be that much difference in performance at about 100' of
>> coax as compared to using RG-8? I want to use the RG-8X because the
>> smaller diameter coax will allow me to feed the coax easier into my house.
>> I suppose I could try to get the RG-8 in the house, but the place where I
>> want to bring it in only has minimal space and the RG-8X will fit just
>> right.
>>
>> Thanks.
>IF you are in a marine environment or where the coax would be subject to
>abuse --- consider the # 117 -- RG-8X from The Wireman.
>Press recommended this cable to me about 20 years ago -- it is all I use for
>portable and home usage -- one tough cable -- easy to solder PL-259 to as
>well due to the polypropylene dielectric!
>http://thewireman.com/coax.html
>
>w9gb
>
> CQ MINI 8
> Marine-Mobile First with a tough 'walk-on' polypropylene dielectric
>and tinned copper shield and tinned stranded center conductor, and now with
>a tough, long lived, scuff resistant, jacket. #117
>

I use his #118 -- a low-loss 8X for non-marine environments. Good
stuff.

bob
k5qwg

1956. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:20:20 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4675cfc2$0$3245$4c368faf@roadrunner.com>
Source record: 39960

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:6eidnRlLTrmLV-jbnZ2dnUVZ8sCsnZ2d@bt.com...
>
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f54gjkok2@nnrp.linuxfan.it...
>> Mike Kaliski wrote:
>>
>> > [stuff]
>>
>> Quite obviously, you are missing the real point here ... here is more.
>>
>>
> http://www.rfglobalnet.com/content/news/article.asp?docid=9f3876f8-62d6-4d90-90b8-c15300
bbee23&VNETCOOKIE=NO
>>
> http://electronicsweekly.com/Articles/2005/05/12/35201/Antenna+is+half+height+of+monopol
e.htm
>> http://www.uri.edu/news/vincent/report05/testreport.pdf
>> http://ema.arrl.org/article.php?sid=1025&mode=&order=0
>>
>> JS
>
> John
>
> That is one beautifully constructed antenna and the antenna test facility
> is
> to die for. All those radials and salt water!
>
> Mike G0ULI
>
>

Still, nothing new, short antennas work quite well especially when used with
a very high quality ground system.

Jimmie

1957. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:22:44 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <JMKdnaOgCMSgTejbRVnyjgA@bt.com>
Source record: 39961
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1182124568.818424.33430@g37g2000prf.googlegroups.com...
> On Jun 17, 4:38 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > 300,000
> > photons per second should do the trick, as that is the frequency of the
> > original signal and each photon can represent the amplitude of each half
of
> > a single sine wave.
>
> So the amount of photons-per-second should be double the frequency of
> the carrier-wave? In my first post of the thread, I stated that the
> carrier frequency for the AM signal is 150 KHz. Each photon in that
> signal is 150 KHz. It's possible to have one 150 KHz photon, right?
>
> My question was relating the modulator wave. If I have using 150 KHz
> photons for my carrier-wave on AM radio, what is the minimum amount of
> photons-per-second I would require to transmit, a modulator-signal
> [through the 150 KHz carrier-signal] of 20 KHz? I am guessing 40,000
> 150-KHz-photons-per-seconds. Am I right?
>

Radium

You can have a single photon oscillating at a frequency of 150,000 cycles per second. Measuring that photon will give you a sample of 1/150,000th of a second duration. If you want to do anything meaningful, you need to have a whole lot more photons. If you modulate a 150kHz carrier with a signal of 20kHz then the bandwidth of the signal will extend from 150 kHz -20 kHz to 150 kHz +20 kHz or from 130-170 kHz. Signals centred on 150 kHz represent just the carrier wave. Signals at 130 kHz and 170 kHz represent 100% modulation of the carrier wave. Now the modulation of the carrier wave is symmetrical about the center frequency, so you only need to measure one half.

One way of recovering the signal is to measure the frequency of each photon between 130 and 150 kHz at a rate of 300,000 samples per second. The variation of each photon from the carrier frequency represents the modulation. A 20 kHz signal can be accurately represented using 40,000 samples, but this is different from detecting modulation on a higher frequency carrier wave.

Mike G0ULI

1958. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:24:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54jbkok4@nnrp.linuxfan.it>
Source record: 39962

Jimmie D wrote:

> ...
> Still, nothing new, short antennas work quite well especially when used with
> a very high quality ground system.
>
> Jimmie

Actually, antennas that short, at least normally, perform quite poorly,
with efficiencies in the single digits ...

JS

1959. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:34:39 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1182126879.611371.184640@k79g2000hse.googlegroups.com>
Source record: 39963

On 17 Jun, 17:24, John Smith I <assemblywiz...@gmail.com> wrote:
> Jimmie D wrote:
>
> > ...
>
> > Still, nothing new, short antennas work quite well especially when used with
> > a very high quality ground system.
>
> > Jimmie
>
> Actually, antennas that short, at least normally, perform quite poorly,
> with efficiencies in the single digits ...
>
> JS

I assume that the testing people know their business so why can't hams
accept it?
I know that a member of this group attended one of the lectures of
this
inventor so a check of the archives might provide the extra info.
The patent was awarded so one can assume that the design is providing
something new.
Art

1960. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:40:20 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4675d472$0$8014$4c368faf@roadrunner.com>
Source record: 39964

"Mike Coslo" <mcoslo@youknow.comcast.net> wrote in message
news:Xns9952B9275A814mcoslocomcastnet@216.196.97.136...
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in
> news:46753210$1$8066$4c368faf@roadrunner.com:
>> I t was often taught that matter was matter and energy was energy even
>> after the developementof the atomic bomb and nuclear reactors..
>
> Oy! While that event certainly proved beyond any doubt that th etwo were
> transferrable, some of those old books must have been waaaayy out of date.
>
> In my High school, in the early 70's, we were taught not one thing about
> anything that would make the world older than around 6000 years. Science
> class was very strange.
>
>
> - 73 de Mike KB3EIA -

Actually E=MC2 was explaned fairly well in the text books, just not covered in class. My teacher had a problem with the earth being older than 6000 years too but it was a subject avoided. He would neither confirm nor deny his position in class though several students went to the same church he did.

Jimmie

1961. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ps0hk4-06m.ln1@mail.specsol.com>
Source record: 39965
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jun 17, 4:38 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> > 300,000
> > photons per second should do the trick, as that is the frequency of the
> > original signal and each photon can represent the amplitude of each half of
> > a single sine wave.

> So the amount of photons-per-second should be double the frequency of
> the carrier-wave? In my first post of the thread, I stated that the
> carrier frequency for the AM signal is 150 KHz. Each photon in that
> signal is 150 KHz. It's possible to have one 150 KHz photon, right?

> My question was relating the modulator wave. If I have using 150 KHz
> photons for my carrier-wave on AM radio, what is the minimum amount of
> photons-per-second I would require to transmit, a modulator-signal
> [through the 150 KHz carrier-signal] of 20 KHz? I am guessing 40,000
> 150-KHz-photons-per-seconds. Am I right?

No.

For AM with a 150 Khz carrier and a steady 20 Khz tone, you have to emit
1 130 Khz photon, 2 150 Khz photons, and 1 170 Khz photon approximately
every 12 microseconds.

--
Jim Pennino

Remove .spam.sux to reply.

1962. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:49:29 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <yPCdnYlFhoUZS-jbRVnyuwA@bt.com>
Source record: 39966
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

<jimp@specsol.spam.sux.com> wrote in message
news:ps0hk4-06m.ln1@mail.specsol.com...
> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> > On Jun 17, 4:38 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > > 300,000
> > > photons per second should do the trick, as that is the frequency of
the
> > > original signal and each photon can represent the amplitude of each
half of
> > > a single sine wave.
>
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> > signal is 150 KHz. It's possible to have one 150 KHz photon, right?
>
> > My question was relating the modulator wave. If I have using 150 KHz
> > photons for my carrier-wave on AM radio, what is the minimum amount of
> > photons-per-second I would require to transmit, a modulator-signal
> > [through the 150 KHz carrier-signal] of 20 KHz? I am guessing 40,000
> > 150-KHz-photons-per-seconds. Am I right?
>
> No.
>
> For AM with a 150 Khz carrier and a steady 20 Khz tone, you have to emit
> 1 130 Khz photon, 2 150 Khz photons, and 1 170 Khz photon approximately
> every 12 microseconds.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Nicely put Jim.

Mike G0ULI

1963. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:55:17 UTC
From: herbert.don@gmail.com
Message-ID: <1182128117.871915.310040@q19g2000prn.googlegroups.com>
Source record: 39967

i'm not as smart as you but I do know tht even a mached paper clip
would give roughly the same results.

On Jun 17, 5:34 pm, art <aun...@insightbb.com> wrote:
> On 17 Jun, 17:24, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > Jimmie D wrote:
>
> > > ...
>
> > > Still, nothing new, short antennas work quite well especially when used with
> > > a very high quality ground system.
>
> > > Jimmie
>
> > Actually, antennas that short, at least normally, perform quite poorly,
> > with efficiencies in the single digits ...
>
> > JS
>
> I assume that the testing people know their business so why can't hams
> accept it?
> I know that a member of this group attended one of the lectures of
> this
> inventor so a check of the archives might provide the extra info.
> The patent was awarded so one can assume that the design is providing
> something new.
> Art

1964. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 00:57:23 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1182128243.728285.313930@i38g2000prf.googlegroups.com>
Source record: 39968

Dave wrote:
> the idea on 6ga is to have something heavy enough to handle the current of a
> power line fault or lightning surge. so yes, use the 6ga. note that as you
> bury the wire it will also reduce the total resistance some more, so its not
> a total waste to take what you have left over and add it as buried
> radials... don't do the tuck them into the grass trick though, trench or
> make a good slit for them so they are in contact with solid dirt, the deeper
> the better.

In fact I measured the resistance-to-a-ground-rod from a 20-foot section of buried bare 6AWG stranded wire, and it was in the hundreds of ohms. My conclusion was that buried radials, while great for a vertical antenna installation, were pretty crappy as a DC ground. Of course it's a lot easier to slit the ground (I have random mixed rocks but ignore them) than to drive down a ground rod - I did several rods this morning and am pretty sore from the sledgehammer work tonight.

It is no coincidence that the rods are laid out in a radial-type pattern (at least until I get up to the driveway).

Tim.

1965. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:07:32 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1182128852.338345.231360@j4g2000prf.googlegroups.com>
Source record: 39969

Richard Clark wrote:
> On Sun, 17 Jun 2007 10:35:06 -0700, Tim Shoppa
> <shoppa@trailing-edge.com> wrote:
> The choice of 6 AWG, I suppose, was driven (or should have been
> driven) by code.

That's true. It also seemed stupid to use 22AWG wire after driving down a 5/8" diameter ground rod :-). Still, copper is so damn expensive today!

> The alternative to your 10 Ohms would be infinite Ohms. In that
> sense, quite an improvement. Driving it down to 1 Ohm will take much
> more effort (and grief).
>
> Yet and all, it has nothing to do with RF ground (sorry). What you
> have accomplished serves your safety from lighting strokes. On the
> plus side (when we get beyond survival techniques) you also gain from
> removing a lot of ground currents getting into your gear. This can be
> especially painful in the sense of Signal to Noise ratio. Worse, if
> untreated, it can lead to component failure or shock hazards (you DID
> connect all these grounds together, didn't you?).

While the rods were laid out in a roughly radial pattern from the entrance panel, the driveways kept me from doing the world's best radial pattern :-).

Yes, these are all bonded to the existing older ground system at the entrance panel. I also measured the resistance to the older ground system and it seems the old system barely met code.

> Laying radials would have reduced your ground resistance, faster, and
> lower - but this is not conventional code. Radials will help with
> near RF ground, but will not otherwise help with obtaining those low
> DX launch angles (not, unless you invest in 5 mile radials).
>
> The discussion of the benefits/pay-back for radials drives a lot of
> discussion. Simple advice (if you are building a vertical) is to make
> them as long as your antenna is high, and plant a dozen or two about
> an inch below the soil, or beneath the grass above the soil.

All my antennas are dipoles hung between trees right now, but I used to have a vertical (4BTV) a few decades ago. I look at pictures of the AV-18HT in the catalogs with a lot of envy in my eyes!

Tim.

1966. Re: Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:27:27 UTC
From: no@spam.net
Message-ID: <banb73djr5omlkdv44mj0tcuqbb18camkl@4ax.com>
Source record: 39970

My suggestion is to look up "cheap yagi(s)" with Google. Make one out
of a wooden boom and copper wire elements. In your attic, it will
work as well as anything you can buy.

My second suggestion is to build a Moxon. Google "Moxon Generator"
and I think you will find a page where you can plug in the frequency
and get the dimensions.

I just noticed you said you couldn't build anything. Surely a ham in
your area would be willing to help build either one of these.
Otherwise, Arrow makes very solid antennas. One of their 2 meter
models could easily have the elements shortened to be centered on your
desired frequency.

Kingfish

On Sun, 17 Jun 2007 18:56:40 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hi,
>
>Not very knowledgeable at all re antennas, but let me ask the following,
>please.
>
>Would like to try a Yagi for up in my attic to hopefully receive maritime
>comms from the harbor, about 20 miles away, on my scanner (receive only
>usage).
>Presently using a Scantenna, but without much luck.
>Probably just a bit too far.
>
>Anyway, i read that a very directional Yagi, with its inherent gain, is
>probably worth a try. Willing to do so.
>
>Am not able now at my age to build anything, no matter how simple.
>
>So, I tried to find a Yagi antenna I could purchase for perhaps $ 75 or so,
>max.
>
>I looked all over the web, but the only Yagis I could find around the Marine
>freq's of
>156-163 MHz approx are ones for the 2m bands, which apparently are in the
>144 MHz range, and therefore not too suitable for the marine VHF freq's.
>
>Really spent a lot of time looking and searching.
>
>Might anyone know of a suitable Yagi I can consider purchasing for the

>marine freq's ?
>
>Much thanks,
>Bob
>

1967. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:40:11 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-78E503.18401117062007@newsclstr03.news.prodigy.net>
Source record: 39972
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182118799.867819.74060@x35g2000prf.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:

< Snip >

Go away cross posting nut case.

< Plonk >

--
Telamon
Ventura, California

1968. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:40:13 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54nq5ok5@nnrp.linuxfan.it>
Source record: 39971

art wrote:

> ...
> I assume that the testing people know their business so why can't hams
> accept it?
> ...

He states it uses a "2-dimensional helix", think about that (since I
can't find a pic or construction details), flatten a helix and you end
up with a zig-zag pattern of wire.

.
.
.
.
.
.
.
.
.
.
.
. ... etc. ... (poorly represented in ascii here)

This must drop the inductance of the "helix coil" drastically, leaving
you with only the self-capacitance of the conductor (-jX), which
requires a "loading coil" of +jX ...

Also, there is some text I interpret to suggest there is some additional
coupling somewhere at the center, however, I can't find enough material
to confirm or reject this ...

JS

1969. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:41:35 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-797427.18413517062007@newsclstr03.news.prodigy.net>
Source record: 39973
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <yPCdnYlFhoUZS-jbRVnyuwA@bt.com>,
"Mike Kaliski" <michael.kaliski@tesco.net> wrote:

< Snip >

< Plonk >

--
Telamon
Ventura, California

1970. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:42:10 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-8C71AD.18421017062007@newsclstr03.news.prodigy.net>
Source record: 39974
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <natgk4-upc.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
wrote:

< Snip >

< Plonk >

--
Telamon
Ventura, California

1971. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:48:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54o99ok6@nnrp.linuxfan.it>
Source record: 39975
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Telamon wrote:
> In article <yPCdnYlFhoUZS-jbRVnyuwA@bt.com>,
> "Mike Kaliski" <michael.kaliski@tesco.net> wrote:

Ohh gawd, bizarre telemundo is back ...

<PLONKERS!>

JS

1972. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 01:48:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4675e487$0$28144$4c368faf@roadrunner.com>
Source record: 39976

<nm5k@wt.net> wrote in message
news:1180803205.816808.135140@h2g2000hsg.googlegroups.com...
> On Jun 2, 9:20 am, K7ITM <k...@msn.com> wrote:
>> On Jun 2, 7:20 am, art <aun...@insightbb.com> wrote:
>
>>
>> If it causes you too much pain to tell us why it's an antenna worthy
>> of consideration over other existing antennas, please just ignore my
>> question and I'll go away and let you write whatever you want about
>> it.
>>
>> Cheers,
>> Tom
>
>
> LOL, I can see in his answering post, that he did indeed ignore
> your valid question, and spewed forth the usual whiny drivel...
> Woe is me, sayeth Art...
> Note this comment...
>>""You could change the subject to the patent on Constant Impedance
>>Matching System since that also was rejected by the amateur
>> masses on this newsgroup to add fresh fire to the conversations. ""
> Heck, I modeled his small loop/cap thing and proved it did work.
> Just fine as far as matching is concerned. But I didn't agree with
> his other claims. IE: that there is substantial radiation from the
> loop,
> etc. He claimed you could steer the pattern, by changing the value
> of the cap if I remember right.
> I modeled said device, "I called it a loopole", and showed that this
> wasn't true.
> But I never said it didn't "work" as far as a matching device.
> I just said it didn't work like he thinks it does.
> This was basically ignored.. He has a fine system of ignoring
> any information that does not suit his agenda.
> The only problem is I have a fairly decent system of detecting
> BS... I really don't even have to know much about whatever it is
> being discussed..
> If it's BS, I can usually smell it a mile away.. I may not know why
> I smell the pecular aroma I do, but I will smell it none the less.
> Woe is me, sayeth Art.
> MK
>

I never modeled it but it seemed that for all practical purposes the cap was shorted by the low inductance of the coil/loop and should have from no to negligable effect on tunning.

Jimmie

1973. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:01:07 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1182132067.258527.94190@e9g2000prf.googlegroups.com>
Source record: 39977
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 3:56 pm, "Dave" <n...@nowhere.com> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1182118799.867819.74060@x35g2000prf.googlegroups.com...> Hi:
>
> > What is the minimum amount of photons-per-second needed for a 150 KHz
> > AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> > per-second?
>
> > Thanks,
>
> > Radium
>
> you should have stayed with the alt.sci or sci.physics groups, you don't
> know what you are getting your self in for here!

as in 'go fish' ~ RHF
.
.
. .

1974. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:04:02 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9952E08D4B9CFmcoslocomcastnet@216.196.97.136>
Source record: 39978

"Jimmie D" <GFENDER@carolina.rr.com> wrote in
news:4675cfc2$0$3245$4c368faf@roadrunner.com:

> Still, nothing new, short antennas work quite well especially when
> used with a very high quality ground system.

OH NO! That thing is raising it's ugly head again....

- 73 de Mike KB3EIA -

1975. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:12:30 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1182132750.765681.95260@i38g2000prf.googlegroups.com>
Source record: 39879
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 4:45 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Radium <gluceg...@gmail.com> wrote:
>
> > On Jun 17, 4:05 pm, j...@specsol.spam.sux.com wrote:
> > > So at any given time, you need some number of photons at different
> > > frequencies to get the frequency components and some number of
> > > photons at each frequency component to the the amplitude components
> > > of the total signal.
> > Well, in FM the peak-to-peak amplitude remains constant but the energy
> > [frequency] varies.
> > In AM, the frequency remains constant but the peak to peak amplitude
> > varies.
>
> You've never seen what an AM signal looks like on a spectrum analyzer,
> have you?
>

Scroll down to "A More Realistic Spectrum"
- Go look at:http://www.fas.org/man/dod-101/navy/docs/es310/AM.htm
Check-out the two side-by-side Images

>
> Hot flash for you, the AM modulation process creates other frequencies.
>
> If you only have one frequency, you don't have modulation of any
> kind.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

1976. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:19:08 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4675eb9a$0$28142$4c368faf@roadrunner.com>
Source record: 39880

<herbert.don@gmail.com> wrote in message
news:1182128117.871915.310040@q19g2000prn.googlegroups.com...
> i'm not as smart as you but I do know tht even a mached paper clip
> would give roughly the same results.
>
> On Jun 17, 5:34 pm, art <aun...@insightbb.com> wrote:
>> On 17 Jun, 17:24, John Smith I <assemblywiz...@gmail.com> wrote:
>>
>> > Jimmie D wrote:
>>
>> > > ...
>>
>> > > Still, nothing new, short antennas work quite well especially when
>> > > used with
>> > > a very high quality ground system.
>>
>> > > Jimmie
>>
>> > Actually, antennas that short, at least normally, perform quite poorly,
>> > with efficiencies in the single digits ...
>>
>> > JS
>>
>> I assume that the testing people know their business so why can't hams
>> accept it?
>> I know that a member of this group attended one of the lectures of
>> this
>> inventor so a check of the archives might provide the extra info.
>> The patent was awarded so one can assume that the design is providing
>> something new.
>> Art
>
>

Even a 6ft verticla can be made to perform reasonably well on 40m when used with a good ground system, the ground system thay were using is probably as close to ideal as you can get. The big difference is in using a short antenna with a poor to mediocre ground system, then they stick out like a sore thumb I did nt see any qualitative data given in the test results except saying that the short antennas performed nearly as well as the full size antennas. Hell, Ive heard 20db down reported as "nearly as well" or as "comparable with". Im sure the numbers had to be available so why werent they posted.What would be the point of doing a test like this if you didnt

get qualatative data? Without the data the st might as weel have been, "hey good buddy you sound fine over here at theWinn Dixie, I cant see my S meter 'cause the lights out on it but yo sound like 30 over to me"

Jimmie

1977. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:19:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4675ebce$0$16528$4c368faf@roadrunner.com>
Source record: 39881

Soory Mike Didnt mean to hijack your post

Jimmie
"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:JaidnWq4ZsK_XejbnZ2dnUVZ8t2snZ2d@bt.com...
>
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f54d8pok1@nnrp.linuxfan.it...
>> Actually, old news from 3 years ago ...
>>
>> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>>
>> JS
>
> The guy doesn't even seem to realise that height is one of the prime
> factors
> in optimising propogation, particularly at medium wave frequencies and
> vhf.
> Building a tall mast costs plenty of money and if commercial radio
> stations
> could broadcast efficiently from an antenna the size of a bean can, they
> would have done it years ago.
>
> This is surely just a couple of coils wound in opposite directions with
> capacitive coupling and a capacity top hat to prevent coronal discharge
> and
> maximise current in the top half of the antenna. Basically a form of top
> loaded, inductively wound whip antenna tapped somewhere up from the base
> in
> order to pick up a 50 ohm matching impedence at the design frequency. I
> don't see any new or innovative principles at work here.
>
> Now if he could make it work efficiently on all frequencies with 50 ohms
> impedence and with no requirement for further matching or adjustment of
> any
> sort, I would be impressed. :-)
>
> Mike G0ULI
>
>

1978. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:30:12 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <f1mdi.1675$W9.800@bignews4.bellsouth.net>
Source record: 39882

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:1182128852.338345.231360@j4g2000prf.googlegroups.com...
> Richard Clark wrote:
>> On Sun, 17 Jun 2007 10:35:06 -0700, Tim Shoppa
>> <shoppa@trailing-edge.com> wrote:
>> The choice of 6 AWG, I suppose, was driven (or should have been
>> driven) by code.
>
> That's true. It also seemed stupid to use 22AWG wire after driving
> down a 5/8" diameter ground rod :-). Still, copper is so damn
> expensive today!
==========
The ground rod diameter is large because of (physical) necessity since it
must endure a pounding on one end without bending, so don't feel like the
diameter of the ground rods make it necessary to use large wire.
I have used 12 ga (as radials) (not as bonding conductors per the NEC).
You're right copper is high.
==========
>
> While the rods were laid out in a roughly radial pattern from the
> entrance panel, the driveways kept me from doing the world's best
> radial pattern :-).
>
> Yes, these are all bonded to the existing older ground system at the
> entrance panel. I also measured the resistance to the older ground
> system and it seems the old system barely met code.
>
==========
it would be interesting to see what difference it would make if you just
burried the same dollars-worth of 12ga wire about 2 or 3 inches and omit
most of the ground rods..
==========
> All my antennas are dipoles hung between trees right now, but I used
> to have a vertical (4BTV) a few decades ago. I look at pictures of the
> AV-18HT in the catalogs with a lot of envy in my eyes!
>
> Tim.
>

1979. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:34:23 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9952E5B33C7C1mcoslocomcastnet@216.196.97.136>
Source record: 39883

"Jimmie D" <GFENDER@carolina.rr.com> wrote in
news:4675eb9a$0$28142$4c368faf@roadrunner.com:

> I did nt see any qualitative data given
> in the test results except saying that the short antennas performed
> nearly as well as the full size antennas. Hell, Ive heard 20db down
> reported as "nearly as well" or as "comparable with". Im sure the
> numbers had to be available so why werent they posted.

Heh, heh. Jimmie youze is throwin' 'round them scientifical terms
like "nearly as well" and "comparable to". Heck I'ze gettin' all
confoozlated. But not so confusticated that I'll not get me wonna them
mircle antennies!

Seriously though, you are right. There has been precious little
real data on this antenna since the first press release in '04.

- 73 de Mike KB3EIA -

1980. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:37:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9jrb73dp39fvp1bf9vktlcqa3g8g6i2n6j@4ax.com>
Source record: 39884
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Sun, 17 Jun 2007 15:19:59 -0700, Radium <glucegen1@gmail.com>
wrote:

>What is the minimum amount of photons-per-second needed for a 150 KHz
>AM radio carrier wave to transmit audio signals? Around 20,000-photons-
>per-second?

That one is real simple:
2 photons (of appropriate amplitude, hence color) at most 3.333 (less
would be better, but not too much less) microseconds apart.

Feel free to desire more, but you asked for the minimum. If you want
more audio (sideband) content, that will certainly drive up the count
too.

Now, how's your quantum efficiency these days? (Use it to boost the
count higher.)

73's
Richard Clark, KB7QHC

1981. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:51:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54rvepdg1@nnrp.linuxfan.it>
Source record: 39885

Mike Kaliski wrote:

> ...
> Now if he could make it work efficiently on all frequencies with 50 ohms
> impedence and with no requirement for further matching or adjustment of any
> sort, I would be impressed. :-)
>
> Mike G0ULI

Well then, let me take you at least half way to being impressed:

1) "The technology is completely scalable: Take the component values and divide them by two, and you get twice the frequency; take all the component values and multiply them by two, and you are at half the frequency," said Vincent. "There are two poles in the antenna, and where I place the poles in relation to one another-how much I bring the two resonant frequencies together or spread them apart-enables me to emulate different antennas, from a quarter-wave to a five-eighths wave."
"
2) "All I have to do is tap the helix at its base, and you get a perfect 50-ohm match with out any lossy networks as are required for other advanced antenna designs," said Vincent.

3) "Eight years ago, antenna design was 90 percent black magic and 10 percent theory," said Vincent. "But now, with my design, they are 10 percent black magic and 90 percent theory."

The above from this URL:

http://www.jefallbright.net/node/2718

He mentions being able to create these in 1/4 to 5/8 design--so, create a 1/2 and loose the radials and salt water ...

It is difficult to find real detail on this antenna! Makes 'ya wonder, don't it?

JS

1982. Re: Random ground measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 02:51:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ujsb73tabtlm9jhoq1hviu1me6u4t7tk3o@4ax.com>
Source record: 39886

On Sun, 17 Jun 2007 22:30:12 -0400, "Hal Rosser"
<hmrosser@bellsouth.net> wrote:

>it would be interesting to see what difference it would make if you just
>burried the same dollars-worth of 12ga wire about 2 or 3 inches and omit
>most of the ground rods..

Hi Hal,

That has been discussed here at depth (no pun, well maybe) and it
works nearly as well (barring the current density vaporizing it during
a lightning strike).

Depth does not bring any great boon to lowering resistance that cannot
be served with a lateral bar of the same length. As usual, simple
answers have their problems, but this simple answer serves many
trivial concerns (RF ground being one).

73's
Richard Clark, KB7QHC

1983. Re: Trying to find out what Ferrite material this is.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 03:04:32 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns995384FD72E41nonenowhere@61.9.191.5>
Source record: 39887

Owen Duffy <none@no.where> wrote in
news:Xns99435276CA363nonenowhere@61.9.191.5:

> Owen Duffy <none@no.where> wrote in
> news:Xns99434C4B9D51nonenowhere@61.9.191.5:
>
> ...
>> Search Jaycar's site for a LO1238. If that is what you have, you
>> could ask them for data.
>
> I should have added that I think it is similar to the L8 material
> described in their data sheets.
>
> I have a vague recollection of measuring the inductance of a winding
> on the material, and I think the ui was around 1500 which suggests it
> is low loss up to a few hundred kHz, perhaps to 1MHz or so.

I am back at home and dug out my measurments for LO1238. I make ui around
1100 at 10kHz (Al ~145nH), so it is a little lower than the L8 material,
probably goes to slighly higher frequency before loss sets in.

Owen

1984. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 03:57:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f54vqospg1@nnrp.linuxfan.it>
Source record: 39889

art wrote:
> ... True, we have had a string of
> questionable designs that amateurs have questioned but that
> is no reason to condemn all new designs especially when apparently
> not all is known or disclosed. An independent testing procedure
> can be very convincing if repeated and monitered by the naysayers.
> When reviewing the postings on burning water we could not defend
> ourselves as being antenna experts.
> Art
>

Art:

It is all in the numbers (odds.)

If you know how to gamble, you know how to play the odds. Show me one
street smart individual and I will show you someone who knows the ropes ...

Being a naysayer has great advantages, most experiments/"new inventions"
turn out less than what may have been expected ... playing the odds of
"naysaying" you can always claim a better than avg. "batting avg."

It's all in the game ... play it right and you expose the details.

Regards,
JS

1985. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 04:20:02 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <I8WdnRes9_0cZOjbnZ2dnUVZ_qyjnZ2d@bright.net>
Source record: 39888

Dear Group:

Details of the patent applications may be found on the USPTO's site.

Robert J. Vincent (Electronics Technician II, Physics-URI)

Application 20060022883; published Feb. 2, 2006
Application 20070132647; published June 14, 2007

73, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net

1986. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 04:25:47 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f551gk$3vk$1@nnrp.linuxfan.it>
Source record: 39890

art wrote:

> ...
> Very true unless you have to state why
> Art
>

Art:

You missed, but not by much; change that to, "... unless you have to
CORRECTLY state why."

Regards,
JS

1987. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 04:36:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f55246$3vk$2@nnrp.linuxfan.it>
Source record: 39891

John Smith I wrote:

> ...

Dear Virginia:

If you seen it in the New York Times, it must be true:

http://www.nytimes.com/2004/06/10/technology/circuits/10next.html?ex=1402200000&en=1556e1986c52d663&ei=5007&partner=USERLAND

Regards,
JS

1988. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 05:06:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns995399B05E298nonenowhere@61.9.191.5>
Source record: 39892

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:m2idi.1463$W_6.1218@newsread1.news.pas.earthlink.net:

>
> Being in the US, I don't know what kind of coax is common in other
> countries. The rg-6 is good except for two things, most of it has
> aluminum for the shield that will not take solder and it has a solid
> center conductor. There seems to be miles of that stuff around that
> can be had for almost nothing.
> The 8x is about half or less than the cost of the larger coax.
> Another good reason for using it if you have several runs of it.

RG-6 is 75 ohms. Nevertheless, it can be used to good effect. I have a 40m half wave dipole that is cut a little short to cause a VSWR(75) of 1.5 on RG6, and the RG6 is cut at a point where Z=50+j0 and connected direct to the amplifier for a good match. Yes, it is a one band antenna.

You do need to be selective in choosing RG-6, there is a wide range in quality. There are some versions with a mix of copper and aluminium wire in the braid, and they are solderable. BNC crimp connectors are available for RG-6 and they work fine. I think the last roll of RG-6 I purchased cost A$0.32/m (~US$0.08/'). The versions with solid copper inner conductor should be better at lower frequencies than the copper clad steel conductors.

Owen

1989. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 05:09:21 UTC
From: oeguet@gmx.de
Message-ID: <1182143361.226355.304850@k79g2000hse.googlegroups.com>
Source record: 39893

Hi Richard,

> Unfortunately that is exactly what you have done, re-invent C. The
> source you provide makes sense mostly to the C programming community,
> not antenna designers.

No. I am using nearly the same syntax. And only for some pre-processor commands and expressions.
Antenna geometry follows almost mathematical expressions (see gaussian horn antenna or parabolic dish). These expressions can be easily described in any language. But I decided to make this C-compatible.
The flexibility of C expressions has a big advantage.

> Antenna designers are not C programmers, usually. As this post proves
> through your contribution, English is far more universal - hence
> designing an antenna pre-processing language with a natural language
> interface makes far more sense.

I hope, antenna designers can use their brain and write some expressions. As they can type in any edit-windows, they should also be able to write them in a text file. May be antenna designers are Windows-Click-Fans (constructing via mouse or ACAD).
Such antenne designers should not use my software! They will be excluded from my licence agreement explicitly.
;-)

>
> You don't know BNF or YACC, do you?

Yepp. I am grown up with these things. I wrote many parsers till now and I am getting bored and tired almost writing another one. I have not mentioned, that I have studied computer science. I am a professional software engineer and know all the techniques and design rules.
My work has been started as a quick-and-dirty solution former. I made many changes on syntax, command set, etc. yet. As you can assume, it is grown up and a big new change (BNF, YACC) would cause many work and redesign.
No, I do not want to write a new compiler. It is just a simple pre-processor with well known syntax and it is a compromise between C and NEC. Not more. But it is enough, to design complex antenna structures.

It is able at the moment, to write generator modules, which should be written from a professional C-coder and the antenna designer can use the generator by passing them the parameters (by setting the parameter values before including the generator).

That is the most advantage of my design. To split the antenna project in many modules (like c) and include them, when they needed. Different feeders, reflectors, etc.

>
> The first limitation is the source you provide is not a symbolic
> language, it is a procedural language. Just giving it the name
> symbolic does not make it one.

Here is a misunderstand. The pre-processor generates symbolic NEC code. That means, all parameters for NEC description are not computed at compiling time. The code contains variable based expressions. That is the most advantage item. You can optimize your parameters. As 4nec2 changes the parameters automatically for you, the design follows the given parameter. The symbolic output file can be expressed as a construction model.

>
> Please reference SNOBOL for symbolic languages, or Pascal records, or
> if you insist C, then C's structs (I notice you don't use structs).

I am not using structs, types, procedures (functions). I am using some usefull commands (e.g. for()-loop). I do not want to implement much more. When I am using some constructs, I try to conform to C-Syntax. I do not want getting confused with other programming language.

May be it is not the right time, to introduce some language for antenna design. What happens, when people getting to use the pre-processor? When I am finished, all you can download and test it.

I was getting sick with the original NEC files. There are some usefull tools, to avoid writing NEC files. But not good enough, what I was searching for. Indeed, I did not find any satisfying solution till now. When there is one, please let me know.

Regards,
Aziz

PS: My expression parser uses BNF-Notation. It uses no tables and is realized via stack (recursive calls).

1990. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 05:54:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3e7c735cmmtkkkdf6u4254a3onojbeaclu@4ax.com>
Source record: 39894

On Sun, 17 Jun 2007 22:09:21 -0700, oeguet@gmx.de wrote:

>My expression parser uses BNF-Notation.

Care to show us?

>It uses no tables and is
>realized via stack (recursive calls).

Now there's a trick! Care to explain how?

73's
Richard Clark, KB7QHC

1991. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 08:48:14 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1182156494.246122.5990@k79g2000hse.googlegroups.com>
Source record: 39895

On 16 jun, 21:45, art <aun...@insightbb.com> wrote:

> Do you know of a program that for optimisation can work with all
> dimensions being variable AT THE SAME TIME?

Yes, maybe. If I am correct you do have some AO experience. 4nec2 does contain an optimiser based on the same principles, however it's not Mininec based as OA was, but Nec2 based (or Nec4 based if you own a Nec4 license).
You can directly read-in your *.ao files into 4nec2, they will be automatically converted. Complicated ao files may need some minor manual changes afterwards.

You can include as much variables as you like in your antenna model and for each run, you can select the variables to optimise from the list. When the run has completed and the selected quality of your model has been optimized as good as possible, you can (partly) deselect previous variables and select another set of variabels and continue optimization based on the outcome of previous run.

Furthermore it also contains a GA (genetic algorithms) based optimizer similar to the one included in the commercial SuperNec package.

When optimizing multiple variables at the same time, this type of optimizer is prefered. It also avoids the model of being trapped in local maxima. The drawback of this is the increase of optimization time needed.

However be aware, it needs some 'learning curve'.
There seem to be two distinct groups of people, those who adore it and those who think it's much to complicated. It seems not possible to 'sit' anywhere between those both extremes.

1992. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 09:27:28 UTC
From: oeguet@gmx.de
Message-ID: <1182158848.009191.289470@c77g2000hse.googlegroups.com>
Source record: 39896

Sorry Richard,

no source code will be available for anybody. Only binaries and
antenna models.
But the expression-syntax is shown below:
(you must convert the text below to courier font, to see the diagram
right).

```
// Level1 : ---+---(Level2)---+---
// | |
// +-----[||]-----+

// Level2 : ---+---(Level3)---+---
// | |
// +-----[&&]-----+

// Level3 : ---(Level4)---+------------------------+---
// | +--[!=]--+ |
// +--+ +--(Level4)--+
// +--[==]--+

// Level4 : ---(Level5)---+------------------------+---
// | +--[< ]--+ |
// | | | |
// | +--[<=]--+ |
// +--+ +--(Level5)--+
// +--[> ]--+
// | |
// +--[>=]--+

// Level5 : ---+---(Level6)---+---
// | |
// | +--[+]--+ |
// +--+ +---+
// +--[-]--+

// Level6 : ---+---(Level7)---+---
// | |
// | +--[^]---+ |
// | +--[|]---+ |
// | +--[&]---+ |
// | +--[*]---+ |
// +--+--[/]---+--+
// +--[%]---+

// Level7 : ---+-------------+---(Level8)---
// | +--[+]--+ |
```

```
// +--+--[-]--+--+
// +--[!]--+
// +--[~]--+

// Level8 : ---(Level9)---+-----------------+---
// disabled (// +--[^]--(Level8)--+)

// Level9 : +---[(]---(Level1)---[)]----------------+
// | |
// +---(Zahl)-----------------------------+
// ---+ +---
// +---(Funktion)---[(]---(Level1)---[)]---+
// | |
// +---(Funktion2)--[(](Level1),(Level1)[)]
+ // , or ; allowed
// | |
// +---(Variable)--------------------------+

// Zahl: +[.]+(Ziffer)+------------+
// | +--------+ |
// ---+ +-+--------------------+---
// | | |+[e]++[+]+ |
// ++(Ziffer)++-------------++ ++ ++---++(Ziffer)++
// +--------++[.]+(Ziffer)++ +[E]++[-]++--------+
// +--------+

// Variable: +------[_]------+
// ---+ +---+-----------------------+---
// +--(Buchstabe)--+ | +------[_]------+ |
// +-+-+--(Buchstabe)--+-+-+
// | +----(Ziffer)---+ |
// +-------------------+

// Ziffer: [0] .. [9]

// Buchstabe: [a] .. [z], [A] .. [Z]

// Funktion: [sin], [cos], [tan], [asin], [acos], [atan], [sqrt],
// [ln], [exp], [sinh], [cosh], [tanh], [abs], [ceil],
[floor] and more
```

1993. Re: Self capacitance/inductance ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 10:17:08 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1182161828.023212.320540@p77g2000hsh.googlegroups.com>
Source record: 39897

On 17 jun, 18:25, John Smith I <assemblywiz...@gmail.com> wrote:
> TWIMC:
>
> I have been using the following formula to find the self-inductance of a
> whip in free space:
>
> 4l
> L = 5.08*l(ln---- -1)
> d
>
> Anyone have a more accurate equation?
>
> Also, I need to compute the self-capacitance of a whip. Anyone have a
> reasonably accurate equation for such?
>
> Regards,
> JS

1994. Re: Self capacitance/inductance ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 10:17:44 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1182161864.661017.192660@o61g2000hsh.googlegroups.com>
Source record: 39898

On 17 jun, 18:25, John Smith I <assemblywiz...@gmail.com> wrote:
> TWIMC:
>
> I have been using the following formula to find the self-inductance of a
> whip in free space:
>
> 4l
> L = 5.08*l(ln---- -1)
> d
>
> Anyone have a more accurate equation?
>
> Also, I need to compute the self-capacitance of a whip. Anyone have a
> reasonably accurate equation for such?
>
> Regards,
> JS

Hi John,

Your formula requires: no ground or other conductors present, uniform current distribution along length of conductor, no other currents present. The formula is only valid when all magnetic field is generated by that wire segment only. This is practically impossible.

Are you looking for an LC or transmission line model that is valid (for example) around a halve wave or quarter wave length?

Best regards,

Wim
PA3DJS
www.tetech.nl

1995. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 11:43:30 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9953301A73B42doldridgsprintca@64.59.135.159>
Source record: 39900

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in
news:JaidnWq4ZsK_XejbnZ2dnUVZ8t2snZ2d@bt.com:

>
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f54d8pok1@nnrp.linuxfan.it...
>> Actually, old news from 3 years ago ...
>>
>> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>>
>> JS
>
> The guy doesn't even seem to realise that height is one of the prime
> factors in optimising propogation, particularly at medium wave
> frequencies and vhf. Building a tall mast costs plenty of money and if
> commercial radio stations could broadcast efficiently from an antenna
> the size of a bean can, they would have done it years ago.
>
> This is surely just a couple of coils wound in opposite directions
> with capacitive coupling and a capacity top hat to prevent coronal
> discharge and maximise current in the top half of the antenna.
> Basically a form of top loaded, inductively wound whip antenna tapped
> somewhere up from the base in order to pick up a 50 ohm matching
> impedence at the design frequency. I don't see any new or innovative
> principles at work here.
>
> Now if he could make it work efficiently on all frequencies with 50
> ohms impedence and with no requirement for further matching or
> adjustment of any sort, I would be impressed. :-)

The other day, just for fun, I modelled a shortened 80m dipole hung from
a 100-foot high supporting rope. The dipole was 35 feet long and had two
loading coils about 4 feet from each end. I fed it at the bottom end.

The thing would be fairly narrow and would require an autotransformer or
tuned match at the base (or a quarter wave open stub) but the PATTERN was
very nice, indeed. With all that current up that high, it's nice and
flat and low to the ground. Gain isn't spectacular, though, only about
1.5dbi. But phase 4 of them and you're up there with the big guns,
though probably only for about 10-20khz of the band.

And, on receive, it's a horizon-scraper. You'd hear stuff you didn't
even know was there before. Whether you can outshout THEIR local noise
and QRM is a different question, of course!

--
Dave Oldridge+
ICQ 1800667

1996. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 11:44:59 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182167099.993022.147870@q69g2000hsb.googlegroups.com>
Source record: 39901
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 17, 10:37 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 17 Jun 2007 15:19:59 -0700, Radium <gluceg...@gmail.com>
> wrote:
>
> >What is the minimum amount of photons-per-second needed for a 150 KHz
> >AM radio carrier wave to transmit audio signals? Around 20,000-photons-
> >per-second?

I keep trying and trying to count the 150kc photons ^sec by scooping
them up on a wire and displaying them across a digital osillyscope.
but the instant they interact with the wire they are transformed into
electrons... And those, dibble dabble damned electrons go hide amongst
the other electrons on the surface of the conductor and mock me...
They keep printing, "Photon, photon, who's got the photon, nyaa, nyaa,
nya, nayaa, nyaaaaaaa" across the computer screen...
So I said to myself, 'I'll teach em' - and hooked up a diode and a
speaker to the end of the antenna wire and be damned if they hadn't
transformed into phonons... Now they were mocking me by chanting,
"Who let the dogs out, who, hoooooo..."
So, then I said, 'I'll teach ya', and I hooked up a transmitter to the
end of the wire with a SWR meter and pumped 150kc photons into the
wire... The SWR meter showed infinity to one, or was it one to
infinity, or was that, oh jeez, now I'm confused... *&^()$#@* SWR
meter lies!

I need a beer...

denny / k8do

1997. rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 12:25:26 UTC
From: Jeff Dieterle <djdieterle@localnet.com>
Message-ID: <137cqmmi6lahbe6@corp.supernews.com>
Source record: 39899

I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm planning to use a Channel Master rotor which I haven't purchased yet. I've buried 1"pvc conduit to tower and planning the wire pull for the antenna & satellite coax plus the rotor cable. From my research 3c/22ga. wire will control all C M rotors. Since I don't know the power requirements yet of the un-purchased rotor I can't calculate the voltage drop on appx. 500ft of 22 ga wire to see if it will be sufficient. Can somebody either reply with the typical C M rotor current/voltage/watts or first hand knowledge of the correct wire gauge for a 500ft run. Thanks Jeff

1998. Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 12:45:44 UTC
From: ukmonitor@hotmail.com
Message-ID: <1182170744.440527.38970@c77g2000hse.googlegroups.com>
Source record: 39902

Hi All,

Here's a challenge !

Having recently acquired a Yaesu FT-879 HF transceiver I'd like to use it for portable operation from my camper van. Ideally to take advantage of the improving HF conditions during my lunch hour at work.

So I originally thought about buying a Yaesu ATAS-120A, but then I realised that I wasn't that interested in mobile operation. So I could consider something a bit more efficient.

I have a 10m fishing pole and a G5RV doublet type antenna which I can erect as an inverted V when space permits. However this is not quick or easy to do in the parking lot at work, time taken for assembly and disassembly eats into valuable operating time.

I then thought about one of the no tune broadband HF vertical antennas such as the Diamond BB7V, Comet CHA250B and the Maldol MFB-300. These have the advantage of no-tune operation and only requiring limited radials (which you can't easily spread out in a car park).

Then it struck me ! I already have a good selection of basic components to build a vertical antenna of my own.

1. 10m Fishing pole which mounts on the rear trailer hitch.
2. LDG Z-11 Pro
3. Campervan which works as a reasonably good counterpoise.

My design criteria are.

1. Operation on all bands from 3.5MHz to 52MHz (ideally broadband operation using the Z-11). I would prefer to be able to quickly change bands from inside the van, as operating time is limited and UK weather is normally cold and wet.

2. Easy and quick to erect and take down single handed.

3. No radials - but with the option to roll some out if space permits.

4. As efficient as possible - Top hats and loading coils would be considered but would need to be light weight and inconspicuous. I'm not interested in gaining fractions of a percentage increase in efficiency if it takes more than 5 min to erect the whole thing.

5. I would also like to use the same solution for backpack portable or temporary installation on top of a building roof. But this is not the main design criteria.

All this suggests using the 10m pole as a support for a vertical wire, with some sort of matching network at the base (broadband impedance transformer) fed against the van chassis and the Z-11 inside the van.

Suggestions for alternatives or best length of wire and transformer ratio would be greatly appreciated.

UKM

1999. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 12:51:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f55v5hfak1@nnrp.linuxfan.it>
Source record: 39903

oeguet@gmx.de wrote:
> Sorry Richard,
>
> no source code will be available for anybody. Only binaries and
> antenna models.
> ...

Keep it, I'll write my own ... :-)

Regards,
JS

2000. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 12:57:53 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f55vgq$g01$1@nnrp.linuxfan.it>
Source record: 39904
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Denny wrote:

> ...
> I keep trying and trying to count the 150kc photons ^sec by scooping
> them up on a wire and displaying them across a digital osillyscope.
> ...
> denny / k8do

Denny:

That is just plain silly.

I use a paper coated with a photographic emulsion to record the photons striking the light sensitive emulsion.

Only problem, background radiation fogs the film before recording the photons--I am working on resolving that minor problem ...

Regards,
JS

2001. ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 14:02:02 UTC
From: Steve Reinhardt <stevereinhardt@noearthspamlink.net>
Message-ID: <Wfwdi.1$Ld6.0@newsfe03.lga>
Source record: 39905

I have read a circularly polarized Yagi is appropriate for ARISS communications. Is there a vendor that offers a crossed design? Or, better still, is there a construction article that I can refer to?

What are you using for this type of communication?

I'm trying to set up a contact for my son's school class.

73,
Steve
W1KF

2002. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 14:12:28 UTC
From: Nick <a@b.com>
Message-ID: <gpwdi.1712$_14.1383@newsfe2-gui.ntli.net>
Source record: 39906

"Jeff Dieterle" <djdieterle@localnet.com> wrote in message
news:137cqmmi6lahbe6@corp.supernews.com...
> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
> planning to use a Channel Master rotor which I haven't purchased yet. I've
> buried 1"pvc conduit to tower and planning the wire pull for the antenna &
> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
> control all C M rotors. Since I don't know the power requirements yet of
> the un-purchased rotor I can't calculate the voltage drop on appx. 500ft
> of 22 ga wire to see if it will be sufficient. Can somebody either reply
> with the typical C M rotor current/voltage/watts or first hand knowledge
> of the correct wire gauge for a 500ft run. Thanks Jeff
>

I wonder if a larger conduit would be desirable for a larger diameter
co-axes, else the losses might be
unacceptable and to fit all these cable in - is it OK to run these so
closely together over such a long distance ?

Nick

2003. End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 14:42:08 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182176945_17999@sp12lax.superfeed.net>
Source record: 39907

Several authors recommend against
end-fed dipoles because of alleged
difficulties in matching to a 50-ohm
line. Unfortunately, the "slur" is
dropped without a hint of explanation.

Other authors see it as simple and
reliable, and recommend it with enthusiasm.

A parallel tuned circuit with tapped
inductor is usually the recommended
impedance transformer.

In my own experience, matching has
always been extremely easy and
trouble-free. So does anyone know why
this might be thought so frought with
problems that its general use would be
discouraged?

Chuck, NT3G

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2004. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 14:47:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6h6d731rqapcceo88orojkgaco08r660qq@4ax.com>
Source record: 39908

On Mon, 18 Jun 2007 02:27:28 -0700, oeguet@gmx.de wrote:

>Sorry Richard,
>
>no source code will be available for anybody. Only binaries and
>antenna models.
>But the expression-syntax is shown below:
>(you must convert the text below to courier font, to see the diagram
>right).

Hi Aziz,

OK, all pretty conventional stuff 30 years ago. So what is the
problem with abstracting a symbolic wrapper to level 1 to make it
generally useful?

As I said, there's no reason why your work can't survive, my question
was why do you simply re-invent C, a language as dead to antenna
designers as Sanskrit?

73's
Richard Clark, KB7QHC

2005. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 15:02:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <297d73tv3djls93riibef4gh9dhc65ev9d@4ax.com>
Source record: 39909

On Mon, 18 Jun 2007 10:42:08 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>In my own experience, matching has
>always been extremely easy and
>trouble-free. So does anyone know why
>this might be thought so frought with
>problems that its general use would be
>discouraged?

Hi Chuck,

The slur may attend the illusion that just the antenna is being
matched and the operator cries foul about transmission line common
mode currents.

However, if those currents go unnoticed; then end fed antennas are
marvelous and have this undeserved bad reputation. On the other hand,
if those currents are noticed and fixed, the antenna probably doesn't
work any better; but after all that effort "it damned well should and
no one is going to convince me otherwise."

73's
Richard Clark, KB7QHC

2006. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 15:29:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <628d7352te1hp9d68nk4r8p5ig3srth5al@4ax.com>
Source record: 39910

On Mon, 18 Jun 2007 07:47:37 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>As I said, there's no reason why your work can't survive, my question
>was why do you simply re-invent C, a language as dead to antenna
>designers as Sanskrit?

For instance. Even C programmers (some) enjoy the benefit of structs
as a layer of abstraction. This is a pretty thin difference, but
certainly within furthering the scheme of antenna design. Why I say
that is that the NEC card deck is already a struct. To ignore the
card deck is a step backwards from antenna design to simply conform to
a programmer's model.

Further, taking the deck, you stand a better model with Pascal and
records. This gives the antenna designer a way to more fluently
describe and access segments, wires, or elements. It is a natural
progression. However, Pascal is hardly a symbolic language, except by
some of its own elements (the record). Abstracting further, LISP (a
decidedly intense symbolic language) is a chained and recursive
language (you say you've licked recursion) that mimics not only the
linear connections of wires, but the regress of arrays. However, I
wouldn't wish LISP on anyone as an antenna design language, but it is
certainly far more suitable than C.

All-in-all, each of these variants can still contain exactly what
you've offered in BNF.

In short, your expression syntax is not a language at all (not even
C). It is incomplete being only the phrase particles of many
languages. Phrases need to aggregate into clauses and then sentences.
You exhibit none of that.

73's
Richard Clark, KB7QHC

2007. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 17:00:42 UTC
From: nm5k@wt.net
Message-ID: <1182186042.380464.235940@c77g2000hse.googlegroups.com>
Source record: 39911

On Jun 18, 8:42 am, Chuck <no.s...@no.spam.at.all> wrote:
> Several authors recommend against
> end-fed dipoles because of alleged
> difficulties in matching to a 50-ohm
> line. Unfortunately, the "slur" is
> dropped without a hint of explanation.
>
> Other authors see it as simple and
> reliable, and recommend it with enthusiasm.
>
> A parallel tuned circuit with tapped
> inductor is usually the recommended
> impedance transformer.
>
> In my own experience, matching has
> always been extremely easy and
> trouble-free. So does anyone know why
> this might be thought so frought with
> problems that its general use would be
> discouraged?
>
> Chuck, NT3G

The matching doesn't have anything to do with it.
It's the excess common mode currents that I don't
like.
Sure, they work, but I would never use one if
I can center feed the antenna. And I've never really
had a case where I couldn't center feed.
MK

2008. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 17:12:00 UTC
From: nm5k@wt.net
Message-ID: <1182186720.122032.128460@n60g2000hse.googlegroups.com>
Source record: 39912

On Jun 17, 2:02 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> <n...@wt.net> wrote in message
>
> news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
>
>
>
> > On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>
> >> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
> >> > pipe cap so there isn't much room to work. Also, am I correct to
> >> > assume the 1.8 is the total length, including what is stripped back to
> >> > make the connection?
> >> > Ralph
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> >> Hi Ralph
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> >> I dont know what your needs are for this Turnstile antenna, so my input
> >> may be of no value. But, a Turnstile can be made to work by feeding
> >> both
> >> dipoles with one feed point. No phasing harness is needed. Make one
> >> dipole a little short so it is capacitive and the other dipole a little
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>
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> > The only problem with that is the antenna will still have basically a
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> > pattern. I assume he is wanting the usual omni pattern with circular
> > polarization at the higher angles..
> > But maybe not... You need the phase line if you want a true omni
> > "turnstile"
> > pattern.
> > But saying that , I have used turnstiles with no line.. But usually on
> > 80m..
> > And it does change the pattern a bit from the original single dipole,
> > but not
> > quite the same as using a phase line.
> > MK
>
> Hi MK
>
> I may have screwed up, but I think that a pair of dipoles on the same

> plane, configured like a pair of non-symetrical Vs could be fed with one
> feed point to produce a free space cardiod pattern. That would be one
> short dipole and one one longer dipole fed in parallel.
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> Jerry
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> Jerry

I'm not sure exactly what you mean.. Normally, a turnstile has both
the elements the same length. If you feed two dipoles cut for the
same band, but at different freq's, and feed with a single feedline,
all it will do is effect the SWR plot.. Will look as a "W"..
If you feed a normal turnstile with one line, but no phasing line,
it will act as a normal dipole in one of the 2 plots you could have
from the antenna. In that case, you could feed with two lines,
and switch directions. "dipole pattern each way". You could then
add 90 degrees to one line, and get an omni pattern..
That would give you three choices in plots..
But if you feed with a single line, you must use the phasing line
if you want the omni "turnstile" pattern.
This can be easily modeled using any modeling program..
You set the phasing in the "source" menu..
MK

2009. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 17:41:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f56gae$g54$1@news.service.uci.edu>
Source record: 39913

jimp@specsol.spam.sux.com wrote:
> John Smith I <assemblywizard@gmail.com> wrote:
>
>>jimp@specsol.spam.sux.com wrote:
>
>
>> > ...
>>
>>>Newtonian gravity: experimentally verified; superseded and still used
>>>within appropriate boundaries.
>>>
>>>
>
>
>>Yep. Plenty enough for argument to keep an open mind on the theories
>>still in use today ...
>
>
> Is that babble supposed to mean something?

I don't think so. From Wikipedia:

"Trolling can be described as a breaching experiment, which, because
of the use of an alternate persona, allows for normal social
boundaries and rules of etiquette to be tested or otherwise broken
without serious consequences."

ac6xg

2010. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 17:47:30 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f56gfi$c5g$1@nntp1.jpl.nasa.gov>
Source record: 39914

oeguet@gmx.de wrote:
> Hello Dave,
>
> thanks for your hint. I know the problem with perl scripts. What I am
> searching is, that no text or symbol replacement or calculating
> symbols is done on your source nec file. I am searching for a compiler/
> pre-processor, that makes from source file (antenna model) a
> compatible nec file (still left in symbolic 4nec2-format).
> I am sick off, to code many symbolic lines of nec code. It is boring
> and difficult, when your model gets complex and has much more
> segments.
> Therefore I started with my pre-processor few month ago, that makes
> the code for me automatically. It supports primitive object and
> complex structures. It also let you "to program" your antenna model.
> But the most advantage of letting the nec file symbolic, you can
> optimize the antenna parameters.
> I tried and constructed many antenna models and wont miss the
> optimizer tool from 4nec2.
>
> I am wondering, that nobody made such a tool till now.
>
> Aziz

What you are looking for is essentially a way to specify a mechanical design, which would then be processed into an appropriate description for a modeling code to use.

For trivial antennas, it would be pretty easy to have a text language to describe things. You could have macros and such. However, at a basic level, all you're doing is exchanging the somewhat cryptic NEC cards for something more readable.

As soon as it gets more complex, you're looking at defining your own shape/geometry definition language, and that's quite a chore.. and has been done to boot.

A better approach is to use an off the shelf drawing package of some sort, and build a parser that takes the mechanical drawing and turns it into a EM model. In the commercial world, there's a lot of activity for this sort of gridding process.

Typically you'd start with something like an IGES or DXF file.

>

2011. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:03:17 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f56hd5$1fme$1@f04n12.cac.psu.edu>
Source record: 39915

John Smith I wrote:

>
> It is difficult to find real detail on this antenna! Makes 'ya wonder,
> don't it?

One of the most impressive and strange things about these latter days is that we have a lot of people who are amazingly skeptical about science which has a pretty good system to avoid quackery , and yet are willing to extend credulity to amazing claims.

I wonder if Mythbusters would be willing to take this antenna on? I volunteer to explain the whole thing to Kari.... ;^)

- 73 de Mike KB3EIA -

2012. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:05:01 UTC
From: mzenier@eskimo.com
Message-ID: <f58t1nbtf1@eskinews.eskimo.com>
Source record: 39779
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182118799.867819.74060@x35g2000prf.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:
>Hi:
>
>What is the minimum amount of photons-per-second needed for a 150 KHz
>AM radio carrier wave to transmit audio signals? Around 20,000-photons-
>per-second?

1. What is the energy of a photon at 150 kHz?

2. What is the minimum discernable signal in your receiving system?
(How much power is needed at the receiver to overcome the internal
noise of the receiver system and detect the signal?)

3. What signal to noise ratio makes for a tolerable listening condition?
(How much more power than quetion #2 is needed at the receiver to decode
the modulation and yield a usable signal?)

Mark Zenier mzenier@eskimo.com
Googleproofaddress(account:mzenier provider:eskimo domain:com)

2013. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:08:24 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <sSzdi.1559$IY5.647@trnddc07>
Source record: 39916

<nm5k@wt.net> wrote in message
news:1182186720.122032.128460@n60g2000hse.googlegroups.com...
> On Jun 17, 2:02 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> <n...@wt.net> wrote in message
>>
>> news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
>>
>>
>>
>> > On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>>
>> >> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
>> >> > pipe cap so there isn't much room to work. Also, am I correct to
>> >> > assume the 1.8 is the total length, including what is stripped back
>> >> > to
>> >> > make the connection?
>> >> > Ralph
>>
>> >> Hi Ralph
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>> >> I dont know what your needs are for this Turnstile antenna, so my
>> >> input
>> >> may be of no value. But, a Turnstile can be made to work by feeding
>> >> both
>> >> dipoles with one feed point. No phasing harness is needed. Make one
>> >> dipole a little short so it is capacitive and the other dipole a
>> >> little
>> >> long
>> >> so it is inducvtive.
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>> >> Jerry
>>
>> > The only problem with that is the antenna will still have basically a
>> > dipole
>> > pattern. I assume he is wanting the usual omni pattern with circular
>> > polarization at the higher angles..
>> > But maybe not... You need the phase line if you want a true omni
>> > "turnstile"
>> > pattern.
>> > But saying that , I have used turnstiles with no line.. But usually on
>> > 80m..
>> > And it does change the pattern a bit from the original single dipole,
>> > but not
>> > quite the same as using a phase line.

>> > MK
>>
>> Hi MK
>>
>> I may have screwed up, but I think that a pair of dipoles on the same
>> plane, configured like a pair of non-symetrical Vs could be fed with one
>> feed point to produce a free space cardiod pattern. That would be one
>> short dipole and one one longer dipole fed in parallel.
>>
>> Jerry
>>
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>
>
> I'm not sure exactly what you mean.. Normally, a turnstile has both
> the elements the same length. If you feed two dipoles cut for the
> same band, but at different freq's, and feed with a single feedline,
> all it will do is effect the SWR plot.. Will look as a "W"..
> If you feed a normal turnstile with one line, but no phasing line,
> it will act as a normal dipole in one of the 2 plots you could have
> from the antenna. In that case, you could feed with two lines,
> and switch directions. "dipole pattern each way". You could then
> add 90 degrees to one line, and get an omni pattern..
> That would give you three choices in plots..
> But if you feed with a single line, you must use the phasing line
> if you want the omni "turnstile" pattern.
> This can be easily modeled using any modeling program..
> You set the phasing in the "source" menu..
> MK
>

Hi MK

The concept seemed correct in my mind. It was/is -- Feed two dipoles in
parallel, then turn one so it is at right angles to the other. Make one
dipole slightly inductive by making it longer than halfwave. Make the
other dipole capacitive by making it slightly shorter than half wave. One
dipole will radiate before the other due to their reactice impedances. It
shouldnt be too difficult to get enough phase delay to get a decent amount
of CP broadside to the plane of the dipoles.
The objective of this "no phasing line" approach was to make it physically
easier for the OP to fabricate a Turnstile. I have never tried building a
Turnstile this way, but It almost *has to work*. It sure would be easier
than making 1,000 MHz transmission line stuff.
I didnt catch the reference to "omniazimuth" but I am surprised that the
azimuth pattern is not fairly uniform when *no* phasing line is used, as
outlined above.

Jerry

2014. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:22:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f56ini$i2r$1@news.service.uci.edu>
Source record: 39918

Cecil Moore wrote:

> On Jun 17, 11:47 am, Jim Kelley <jwkel...@uci.edu> wrote:
>
>>From my perspective, these definitions are uniformly
>>consistent with those used in engineering.
>
>
> Jim, you and others have disagreed with definitions in the IEEE
> Dictionary and implied it is not worth the paper upon which it is
> printed. One need only to access Google to verify that fact.

You'll need to do that in order to prove your assertion. I have never disagreed with an IEEE definition. It is your understanding of them that I have occasionally disagreed with. As I said, it is only your understanding of them which conflicts with the physical definitions. I have always asserted that the IEEE definitions are of necessity, consistent with the underlying physics.

73, ac6xg

2015. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:22:22 UTC
From: nm5k@wt.net
Message-ID: <1182190942.830834.327000@p77g2000hsh.googlegroups.com>
Source record: 39917

On Jun 18, 12:08 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> <n...@wt.net> wrote in message
>
> news:1182186720.122032.128460@n60g2000hse.googlegroups.com...
>
>
>
> > On Jun 17, 2:02 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> <n...@wt.net> wrote in message
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> >>news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
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> >> > On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
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> >> >> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a pvc
> >> >> > pipe cap so there isn't much room to work. Also, am I correct to
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> >> > The only problem with that is the antenna will still have basically a
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> >> > "turnstile"
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> >> > But saying that , I have used turnstiles with no line.. But usually on
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> >> > And it does change the pattern a bit from the original single dipole,
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> >> > quite the same as using a phase line.
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> > This can be easily modeled using any modeling program..
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> The concept seemed correct in my mind. It was/is -- Feed two dipoles in
> parallel, then turn one so it is at right angles to the other. Make one
> dipole slightly inductive by making it longer than halfwave. Make the
> other dipole capacitive by making it slightly shorter than half wave. One
> dipole will radiate before the other due to their reactice impedances. It
> shouldnt be too difficult to get enough phase delay to get a decent amount
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> The objective of this "no phasing line" approach was to make it physically
> easier for the OP to fabricate a Turnstile. I have never tried building a
> Turnstile this way, but It almost *has to work*. It sure would be easier
> than making 1,000 MHz transmission line stuff.
> I didnt catch the reference to "omniazimuth" but I am surprised that the
> azimuth pattern is not fairly uniform when *no* phasing line is used, as
> outlined above.
>
> Jerry

I see what you are getting at now.. I tried modeling it, but it didn't seem
to work. I took a previous model which had the elements the same length,
and fed with one 90 out of phase with the other.. Gave a pretty much
perfect omni pattern. Then I tried shortening one element, and lengthening
the other. One leg was 118 ft, the other 122.. I then fed both in phase, using
no delay in the source.. Didn't seem to work so far.. Still got a dipole pattern..
But I will mess with it some more later. I've used the exact antenna you
describe on 80m.. But more to get more bandwidth, rather than a good
omni pattern.
MK

2016. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:50:43 UTC
From: "_._ _.. ..... _.__ .." <groups5not@verizon.net>
Message-ID: <7uAdi.1520$AR5.1490@trnddc06>
Source record: 39919

"Jeff Dieterle" <djdieterle@localnet.com> wrote in message
news:137cqmmi6lahbe6@corp.supernews.com...
> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
> planning to use a Channel Master rotor which I haven't purchased yet. I've
> buried 1"pvc conduit to tower and planning the wire pull for the antenna &
> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
> control all C M rotors. Since I don't know the power requirements yet of
> the un-purchased rotor I can't calculate the voltage drop on appx. 500ft
> of 22 ga wire to see if it will be sufficient. Can somebody either reply
> with the typical C M rotor current/voltage/watts or first hand knowledge
> of the correct wire gauge for a 500ft run. Thanks Jeff

Hi, Jeff -

I could find only one rotator on the Channel Master Web site. The manual for
it is
http://www.pctinternational.com/channelmaster/0612/pdfs/manual_9521_37.pdf
and page 1 tells required wire size vs length. Looks like you need 18ga.

Cheers,
John KD5YI

2017. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 18:52:34 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f56k9i$e72$1@nntp1.jpl.nasa.gov>
Source record: 39920

art wrote:

> Look at the patent request to obtain the basics.
> The testing station tested it with a set up that is tracable
> to normal standard antennas. Results therefor can be compared against
> a standard antennas with confidence. The testing was done by a
> independent source so a review of the results shows what you get.
> The patent was accepted by the PTO so on the surface it would
> appear that there is something new here even if the experts are
> baying at the moon ahead of time knowing that all is known about
> antennas.

not at all.. The PTO's current strategy is to grant the patent unless obviously defective, and let potential infringers down the road spend the time to break the patent.

The examiners are fairly knowledgeable in their areas, but they also depend on what's in the application to describe why it's novel and doesn't merely duplicate prior art.

It would be interesting if the independent test reports
> were included in the patent request which would infere that the PTO
> confirmed the propriety of the tests, usually by being present.

One almost never puts test results in a patent application. Why would you..an invention doesn't have to actually work, today, it just has to be described appropriately, and have appropriate claims. There are lots of perfectly valid patents out there that have no test data: Feynman's patents on nuclear powered airplanes would be one.

The "reduction to practice" requirement is met by "describing with sufficient detail that someone ordinarily skilled in the art can implement the invention". It's been over 100 years since the PTO required working models or test data.

The only case where the PTO would actually have to have a working model demonstrated would be for a perpetual motion machine (and one other, which escapes me at the moment).

> Note the antenna was designed using a propriety computor program
> which the range test confirmed after the fact.
>

And this is true for most antennas these days... Simple antennas have been around a while and wouldn't be likely to be patented. A complex antenna which might be patentable is probably tricky enough to build

that one would want to model it first, before "cutting metal".

And, any decent modeling code(s) will have extensive validation against range tests, so it's not much of a surprise when the antenna works as modeled. The surprises come from aspects that weren't modeled.

2018. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 19:01:17 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f56kptegr1@nntp1.jpl.nasa.gov>
Source record: 39921

J. Mc Laughlin wrote:
> Dear Group:
>
> Details of the patent applications may be found on the USPTO's site.
>
> Robert J. Vincent (Electronics Technician II, Physics-URI)
>
> Application 20060022883; published Feb. 2, 2006
> Application 20070132647; published June 14, 2007
I think that ends in ..649
filed 25 Jan 2007

one might note that claims 1-23 were cancelled...

The second application is basically a revision of the first amd has more details of why it has priority over earlier applications (presumably over other inventors?)

The first is a continuation application as well.

I'm going to guess that the examiner came back on the first app and said: Uh,uh, you need to update to establish why a)you're first and b) why you're novel

If you've got significant time available, compare the two applications and it may be revealed

>
> 73, Mac N8TT
>
>
> --
> J. Mc Laughlin; Michigan U.S.A.
> Home: JCM@Power-Net.Net
>
>

2019. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 19:08:09 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f56l6p$en6$1@nntp1.jpl.nasa.gov>
Source record: 39922

4nec2 wrote:
> On 16 jun, 21:45, art <aun...@insightbb.com> wrote:
>
>
>>Do you know of a program that for optimisation can work with all
>>dimensions being variable AT THE SAME TIME?
>
>
> Yes, maybe. If I am correct you do have some AO experience. 4nec2 does
> contain an optimiser based on the same principles, however it's not
> Mininec based as OA was, but Nec2 based (or Nec4 based if you own a
> Nec4 license).
> You can directly read-in your *.ao files into 4nec2, they will be
> automatically converted. Complicated ao files may need some minor
> manual changes afterwards.
>
> You can include as much variables as you like in your antenna model
> and for each run, you can select the variables to optimise from the
> list. When the run has completed and the selected quality of your
> model has been optimized as good as possible, you can (partly)
> deselect previous variables and select another set of variabels and
> continue optimization based on the outcome of previous run.
>
> Furthermore it also contains a GA (genetic algorithms) based optimizer
> similar to the one included in the commercial SuperNec package.
>
> When optimizing multiple variables at the same time, this type of
> optimizer is prefered. It also avoids the model of being trapped in
> local maxima. The drawback of this is the increase of optimization
> time needed.
>
> However be aware, it needs some 'learning curve'.
> There seem to be two distinct groups of people, those who adore it and
> those who think it's much to complicated. It seems not possible to
> 'sit' anywhere between those both extremes.
>

I think this is true of all optimizers..
The more complex the thing being optimized, the more difficult it is to
have a generic interface that provides a way for the user to tell the
optimizer what the constraints and desires are. In the limit, you wind
up writing a program to implement the constraints, and another program
to implement the evaluation function, and yet another program to take
the optimized variables and turn it into a model which the modeling

engine can run.

2020. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 20:00:06 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <3tadne0YPZ7YeevbRVnygAA@pipex.net>
Source record: 39923

art wrote:
<SNIP>
> The patent was awarded so one can assume that the design is providing
> something new.
> Art
>
That's a joke, right? The US patent system is a mess. I'm not
knocking the antenna BTW.

Charlie.

--
M0WYM
www.radiowymsey.org

2021. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 20:41:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6sqd73t0rifqntqnadruu821put95nsbau@4ax.com>
Source record: 39924

On Mon, 18 Jun 2007 12:08:09 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>I think this is true of all optimizers..
>The more complex the thing being optimized, the more difficult it is to
>have a generic interface that provides a way for the user to tell the
>optimizer what the constraints and desires are. In the limit, you wind
>up writing a program to implement the constraints, and another program
>to implement the evaluation function, and yet another program to take
>the optimized variables and turn it into a model which the modeling
>engine can run.

Hi Jim, Arie,

It goes WAY beyond that (as if there weren't enough problems). In the GA community, the introduction of unlimited variables leads to (very quickly with even a few of them) what is called "combinatorial explosion."

A second issue (and it seems that Arie probably has at least one algorithm to tackle this) is with an engine becoming stuck at a local minima or maxima. This false solution ignores a better one nearby (or further down the road) simply because it satisfied the criteria within a restricted region of a curve.

Arthur's models quite obviously exhibit this last problem when his designs can be bested with mediocre examples that have been drawn from the dusty bookshelves. The science of GA has moved well beyond the Paleolithic era of AO.

73's
Richard Clark, KB7QHC

2022. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:22:44 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f56t35$ir0$1@nntp1.jpl.nasa.gov>
Source record: 39832

Richard Clark wrote:
> On Mon, 18 Jun 2007 12:08:09 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
> wrote:
>
>
>>I think this is true of all optimizers..
>>The more complex the thing being optimized, the more difficult it is to
>>have a generic interface that provides a way for the user to tell the
>>optimizer what the constraints and desires are. In the limit, you wind
>>up writing a program to implement the constraints, and another program
>>to implement the evaluation function, and yet another program to take
>>the optimized variables and turn it into a model which the modeling
>>engine can run.
>
>
> Hi Jim, Arie,
>
> It goes WAY beyond that (as if there weren't enough problems). In the
> GA community, the introduction of unlimited variables leads to (very
> quickly with even a few of them) what is called "combinatorial
> explosion."
>
> A second issue (and it seems that Arie probably has at least one
> algorithm to tackle this) is with an engine becoming stuck at a local
> minima or maxima. This false solution ignores a better one nearby (or
> further down the road) simply because it satisfied the criteria within
> a restricted region of a curve.
>
> Arthur's models quite obviously exhibit this last problem when his
> designs can be bested with mediocre examples that have been drawn from
> the dusty bookshelves. The science of GA has moved well beyond the
> Paleolithic era of AO.
>
> 73's
> Richard Clark, KB7QHC
My comment was not so much about the details of the optimizers (for
which you've given some typical problems) but with the difficulty of
coming up with a generic optimizer that can manage generalized models,
generalized constraints, etc. Since the underlying optimizer algorithms
are available as canned packages/library routines in most cases, the
hard work is in formulating the stuff that goes to the optimizer.

2023. Yagi Question: Freq. Coverage Range

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:23:53 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <RLWdnU5HbaTgauvbnZ2dnUVZ_vqpnZ2d@comcast.com>
Source record: 39925

Hello,

Is the freq range of 156 to 163 MHz (receive only) too much to probably consider a yagi for ?

If so, any suggestions for type(s) that have intrinsic Gain ?

Can, and probably should be, be very directional.

Thanks,
Bob

2024. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:32:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <MRCdi.7385$jb5.4017@trndny09>
Source record: 39926

"art" <aunwin@insightbb.com> wrote in message
news:1182196967.199031.269680@c77g2000hse.googlegroups.com...
> On 18 Jun, 11:52, Jim Lux <james.p....@jpl.nasa.gov> wrote:
>> art wrote:
> and the IEEE were in error. I certainly would not trash it on
> the basis of comments by amateurs on this newsgroup unless they
> provided credible proof that they were knoweledgable about the
> specifics
> of the antenna and could then provide credible reasons why it
> should not be accepted. That ofcourse will never happen
> in this newsgroup. Look up at the howl that emanated on this group
> on such a simple subject such as Gauss together with conservative
> and non conservative fields. We even have teachers in this group
> who could not come forward to explain it to others as well as some
> who denied any possibility of a connection. This is just an
> amateur group who likes to play word games with others to get a
> "gottcha",
> It is not a scientific group with credible backgrounds that
> by itself demands attention, it is just a group of amateurs
> from various fields and pursuits where their every post reflect
> their true abilities.
> Regards
> Art
>

simple answer... its a 3 year old article, who do you know that is selling
them? if they were anything special someone would have picked them up and
started marketing them. speaking of which, who have you lined up to sell
your 'gaussian' designs art? can you even define it yet??

2025. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:40:29 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf7duud.18jn.bit-bucket@shell.config.com>
Source record: 39927

```
On Mon, 18 Jun 2007 07:25:26 -0500, Jeff Dieterle wrote:
> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
> planning to use a Channel Master rotor which I haven't purchased yet. I've
> buried 1"pvc conduit to tower and planning the wire pull for the antenna &
> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
> control all C M rotors. Since I don't know the power requirements yet of the
> un-purchased rotor I can't calculate the voltage drop on appx. 500ft of 22
> ga wire to see if it will be sufficient. Can somebody either reply with the
> typical C M rotor current/voltage/watts or first hand knowledge of the
> correct wire gauge for a 500ft run. Thanks Jeff
>
>

--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>
```

2026. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:46:56 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182203216.955591.216040@u2g2000hsc.googlegroups.com>
Source record: 39928

On Jun 17, 7:02 pm, Mike Coslo <mco...@youknow.comcast.net> wrote:
> Might it just be simpler to say that you don't care for those who believe
> that we've discovered it all?

Yes, that would be simpler and I would include anyone who believes
that the scientific method leads to eternal perfection in some
scientific heaven.
--
73, Cecil, w5dxp.com

2027. Re: Yagi Question: Freq. Coverage Range

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:50:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mfvd73too8ied38u41t4ld1vlr4k3g5dlb@4ax.com>
Source record: 39830

On Mon, 18 Jun 2007 17:23:53 -0400, "Robert11" <rgsros@notme.com>
wrote:
>If so, any suggestions for type(s) that have intrinsic Gain ?

Log Periodic Dipole Array

73's
Richard Clark, KB7QHC

2028. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:50:49 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <Z6Ddi.2658$Rw1.1341@newssvr25.news.prodigy.net>
Source record: 39829

Several manufacturers make such antennas, and to
change "polarity" (from clockwise, to counter
clockwise), change phaseing lines feeding the
(say) horizontal elements, from 90 degrees to 270
degrees, relative to the feed of the vertical
elements. Try Cushcraft, M-Squared, HYGAIN, ect.
Think, also some of the handbooks also show them, as
well check ANSAT's website! Jim NN7K

Steve Reinhardt wrote:
> I have read a circularly polarized Yagi is appropriate for ARISS
> communications. Is there a vendor that offers a crossed design? Or,
> better still, is there a construction article that I can refer to?
>
> What are you using for this type of communication?
>
> I'm trying to set up a contact for my son's school class.
>
> 73,
> Steve
> W1KF

2029. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:56:32 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182203792.675916.138950@m36g2000hse.googlegroups.com>
Source record: 39831

On Jun 18, 1:22 pm, Jim Kelley <jwkel...@uci.edu> wrote:
> Cecil Moore wrote:
> > Jim, you and others have disagreed with definitions in the IEEE
> > Dictionary and implied it is not worth the paper upon which it is
> > printed. One need only to access Google to verify that fact.
>
> You'll need to do that in order to prove your assertion. I have never
> disagreed with an IEEE definition. It is your understanding of them
> that I have occasionally disagreed with.

You and others have said that power cannot be transferred from one
place to another, that only energy can be transferred. Yet the IEEE
Dictionary defines "power transfer". You and others have said power
doesn't flow, that it is energy that flows.Yet the IEEE Dictionary
defines "power flow vector".
--
73, Cecil, w5dxp.com

2030. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 21:57:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f56vf1$s6p$1@news.service.uci.edu>
Source record: 39835

Cecil Moore wrote:
> On Jun 18, 1:22 pm, Jim Kelley <jwkel...@uci.edu> wrote:
>
>>Cecil Moore wrote:
>>
>>>Jim, you and others have disagreed with definitions in the IEEE
>>>Dictionary and implied it is not worth the paper upon which it is
>>>printed. One need only to access Google to verify that fact.
>>
>>You'll need to do that in order to prove your assertion. I have never
>>disagreed with an IEEE definition. It is your understanding of them
>>that I have occasionally disagreed with.
>
>
> You and others have said that power cannot be transferred from one
> place to another, that only energy can be transferred. Yet the IEEE
> Dictionary defines "power transfer". You and others have said power
> doesn't flow, that it is energy that flows.Yet the IEEE Dictionary
> defines "power flow vector".
> --
> 73, Cecil, w5dxp.com

Two points here, one, I do not speak for others and they do not speak
for me. Two, you do not speak for others as they do not speak for
you. Please use quotes when referring to what I said. I do not wish
to argue about what you think somebody said. Thanks.

73, ac6xg

2031. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 22:00:15 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <QfDdi.4965$bP5.513@newssvr19.news.prodigy.net>
Source record: 39833

Nick wrote:
> "Jeff Dieterle" <djdieterle@localnet.com> wrote in message
> news:137cqmmi6lahbe6@corp.supernews.com...
>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>> planning to use a Channel Master rotor which I haven't purchased yet.

Also, be aware that many of these rotors are
Capacitor Start motors. So, where is the
Capacitor? Well, its in the Control Box
(to make it simple to get to, when it ages/or
gives up). Tho these are easy to access, my
question would also be (since these cap leads
are quite long, and RESISTIVE to get to the
rotor), is just what effect these long (thus
HIGHer) resistance and thus, volts limiting going
to do to the rotor speed ? I hope I stated this
correctly. Anyone have experience with this? Jim
NN7K

2032. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 22:09:35 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <AoDdi.4966$bP5.3615@newssvr19.news.prodigy.net>
Source record: 39834

One other thing, I see, is that End Fed Dipoles
have a extremely high impedence, and hence a very
HIGH VOLTAGE (altho at little current), unlike
center-fed dipoles. Might make insulation
problematic to prevent arcing . Can generate
hundreds (if not Thousands) of volts, at the feed
point! Jim NN7K

Richard Clark wrote:
> On Mon, 18 Jun 2007 10:42:08 -0400, Chuck <no.spam@no.spam.at.all>
> wrote:
>
>> In my own experience, matching has
>> always been extremely easy and
>> trouble-free. So does anyone know why
>> this might be thought so frought with
>> problems that its general use would be
>> discouraged?
>
> Hi Chuck,
>
> The slur may attend the illusion that just the antenna is being
> matched and the operator cries foul about transmission line common
> mode currents.
>
> However, if those currents go unnoticed; then end fed antennas are
> marvelous and have this undeserved bad reputation. On the other hand,
> if those currents are noticed and fixed, the antenna probably doesn't
> work any better; but after all that effort "it damned well should and
> no one is going to convince me otherwise."
>
> 73's
> Richard Clark, KB7QHC

2033. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 22:16:04 UTC
From: nm5k@wt.net
Message-ID: <1182204964.658609.301010@n60g2000hse.googlegroups.com>
Source record: 39836

On Jun 17, 8:51 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Mike Kaliski wrote:
>
> > ...
>
> > Now if he could make it work efficiently on all frequencies with 50 ohms
> > impedence and with no requirement for further matching or adjustment of any
> > sort, I would be impressed. :-)
>
> > Mike G0ULI
>
> Well then, let me take you at least half way to being impressed:

Doesn't impress me much, and it's not really new either.
I did that 12-15 years ago on my first mobile antenna..
"combining a helical mast with lumped loading coils."
Big deal...
Myself, I think he would be better off to dump the helical
windings, and just use all lumped loading..
A large high Q lumped coil will generally have less total
loss than using any narrower dia helical winding along
with a lumped coil.
I did away with the helical windings on mine. And I
still have good current distribution.
And slightly less loss.

>
> 1) "The technology is completely scalable:

What isn't ?

> "
> 2) "All I have to do is tap the helix at its base, and you get a perfect
> 50-ohm match with out any lossy networks as are required for other
> advanced antenna designs," said Vincent.

Who says other designs have lossy matching networks?
Mine don't.. He calls that an advanced antenna design? Hummm...
I'll reserve comment...

>
> 3) "Eight years ago, antenna design was 90 percent black magic and 10
> percent theory," said Vincent. "But now, with my design, they are 10
> percent black magic and 90 percent theory."

This is even worse... That statement is just total BS...

>
> The above from this URL:
>
> http://www.jefallbright.net/node/2718
>
> He mentions being able to create these in 1/4 to 5/8 design--so, create
> a 1/2 and loose the radials and salt water ...

Wow, that's really advanced.. I wish I could think to try that... :/
>
> It is difficult to find real detail on this antenna! Makes 'ya wonder,
> don't it?
>
> JS

Not really.. The antenna is ok I guess, nothing really horrible about
it, but I don't see anything new. In fact, some of his statements are
sort of silly.. IE:
"For instance, in a normal quarter-wave antenna the current
continually drops off in a sinusoidal shape, but these antennas
don't do that," said Vincent. "The current at the top of the antenna
is 80 percent of the current at the base."

Wow..I suppose he thinks his antenna will outdo a full quarter wave
then I guess.. Good luck in the contest is all I can say...

Then you have this jibber jabber..
"Using a DLM antenna one-third to one-ninth the size of standard
quarter-wave antenna, he measured nearly 80 percent efficiency,
when conventional wisdom would dictate that an antenna the size
of a DLM should be only 8 to 15 percent efficient."

Look how vague it is.. Can't even get the size of his antenna right..
So how can we decide what to compare it to?
Also he makes no mention of ground quality, radials, etc..
It's easy to sound "advanced" when you don't give enough info
for anyone to prove you wrong...
Anyway... ho hummmm.... As you can tell, I'm really excited
about this new fangled technology.
MK

2034. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 22:26:52 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f570rcksh1@nntp1.jpl.nasa.gov>
Source record: 39837

nm5k@wt.net wrote:
> On Jun 17, 8:51 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
>>Mike Kaliski wrote:
>>
>> > ...
>>
>>
>>>Now if he could make it work efficiently on all frequencies with 50 ohms
>>>impedence and with no requirement for further matching or adjustment of any
>>>sort, I would be impressed. :-)
>>
>>>Mike G0ULI
>>
>>Well then, let me take you at least half way to being impressed:
>
>
> Doesn't impress me much, and it's not really new either.
> I did that 12-15 years ago on my first mobile antenna..
> "combining a helical mast with lumped loading coils."
> Big deal...
> Myself, I think he would be better off to dump the helical
> windings, and just use all lumped loading..
> A large high Q lumped coil will generally have less total
> loss than using any narrower dia helical winding along
> with a lumped coil.
> I did away with the helical windings on mine. And I
> still have good current distribution.
> And slightly less loss.
>

But then you would have something that is prior art.

Sometimes, all you want is a novel implementation of a standard thing, so that you can patent it. For instance, say a helically loaded whip is a readily known thing that's been around for years. You can't patent that. But maybe you could get a (very narrow) patent for a helical loading where the turn spacing follows some mathematical formula, and you make some assertions that this spacing is special. Maybe it's sinusoidal, and the resulting impedance curve has bumps in some places that are "useful" in some application.

Now, you can go out and patent this literally one of a kind antenna.

You can market yourself as having "patented an antenna". The PR
department of your company can say "our patented antenna designs.."

and then you can go out and make regular old loaded whips with bulk
inductance...

"
>>2) "All I have to do is tap the helix at its base, and you get a perfect
>>50-ohm match with out any lossy networks as are required for other
>>advanced antenna designs," said Vincent.
>
>
> Who says other designs have lossy matching networks?
> Mine don't.. He calls that an advanced antenna design? Hummm...
> I'll reserve comment...

That's a standard part of every patent application. You have to "knock
the prior art" and say why your invention is an improvement. You'll see
statements like:

As Smith taught in patent 1,234,567, matching networks can be used to
provide the desirable 50 ohm termination impedance. However, lumped
components of sizes suitable for the applications we consider have
losses that are excessive.

[Bingo, you've just said why your invention is "different" than Smith's]

>

2035. Re: Yagi Question: Freq. Coverage Range

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 23:03:53 UTC
From: dplatt@radagast.org
Message-ID: <pjfjk4-n5g.ln1@radagast.org>
Source record: 39838

>Hello,
>
>Is the freq range of 156 to 163 MHz (receive only) too much to probably
>consider a yagi for ?

That's less than 5% width, so it's probably reasonable. Yagi antenna design involves a bunch of tradeoffs - Yagis which are optimized for the highest gain at a specific frequency (or for the greatest front-to-back ratio) may tend to be more narrow-band than a Yagi of similar boom length which has a somewhat lower gain or F/B ratio.

There have been some interesting developments over the past few years with OWB (optimized wide-band) Yagis... I gather that it's now possible to put together a Yagi which can cover the whole 144-148 MHz spectrum (and beyond) with very decent performance over the full range.

Yagi behavior tends to deteriorate more rapidly at the upper end of the frequency range, if I recall correctly, so you'd probably want a Yagi which is optimized for somewhere around 162 MHz.

>If so, any suggestions for type(s) that have intrinsic Gain ?
>
>Can, and probably should be, be very directional.

Log-periodic antennas are known for having a wide SWR bandwidth, and decent gain and directional characteristics. Depending on the number, spacing, and taper schedule, it's not difficult to cover a frequency range of 3:1 with decent gain and with an SWR of no worse than 2:1. Log-periodics are often used as TV/FM antennas, precisely because this application requires decent directionality and a wide frequency coverage.

It's possible that a commercial TV/FM antenna might do the trick for you. A full-sized VHF-TV-plus-FM antenna would work from 45-88 MHz (VHF TV low-band), 88-109 or so (FM), and 174-216 MHz (VHF TV high-band). It's not uncommon for such antennas to use the longer elements in two modes - they resonate on their fundamental frequencies for VHF low-band, and on their third harmonic for VHF high-band. If you see a TV antennas whose longest elements are "swept forward" (with their tips aimed at an angle in the direction that the antenna is pointing) then it's likely that the antenna is using this particular trick.

If so, then there's a fairly good chance that it would cover the marine-band frequencies as well, since those also fall within the range of the third harmonic of the VHF low-band frequencies.

So - you could buy yourself a VHF TV antenna, log-periodic type, which has swept-forward elements, and just rotate it into a vertical orientation (i.e. mount it sideways on the mast, held out some distance from the mast so that the mast doesn't de-tune it).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2036. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 23:32:46 UTC
From: nm5k@wt.net
Message-ID: <1182209566.608433.24410@c77g2000hse.googlegroups.com>
Source record: 39839

On Jun 18, 4:09 pm, Jim - NN7K <N...@NOWAY.NET> wrote:
> One other thing, I see, is that End Fed Dipoles
> have a extremely high impedence, and hence a very
> HIGH VOLTAGE (altho at little current), unlike
> center-fed dipoles. Might make insulation
> problematic to prevent arcing . Can generate
> hundreds (if not Thousands) of volts, at the feed
> point! Jim NN7K

Then you have to have a pretty good tuner..
Along with whatever losses it provides..
I avoid tuners if at possible. None of my
everyday antennas use one.
I have a 989c, but I mainly use the wattmeter,
and switch..
The tuner itself sees little use. Probably has
spiders inside.. :/
MK

2037. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 23:33:18 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <2DEdi.4469$%t6.3402@trnddc02>
Source record: 39840

<nm5k@wt.net> wrote in message
news:1182190942.830834.327000@p77g2000hsh.googlegroups.com...
> On Jun 18, 12:08 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> <n...@wt.net> wrote in message
>>
>> news:1182186720.122032.128460@n60g2000hse.googlegroups.com...
>>
>>
>>
>> > On Jun 17, 2:02 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> >> <n...@wt.net> wrote in message
>>
>> >>news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
>>
>> >> > On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>>
>> >> >> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a
>> >> >> > pvc
>> >> >> > pipe cap so there isn't much room to work. Also, am I correct to
>> >> >> > assume the 1.8 is the total length, including what is stripped
>> >> >> > back
>> >> >> > to
>> >> >> > make the connection?
>> >> >> > Ralph
>>
>> >> >> Hi Ralph
>>
>> >> >> I dont know what your needs are for this Turnstile antenna, so my
>> >> >> input
>> >> >> may be of no value. But, a Turnstile can be made to work by
>> >> >> feeding
>> >> >> both
>> >> >> dipoles with one feed point. No phasing harness is needed. Make
>> >> >> one
>> >> >> dipole a little short so it is capacitive and the other dipole a
>> >> >> little
>> >> >> long
>> >> >> so it is inducvtive.
>>
>> >> >> Jerry
>>
>> >> > The only problem with that is the antenna will still have basically
>> >> > a
>> >> > dipole

>> >> > pattern. I assume he is wanting the usual omni pattern with circular
>> >> > polarization at the higher angles..
>> >> > But maybe not... You need the phase line if you want a true omni
>> >> > "turnstile"
>> >> > pattern.
>> >> > But saying that , I have used turnstiles with no line.. But usually
>> >> > on
>> >> > 80m..
>> >> > And it does change the pattern a bit from the original single
>> >> > dipole,
>> >> > but not
>> >> > quite the same as using a phase line.
>> >> > MK
>>
>> >> Hi MK
>>
>> >> I may have screwed up, but I think that a pair of dipoles on the
>> >> same
>> >> plane, configured like a pair of non-symetrical Vs could be fed with
>> >> one
>> >> feed point to produce a free space cardiod pattern. That would be
>> >> one
>> >> short dipole and one one longer dipole fed in parallel.
>>
>> >> Jerry
>>
>> >> Jerry
>>
>> > I'm not sure exactly what you mean.. Normally, a turnstile has both
>> > the elements the same length. If you feed two dipoles cut for the
>> > same band, but at different freq's, and feed with a single feedline,
>> > all it will do is effect the SWR plot.. Will look as a "W"..
>> > If you feed a normal turnstile with one line, but no phasing line,
>> > it will act as a normal dipole in one of the 2 plots you could have
>> > from the antenna. In that case, you could feed with two lines,
>> > and switch directions. "dipole pattern each way". You could then
>> > add 90 degrees to one line, and get an omni pattern..
>> > That would give you three choices in plots..
>> > But if you feed with a single line, you must use the phasing line
>> > if you want the omni "turnstile" pattern.
>> > This can be easily modeled using any modeling program..
>> > You set the phasing in the "source" menu..
>> > MK
>>
>> Hi MK
>>
>> The concept seemed correct in my mind. It was/is -- Feed two dipoles
>> in
>> parallel, then turn one so it is at right angles to the other. Make one
>> dipole slightly inductive by making it longer than halfwave. Make the

>> other dipole capacitive by making it slightly shorter than half wave.
>> One
>> dipole will radiate before the other due to their reactice impedances.
>> It
>> shouldnt be too difficult to get enough phase delay to get a decent
>> amount
>> of CP broadside to the plane of the dipoles.
>> The objective of this "no phasing line" approach was to make it
>> physically
>> easier for the OP to fabricate a Turnstile. I have never tried building
>> a
>> Turnstile this way, but It almost *has to work*. It sure would be easier
>> than making 1,000 MHz transmission line stuff.
>> I didnt catch the reference to "omniazimuth" but I am surprised that
>> the
>> azimuth pattern is not fairly uniform when *no* phasing line is used, as
>> outlined above.
>>
>> Jerry
>
>
> I see what you are getting at now.. I tried modeling it, but it didn't
> seem
> to work. I took a previous model which had the elements the same
> length,
> and fed with one 90 out of phase with the other.. Gave a pretty much
> perfect omni pattern. Then I tried shortening one element, and
> lengthening
> the other. One leg was 118 ft, the other 122.. I then fed both in
> phase, using
> no delay in the source.. Didn't seem to work so far.. Still got a
> dipole pattern..
> But I will mess with it some more later. I've used the exact antenna
> you
> describe on 80m.. But more to get more bandwidth, rather than a good
> omni pattern.
> MK

Hi MK

Can we change the antenna lengths more than ? We will probably need a
bigger change in dipole length to get the antenna terminal impedance to be
sufficiently reactive.
I know the "+jx with -jx" concept works for some antennas. I assume it
will work with a Turnstile. I have read articles that deal with the math
and equations, but I sure done want to get involved with that.
If the OP really cared about the suggestion I made, it might be fun to do
more investigation into exactly how close to *good enough* we could get with
the single feed point Turnstile. Heck, if you want to investigate the
applicapability of this I'd sure dig into the concept further. Right now,
I am pretty sure the concept will work for Turnstiles. I just dont know how

good the antenna needs to be.

Jerry

2038. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 23:54:39 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <3XEdi.4477$%t6.550@trnddc02>
Source record: 39841

"Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message
news:Wfwdi.1$Ld6.0@newsfe03.lga...
>I have read a circularly polarized Yagi is appropriate for ARISS
>communications. Is there a vendor that offers a crossed design? Or, better
>still, is there a construction article that I can refer to?
>
> What are you using for this type of communication?
>
> I'm trying to set up a contact for my son's school class.
>
> 73,
> Steve
> W1KF

Hi Steve

Have you contacted the AMSAT guys (www.amsat.org)? I assume you are
aware of the need for gain required for you particular station. I thought
a linearly polarized 3 or 4 element Yagi was adequate. So, I wonder if
the complexity of making a crossed Yagi CP is justified when that will have
only 3 dB improvement with that same boom length.

Jerry

2039. Re: Turnstile question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-18 23:57:19 UTC
From: nm5k@wt.net
Message-ID: <1182211039.274670.42020@w5g2000hsg.googlegroups.com>
Source record: 39842

On Jun 18, 5:33 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> <n...@wt.net> wrote in message
>
> news:1182190942.830834.327000@p77g2000hsh.googlegroups.com...
>
>
>
> > On Jun 18, 12:08 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> <n...@wt.net> wrote in message
>
> >>news:1182186720.122032.128460@n60g2000hse.googlegroups.com...
>
> >> > On Jun 17, 2:02 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> >> <n...@wt.net> wrote in message
>
> >> >>news:1182107355.445284.308300@m36g2000hse.googlegroups.com...
>
> >> >> > On Jun 17, 12:47 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>
> >> >> >> > I figured 1.8 inches for 1066 MHz. I wanted to build it into a
> >> >> >> > pvc
> >> >> >> > pipe cap so there isn't much room to work. Also, am I correct to
> >> >> >> > assume the 1.8 is the total length, including what is stripped
> >> >> >> > back
> >> >> >> > to
> >> >> >> > make the connection?
> >> >> >> > Ralph
>
> >> >> >> Hi Ralph
>
> >> >> >> I dont know what your needs are for this Turnstile antenna, so my
> >> >> >> input
> >> >> >> may be of no value. But, a Turnstile can be made to work by
> >> >> >> feeding
> >> >> >> both
> >> >> >> dipoles with one feed point. No phasing harness is needed. Make
> >> >> >> one
> >> >> >> dipole a little short so it is capacitive and the other dipole a
> >> >> >> little
> >> >> >> long
> >> >> >> so it is inducvtive.
>
> >> >> >> Jerry
>

> >> >> > The only problem with that is the antenna will still have basically
> >> >> > a
> >> >> > dipole
> >> >> > pattern. I assume he is wanting the usual omni pattern with circular
> >> >> > polarization at the higher angles..
> >> >> > But maybe not... You need the phase line if you want a true omni
> >> >> > "turnstile"
> >> >> > pattern.
> >> >> > But saying that , I have used turnstiles with no line.. But usually
> >> >> > on
> >> >> > 80m..
> >> >> > And it does change the pattern a bit from the original single
> >> >> > dipole,
> >> >> > but not
> >> >> > quite the same as using a phase line.
> >> >> > MK
>
> >> >> Hi MK
>
> >> >> I may have screwed up, but I think that a pair of dipoles on the
> >> >> same
> >> >> plane, configured like a pair of non-symetrical Vs could be fed with
> >> >> one
> >> >> feed point to produce a free space cardiod pattern. That would be
> >> >> one
> >> >> short dipole and one one longer dipole fed in parallel.
>
> >> >> Jerry
>
> >> >> Jerry
>
> >> > I'm not sure exactly what you mean.. Normally, a turnstile has both
> >> > the elements the same length. If you feed two dipoles cut for the
> >> > same band, but at different freq's, and feed with a single feedline,
> >> > all it will do is effect the SWR plot.. Will look as a "W"..
> >> > If you feed a normal turnstile with one line, but no phasing line,
> >> > it will act as a normal dipole in one of the 2 plots you could have
> >> > from the antenna. In that case, you could feed with two lines,
> >> > and switch directions. "dipole pattern each way". You could then
> >> > add 90 degrees to one line, and get an omni pattern..
> >> > That would give you three choices in plots..
> >> > But if you feed with a single line, you must use the phasing line
> >> > if you want the omni "turnstile" pattern.
> >> > This can be easily modeled using any modeling program..
> >> > You set the phasing in the "source" menu..
> >> > MK
>
> >> Hi MK
>
> >> The concept seemed correct in my mind. It was/is -- Feed two dipoles

> >> in
> >> parallel, then turn one so it is at right angles to the other. Make one
> >> dipole slightly inductive by making it longer than halfwave. Make the
> >> other dipole capacitive by making it slightly shorter than half wave.
> >> One
> >> dipole will radiate before the other due to their reactice impedances.
> >> It
> >> shouldnt be too difficult to get enough phase delay to get a decent
> >> amount
> >> of CP broadside to the plane of the dipoles.
> >> The objective of this "no phasing line" approach was to make it
> >> physically
> >> easier for the OP to fabricate a Turnstile. I have never tried building
> >> a
> >> Turnstile this way, but It almost *has to work*. It sure would be easier
> >> than making 1,000 MHz transmission line stuff.
> >> I didnt catch the reference to "omniazimuth" but I am surprised that
> >> the
> >> azimuth pattern is not fairly uniform when *no* phasing line is used, as
> >> outlined above.
>
> >> Jerry
>
> > I see what you are getting at now.. I tried modeling it, but it didn't
> > seem
> > to work. I took a previous model which had the elements the same
> > length,
> > and fed with one 90 out of phase with the other.. Gave a pretty much
> > perfect omni pattern. Then I tried shortening one element, and
> > lengthening
> > the other. One leg was 118 ft, the other 122.. I then fed both in
> > phase, using
> > no delay in the source.. Didn't seem to work so far.. Still got a
> > dipole pattern..
> > But I will mess with it some more later. I've used the exact antenna
> > you
> > describe on 80m.. But more to get more bandwidth, rather than a good
> > omni pattern.
> > MK
>
> Hi MK
>
> Can we change the antenna lengths more than ? We will probably need a
> bigger change in dipole length to get the antenna terminal impedance to be
> sufficiently reactive.
> I know the "+jx with -jx" concept works for some antennas. I assume it
> will work with a Turnstile. I have read articles that deal with the math
> and equations, but I sure done want to get involved with that.
> If the OP really cared about the suggestion I made, it might be fun to do
> more investigation into exactly how close to *good enough* we could get with

> the single feed point Turnstile. Heck, if you want to investigate the
> applicapability of this I'd sure dig into the concept further. Right now,
> I am pretty sure the concept will work for Turnstiles. I just dont know how
> good the antenna needs to be.
>
> Jerry

I can try it, but I think he would be better off using the actual
coax line if he can rig it up.
MK

2040. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:01:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v17e73ljreg21uc5huhmvstpjr8dlf0mjb@4ax.com>
Source record: 39844

On Mon, 18 Jun 2007 15:26:52 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>[Bingo, you've just said why your invention is "different" than Smith's]

Here's another "different" antenna:

To increase the directivity of such an antenna, a parasitic reflector
element, usually tuned to a frequency slightly higher than the driver
resonant frequency, can be placed parallel to the driver element along
the boom. For further increased directivity, one or more director
elements, usually tuned to frequencies slightly lower than the driver
resonant frequency, can be placed at various distances along the boom
on the other side of the driver element and parallel to the driver
element.

This is the world's first gaussian array.

73's
Richard Clark, KB7QHC

2041. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:02:04 UTC
From: oeguet@gmx.de
Message-ID: <1182211324.029175.75970@c77g2000hse.googlegroups.com>
Source record: 39843

> Keep it, I'll write my own ... :-)
>
> Regards,
> JS
Ok, I will wait for your ones and save time and effort.
;-)
Aziz

2042. Re: Yagi Question: Freq. Coverage Range

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:25:17 UTC
From: James <jnipperxxx@nospamfdn.com>
Message-ID: <TvmdnbhuJeb1v-rbnZ2dnUVZ_hisnZ2d@comcast.com>
Source record: 39845

Bob, do you ever acknowledge or thank others that answer your questions and/or send you info ?

Answering your indentical question posted in another group, I sent you a link for a VHF antenna that is perfect for what you asked for in your OP, but you have never commented or acknowledged receipt of it. I sent it again in this group when you posted the exact question here, but got the same non-response.

James

2043. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:29:41 UTC
From: Steve Reinhardt <stevereinhardt@noearthspamlink.net>
Message-ID: <msFdi.35$Ga2.3@newsfe04.lga>
Source record: 39846

Jerry Martes wrote:
> "Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message
> news:Wfwdi.1$Ld6.0@newsfe03.lga...
>> I have read a circularly polarized Yagi is appropriate for ARISS
>> communications. Is there a vendor that offers a crossed design? Or, better
>> still, is there a construction article that I can refer to?
>>
>> What are you using for this type of communication?
>>
>> I'm trying to set up a contact for my son's school class.
>>
>> 73,
>> Steve
>> W1KF
>
>
> Hi Steve
>
> Have you contacted the AMSAT guys (www.amsat.org)? I assume you are
> aware of the need for gain required for you particular station. I thought
> a linearly polarized 3 or 4 element Yagi was adequate. So, I wonder if
> the complexity of making a crossed Yagi CP is justified when that will have
> only 3 dB improvement with that same boom length.
>
> Jerry
>
>
Jerry,

All news to me, so far. The ARISS website suggested circular
polarization and up to 100W. AMSAT is saying 3 elements and an HT. Quite
a variation...

Thanks for the hints, and I'll try listening for a while after I build
something!

73,
Steve
W1KF

2044. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:36:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <lyFdi.6664$Fk7.3682@trnddc01>
Source record: 39847

"Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message
news:msFdi.35$Ga2.3@newsfe04.lga...
> Jerry Martes wrote:
>> "Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message
>> news:Wfwdi.1$Ld6.0@newsfe03.lga...
>>> I have read a circularly polarized Yagi is appropriate for ARISS
>>> communications. Is there a vendor that offers a crossed design? Or,
>>> better still, is there a construction article that I can refer to?
>>>
>>> What are you using for this type of communication?
>>>
>>> I'm trying to set up a contact for my son's school class.
>>>
>>> 73,
>>> Steve
>>> W1KF
>>
>>
>> Hi Steve
>>
>> Have you contacted the AMSAT guys (www.amsat.org)? I assume you are
>> aware of the need for gain required for you particular station. I
>> thought a linearly polarized 3 or 4 element Yagi was adequate. So, I
>> wonder if the complexity of making a crossed Yagi CP is justified when
>> that will have only 3 dB improvement with that same boom length.
>>
>> Jerry
> Jerry,
>
> All news to me, so far. The ARISS website suggested circular polarization
> and up to 100W. AMSAT is saying 3 elements and an HT. Quite a variation...
>
> Thanks for the hints, and I'll try listening for a while after I build
> something!
>
> 73,
> Steve
> W1KF

Hi Steve

AMSAT has special interest in schools. Have you read about that?

Jerry

2045. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 00:41:20 UTC
From: oeguet@gmx.de
Message-ID: <1182213680.368395.235200@o61g2000hsh.googlegroups.com>
Source record: 39848

Hi Richard,

I am really not happy with old stuff like NEC-Cards. And I do not want
do a lot of work. But a minimum of command set must be interpreted.
For the translation of primitive objects (#SP3, #SP4, #Horn, #Box,
#Tube, #Pipe, #SPArc), I am only using simple CM, CE, GW, SP, SC and
GM cards.
For symbols (variables) I am using only the extension SY of 4nec2.
Any other cards, that can not be detected from the parser, they are
simply passed through without changing. Of course, some comment line
transformation must also be done. Thats all.
Complex data type structures would explode the amount of work. I want
to keep the pre-processor as simple as possible. The pre-processor is
a NEC-processor and not a compiler.

However, there are some good ideas built in:
- fully symbolic (SY abc=..) NEC-code generation or hard wired
(calculated) NEC-code
- SP3 (triangle), SP4 (quadrilateral) can be divided into more small
peaces (segmentation)
- easy to use primitive objects
- complex (hierarchical) object transformation (move, rotation,
scaling does not work due to NEC limitation)
- surface-patch or wire-mode support, without changing the model
- hotspots, where parts of structures or locations can be masked out
(<-----!)
- generator modules (parabolic reflector, helix, etc.)
- program control commands
- programable antenna models

Again, I am not re-inventing C. I am only using the syntax whenever
possible. That is the difference.

Now, many old neglected deposits from the pre-processor must be
redesigned and improved. I am doing this step by step. Of course, a
good BNF notation and implementation would simplfy many things. I will
do this for the future version may be.

Regards,
Aziz

2046. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 01:09:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f57aq1$7ts$1@news.service.uci.edu>
Source record: 39849

Hi Steve -

The guys here ran a successful contact a few months ago. They used
their cubesat satellite setup. Here's a link to an article about it.

http://www.eng.uci.edu/node/1220

If you send me an email, I can put you in touch with the head of the
project who would be happy to supply all the info.

73, ac6xg

Steve Reinhardt wrote:

> Jerry Martes wrote:
>
>> "Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in
>> message news:Wfwdi.1$Ld6.0@newsfe03.lga...
>>
>>> I have read a circularly polarized Yagi is appropriate for ARISS
>>> communications. Is there a vendor that offers a crossed design? Or,
>>> better still, is there a construction article that I can refer to?
>>>
>>> What are you using for this type of communication?
>>>
>>> I'm trying to set up a contact for my son's school class.
>>>
>>> 73,
>>> Steve
>>> W1KF
>>
>>
>>
>> Hi Steve
>>
>> Have you contacted the AMSAT guys (www.amsat.org)? I assume you
>> are aware of the need for gain required for you particular station.
>> I thought a linearly polarized 3 or 4 element Yagi was adequate.
>> So, I wonder if the complexity of making a crossed Yagi CP is
>> justified when that will have only 3 dB improvement with that same
>> boom length.
>>
>> Jerry
>>
> Jerry,
>

> All news to me, so far. The ARISS website suggested circular
> polarization and up to 100W. AMSAT is saying 3 elements and an HT. Quite
> a variation...
>
> Thanks for the hints, and I'll try listening for a while after I
> build something!
>
> 73,
> Steve
> W1KF

2047. NEW EZNEC v.5.0 and EZNEC + 5.0 - Anyone...anyone ???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 01:22:36 UTC
From: Sum Ting Wong <sumtingwong@privacy.net>
Message-ID: <jibe735ptuvgtc389i1r24puseb66g4rhi@4ax.com>
Source record: 39850

Has anyone out here tried the new EZNEC v.5.0 or EZNEC + v.5.0 ??? I have EZNEC v.3 and am contemplating an upgrade but would appreciate any comments from users. There is a crippled test drive version for v.5.0 at www.eznec.com but there isn't one available for the + version.

Thanks.

S.T.W.

2048. Re: NEW EZNEC v.5.0 and EZNEC + 5.0 - Anyone...anyone ???

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 01:46:38 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <j6de739sfmeh96irmojdpj6ccepac7156s@4ax.com>
Source record: 39851

On Tue, 19 Jun 2007 01:22:36 GMT, Sum Ting Wong
<sumtingwong@privacy.net> wrote:

>Has anyone out here tried the new EZNEC v.5.0 or EZNEC + v.5.0 ??? I
>have EZNEC v.3 and am contemplating an upgrade but would appreciate
>any comments from users. There is a crippled test drive version for
>v.5.0 at www.eznec.com but there isn't one available for the +
>version.
>
>Thanks.
>
Have you checked the manual (help file) that comes with the demo
version? Knowing Roy it should explain the program operation in good
detail.

Danny, K6MHE

2049. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:09:01 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <1kee731ug1i79sdrq5sgpr9ofp9e93uv7a@4ax.com>
Source record: 39852

Correct me if I am wrong, but if you end feed a wire, it isn't a
dipole, its a monopole.

On Mon, 18 Jun 2007 10:42:08 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>Several authors recommend against
>end-fed dipoles because of alleged
>difficulties in matching to a 50-ohm
>line. Unfortunately, the "slur" is
>dropped without a hint of explanation.
>
>Other authors see it as simple and
>reliable, and recommend it with enthusiasm.
>
>A parallel tuned circuit with tapped
>inductor is usually the recommended
>impedance transformer.
>
>In my own experience, matching has
>always been extremely easy and
>trouble-free. So does anyone know why
>this might be thought so frought with
>problems that its general use would be
>discouraged?
>
>Chuck, NT3G
>
>>----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
>http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
>----= East and West-Coast Server Farms - Total Privacy via Encryption =----

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2050. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:30:16 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <46773fca$0$17200$39cecf19@news.twtelecom.net>
Source record: 39853

Dave wrote:
> "art" <aunwin@insightbb.com> wrote in message
> news:1182117138.036020.298490@n60g2000hse.googlegroups.com...
>> On 6 Jun, 18:00, Mike Coslo <mco...@youknow.comcast.net> wrote:
>>> richardharri...@webtv.net (Richard Harrison) wrote in
>>> news:28667-46639927-
>>> 4...@storefull-3256.bay.webtv.net:
>>>
>>>> Jimmy D wrote:
>>>> "Wouldn`t it be nice if Art did the comparison?"
>>>> Yes. I thought a Gaussian was a 17-sided polygon.
>>> heptakaidecagon?
>>>
>>> 73 de Mike KB3EIA -
>> Newsgroup members,
>> Thought I would give you another example to laugh at.
>> Looking at the 17th eddition of the ARRL Antenna handbook
>> page 11-18 I came across an optimised 20 metre antenna,
>> The shortest boom length was 16 feet for 3 element
>> and the spec was >20db F/B, SWR <2:1 and going for
>> maximum gain which amateurs seem to think is every
>> thing
>> The ARRL antenna achieved 7.5 dbi max
>> My antenna which is of GAUSSIAN form was also a 3 element
>> and achieved an average of 30 F/B and > 20 db worst case.
>> SWR was < 2:1 ofcourse ranging from 1.34 :1 worst case.
>> Gain figures were 11.45,11.3 and 10.9 dbi
>> The main lobe was 62 deg BW and TOA 14 degrees.
>> I didn't use the 16 foot boom length as the starting
>> point but held the beam to the required 3 elements.
>> So instead of using the ARRL 16 foot boom I used a
>> 8 foot boom. Again I forced the antenna into a planar
>> mode so a reasonable comparison could be made.
>> So have at it. Point out the areas of specs that
>> the antenna fails and have a laugh at the same time.
>> I'll leave you to find the deliberate error if
>> there is one so you can have your moment in the sun.
>> Art
>>
>
> define 'gaussian form'.
>
>

All I'd like to see is a couple real hard numbers. Like element length and position on boom.

And I'd bet lunch at Ruth's Chris, even though I don't like steak at all, that if the thing really shows the numbers Art claims, that the real drive point impedance is in the range of 5 ohms or less.

Come on Art, you won't give away a million dollar idea if you publish the construction details of an 8 foot long 3 element 20 meter beam. You will be able to squash anyone like a bug with your 30 foot version.

tom
K0TAR

2051. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:50:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f57ga4ehc1@nnrp.linuxfan.it>
Source record: 39854

Jim Lux wrote:

> ...
> And, any decent modeling code(s) will have extensive validation against
> range tests, so it's not much of a surprise when the antenna works as
> modeled. The surprises come from aspects that weren't modeled.

Jim:

Your text is interesting.

I went ahead and put together, on the little I could glean from the info on this, an antenna. I marked a pvc pipe on both sides, drilled it, and put the wire though, basically as a series of hair pin loops. "Tap'ed" it, obtained a 50 ohm match (had to use a variable cap) and it works, I need more data ...

I need a complete pic and data so I can duplicate his construction ... I have an open mind. However, this "thing" is so simple, it is better I confirm or reject "it" on my own observations ... it may, or may not, be nothing ...

Regards,
JS

2052. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:51:47 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <467744d4$0$17200$39cecf19@news.twtelecom.net>
Source record: 39855

Richard Clark wrote:
> On Mon, 18 Jun 2007 15:26:52 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
> wrote:
>
>> [Bingo, you've just said why your invention is "different" than Smith's]
>
> Here's another "different" antenna:
>
> To increase the directivity of such an antenna, a parasitic reflector
> element, usually tuned to a frequency slightly higher than the driver

Or maybe lower?

> resonant frequency, can be placed parallel to the driver element along
> the boom. For further increased directivity, one or more director
> elements, usually tuned to frequencies slightly lower than the driver

Or maybe higher?

> resonant frequency, can be placed at various distances along the boom
> on the other side of the driver element and parallel to the driver
> element.
>
> This is the world's first gaussian array.
>
> 73's
> Richard Clark, KB7QHC

tom
K0TAR

2053. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:52:43 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4677450c$0$17200$39cecf19@news.twtelecom.net>
Source record: 39856

Richard Clark wrote:
> On Mon, 18 Jun 2007 15:26:52 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
> wrote:
>
>> [Bingo, you've just said why your invention is "different" than Smith's]
>
> Here's another "different" antenna:
>
> To increase the directivity of such an antenna, a parasitic reflector
> element, usually tuned to a frequency slightly higher than the driver
> resonant frequency, can be placed parallel to the driver element along
> the boom. For further increased directivity, one or more director
> elements, usually tuned to frequencies slightly lower than the driver
> resonant frequency, can be placed at various distances along the boom
> on the other side of the driver element and parallel to the driver
> element.
>
> This is the world's first gaussian array.
>
> 73's
> Richard Clark, KB7QHC

Or maybe you had tongue planted firmly in cheek?

tom
K0TAR

2054. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:53:19 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-8EF9D1.19531818062007@newsclstr02.news.prodigy.com>
Source record: 39857
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182167099.993022.147870@q69g2000hsb.googlegroups.com>,
Denny <k8do@mailblocks.com> wrote:

> On Jun 17, 10:37 pm, Richard Clark <kb7...@comcast.net> wrote:
> > On Sun, 17 Jun 2007 15:19:59 -0700, Radium <gluceg...@gmail.com>
> > wrote:
> >
< Snip >
>
> I need a beer...

Nope. You just need to be added to the kill file.

Cheers.

< Plonk >

--
Telamon
Ventura, California

2055. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:54:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f57ghrehc2@nnrp.linuxfan.it>
Source record: 39859

Dave wrote:

> ...
> simple answer... its a 3 year old article, who do you know that is selling
> them? if they were anything special someone would have picked them up and
> started marketing them. speaking of which, who have you lined up to sell
> your 'gaussian' designs art? can you even define it yet??

Funny you should mention that ... I tore apart last years cell phone.
There is a strange looking "antenna" which is etched onto the pcb
board--strikingly similar to what "he" (the guy with the "weird antenna"
) has described ...

JS

2056. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 02:54:49 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <juHdi.167$ra.119@bignews4.bellsouth.net>
Source record: 39858

"Chuck" <no.spam@no.spam.at.all> wrote in message
news:1182176945_17999@sp12lax.superfeed.net...
> Several authors recommend against end-fed dipoles because of alleged
> difficulties in matching to a 50-ohm line. Unfortunately, the "slur" is
> dropped without a hint of explanation.
>
> Other authors see it as simple and reliable, and recommend it with
> enthusiasm.
>
> A parallel tuned circuit with tapped inductor is usually the recommended
> impedance transformer.
>
> In my own experience, matching has always been extremely easy and
> trouble-free. So does anyone know why this might be thought so frought
> with problems that its general use would be discouraged?
>
> Chuck, NT3G

Take a google at "J-Poles" - an end-fed half-wave. (I'm reluctant to call it
a dipole.)
The 2-meter version of the j-pole is used by bunches of folks.
The matching section at the bottom allows hooking it up to 50-ohm cable.
I have not tried it on lower frequencies. But hey - making antennas is fun,
so get hold of an antenna analyzer, and play
eee ha

2057. Re: Yagi Question: Freq. Coverage Range

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 03:00:55 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <0AHdi.169$ra.46@bignews4.bellsouth.net>
Source record: 39860

"Robert11" <rgsros@notme.com> wrote in message
news:RLWdnU5HbaTgauvbnZ2dnUVZ_vqpnZ2d@comcast.com...
> Hello,
>
> Is the freq range of 156 to 163 MHz (receive only) too much to probably
> consider a yagi for ?
>
> If so, any suggestions for type(s) that have intrinsic Gain ?
>
> Can, and probably should be, be very directional.
>
> Thanks,
> Bob

I would say - try a quad instead. and use copper tubing to help make it
broad-band.

2058. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 03:05:47 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f57h6nhqo1@nnrp.linuxfan.it>
Source record: 39861

Richard Clark wrote:

> ...
> This is the world's first gaussian array.
>
> 73's
> Richard Clark, KB7QHC

Richard:

From my time here, I have learned to love you, present wife is worried!
ROFLOL

Anyway, in the land yacht, I use a "boosted antenna" which utilizes a
mars device--works surprisingly well, and was purchased at a flea market
for ~$10 bucks. The thing is crap ... at least technically!

I know it should not work as well as it does, XYL wants me to replace it
with a mobile direct tv setup--hey, what can I say, I believe in fairy
tales?

Anyway, I was able to watch the lost tv series on it when we went to
visit family ...

I have time to play with such, it keeps me out of jail. :-)

Regards,
JS

2059. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 03:07:30 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f57h9sehc3@nnrp.linuxfan.it>
Source record: 39862

oeguet@gmx.de wrote:
>> Keep it, I'll write my own ... :-)
>>
>> Regards,
>> JS
> Ok, I will wait for your ones and save time and effort.
> ;-)
> Aziz
>

LOL!

You flatter me, however, if I don't have to provide user support ... OK!

Regards,
JS

2060. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 03:08:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f57hcaehc4@nnrp.linuxfan.it>
Source record: 39863

Richard Clark wrote:
> On Mon, 18 Jun 2007 02:27:28 -0700, oeguet@gmx.de wrote:
>
>> Sorry Richard,
>>
>> no source code will be available for anybody. Only binaries and
>> antenna models.
>> But the expression-syntax is shown below:
>> (you must convert the text below to courier font, to see the diagram
>> right).
>
> Hi Aziz,
>
> OK, all pretty conventional stuff 30 years ago. So what is the
> problem with abstracting a symbolic wrapper to level 1 to make it
> generally useful?
>
> As I said, there's no reason why your work can't survive, my question
> was why do you simply re-invent C, a language as dead to antenna
> designers as Sanskrit?
>
> 73's
> Richard Clark, KB7QHC

Richard, I'd like you a whole lot more if you would just pick up the "C"
syntax and quit your complaining <grin!>

Regards,
JS

2061. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 06:36:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1rte73da6nmlb7qv8ll7hkhkhda0djmqa1@4ax.com>
Source record: 39864

On Mon, 18 Jun 2007 21:52:43 -0500, Tom Ring <news0003@taring.org>
wrote:

>Richard Clark wrote:
>> On Mon, 18 Jun 2007 15:26:52 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
>> wrote:
>>
>>> [Bingo, you've just said why your invention is "different" than Smith's]
>>
>> Here's another "different" antenna:
>>
>> To increase the directivity of such an antenna, a parasitic reflector
>> element, usually tuned to a frequency slightly higher than the driver
>> resonant frequency, can be placed parallel to the driver element along
>> the boom. For further increased directivity, one or more director
>> elements, usually tuned to frequencies slightly lower than the driver
>> resonant frequency, can be placed at various distances along the boom
>> on the other side of the driver element and parallel to the driver
>> element.
>>
>> This is the world's first gaussian array.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Or maybe you had tongue planted firmly in cheek?

Hi Tom,

It support's Arthur's faith in the PTO giving authority to invention:
>>>As a side note, one of my past PTO examinas did not know the
>>>difference
>>>between parallel and series circuit but that is O.K.

Of course, Arthur also leand on their credibility to recognize
something "different:"
>>>The patent was accepted by the PTO so on the surface it would
>>>appear that there is something new here even if the experts are
>>>baying at the moon ahead of time knowing that all is known about
>>>antennas.

Considering that the PTO can be condemned and praised for the same
thing is about as clarifying as his explanation for gaussian antenna
theory. The original quote above (drawn from an actual patent that

teaches the "different" antenna theory of the inventor) has its problems too, of course, but its "difference" makes it patentable. Afterall, who could possible beat him in the marketplace by stealing this idea?

73's
Richard Clark, KB7QHC

2062. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 06:40:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <shue73p6k9k9jj2s8p307gbno7ul2rtl5f@4ax.com>
Source record: 39865

On Mon, 18 Jun 2007 20:08:49 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Richard, I'd like you a whole lot more if you would just pick up the "C"

Nutz! And I thought I had the bathing suit competition in the palm of
my hand.

73's
Richard Clark, KB7QHC

2063. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 07:34:59 UTC
From: nm5k@wt.net
Message-ID: <1182238499.822811.258510@k79g2000hse.googlegroups.com>
Source record: 39866

On Jun 18, 10:36 pm, art <aun...@insightbb.com> wrote:

>
> > Come on Art, you won't give away a million dollar idea if you publish
> > the construction details of an 8 foot long 3 element 20 meter beam. You
> > will be able to squash anyone like a bug with your 30 foot version.
>
> > tom
> > K0TAR- Hide quoted text -
>
> > - Show quoted text -
>
> No,No.No. The criteria used by the arrl woulod not allow me to do
> that.

What does the ARRL have to do with anything?
Besides, they are just a bunch of lowly amateurs..
According to you, the likelyhood of them understanding a
word you say is slim..
I agree really, but fer different reasons... :/

> I never go below 20 ohms so I can use a 2:1 balun.
> Actualy I just added another element to make it 4 el on a 8 foot boom
> I havent finished it yet but at the moment it is around 40 ohms, less
> than 2:1 swr
> F/B is 30 db worst case and the gain is about 1/2 db more than the
> three element.

F/B is easy to get with a short boom.. Big deal..

> The elements are std length as per a yagi but bent a bit so they
> are all in equilibrium.

I love it when you talk like that...There is something about the word
"equilibrium" that reminds me of Pleasant Valley®.. Where all is
at peace in the universe, and the skies are not cloudy all day...
We can all sit around the campfire and sing, home, home on the
range! Where the fractals and the gaussians play!
Where seldom is heard, a coherant word, and I'll probably wanna
stay drunk all day!
That way I can fit in better..
Well, I digress... back to the jibber jabber at hand...

> Tom what you don't
> realise
> is that the boom length on a Yagi is to focus the main lobe, it does

> not
> supply an increase in actual radiation so getting 11dbi with a 8 foot
> boom
> is no big deal as the gain is limited regardles of boom length or
> elements used.

This is the statement which drew my attention.. Shame on the mess...
You think I can't get more than 11 dbi with a yagi? I've got models
of some for 70 cm that do 17 dbi, and I haven't even manually tweaked
them yet.. I can make ones that do more too..
The addition of gain does not stop at some specific boom length.
It does decrease bit by bit as you add each element, but you can
sure get a lot more gain from a yagi than you advertise.
And adding more boom length and elements does add more gain ,
although the payoff diminishes to the point where it's not worth
doing for a single antenna. They start stacking them when they
get to that point.
You keep talking about these short boom things and acting like
there is no more gain to be had by adding more elements..
That #$%@ ain't right, as the song by the Saddlesores goes..
MK

2064. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 07:57:12 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <d-ydnaO5_drKDOrbnZ2dnUVZ_s2vnZ2d@giganews.com>
Source record: 39867

NotMe wrote:
>
> Dave wrote:
> > go for it. 8x is just fine for hf unless maybe you are planning to run
> > 1500w rtty ragchewing on 10m on a hot day.
> >
> > NotMe wrote:
> >>I need some help me with a decision on which coax to purchase. I'm a
new
> >>General Class ham and am planning my HF setup.
> >>
> >> The standard coax seems to be RG-8. I'm curious if I use Belden RG-8X
> >> (9258), will there be that much difference in performance at about 100'
> >> of coax as compared to using RG-8? I want to use the RG-8X because the
> >> smaller diameter coax will allow me to feed the coax easier into my
> >> house. I suppose I could try to get the RG-8 in the house, but the
place
> >> where I want to bring it in only has minimal space and the RG-8X will
fit
> >> just right.
> >>
> >> Thanks.
> >>
> >
> >
>
>
> My setup now only has the stock radio at 100 watts.
>

If you're not running l-o-n-g runs at 30MHz, RG-58/U will work fine. It's rated at 250W up to 30MHz, is widely available, less expensive, and smaller diameter (0.21" vs 0.25") than RG-8X. It will also allow you to use a decent easy-to-use crimp-on connector (Amphenol #83-58FCP-RFX). The only caveat is that some versions of '58 are *really* cheesy -- mainly poor shielding (as bad as only 60% shield coverage). The better cables will have >95% shield coverage.

Whatever cable you go with, for outdoor use, you'll be smart to use one that is UV-resistant (sometimes described as having a "non-contaminating jacket"). You'll also want a stranded center conductor, to handle flexing better. All RG8X cables are stranded, some other types aren't always stranded. Davis RF (http://www.davisrf.com/) is a good vendor for coaxial cable & wire antenna parts -- reasonable pricing and excellent customer service. However, they don't handle the crimp plugs (Digi-Key has 'em).

73,
Bryan WA7PRC

2065. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 09:11:38 UTC
From: LA4RT Jon Kåre Hellan <dev@null.com>
Message-ID: <1m3b0o5mwl.fsf@persaunet.uninett.no>
Source record: 39868

Jim Lux <james.p.lux@jpl.nasa.gov> writes:

> nm5k@wt.net wrote:
>> I did away with the helical windings on mine. And I
>> still have good current distribution.
>> And slightly less loss.
>>
>
> But then you would have something that is prior art.

It isn't prior art just because you did it.
It isn't even prior art if you can prove you did it.
It is only prior art if you published it. Or you can prove in some
other way that the idea was well known among those skilled in the art,
or obvious to them.

73
Jon

2066. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 11:27:23 UTC
From: Steve Reinhardt <stevereinhardt@noearthspamlink.net>
Message-ID: <Y4Pdi.171$su3.103@newsfe12.lga>
Source record: 39869

All good info, folks, thanks.

I'll look into this as as soon as I get back from my trip.

73,
Steve
W1KF

Jim Kelley wrote:
> Hi Steve -
>
> The guys here ran a successful contact a few months ago. They used
> their cubesat satellite setup. Here's a link to an article about it.
>
> http://www.eng.uci.edu/node/1220
>
> If you send me an email, I can put you in touch with the head of the
> project who would be happy to supply all the info.
>
> 73, ac6xg
>
>

2067. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 11:28:27 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182252507.359024.113790@q69g2000hsb.googlegroups.com>
Source record: 39870
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 18, 10:53 pm, Telamon
<telamon_spamshi...@pacbell.net.is.invalid> wrote:
> In article <1182167099.993022.147...@q69g2000hsb.googlegroups.com>,
>
>
>
> Denny <k...@mailblocks.com> wrote:
> > On Jun 17, 10:37 pm, Richard Clark <kb7...@comcast.net> wrote:
> > > On Sun, 17 Jun 2007 15:19:59 -0700, Radium <gluceg...@gmail.com>
> > > wrote:
>
> < Snip >
>
> > I need a beer...
>
> Nope. You just need to be added to the kill file.
>
> Cheers.
>
> < Plonk >
>
> --
> Telamon
> Ventura, California

Oh gawd, now my life is over....

denny / k8do

2068. getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 11:42:22 UTC
From: eganders <eganders@yahoo.com>
Message-ID: <1182253342.688113.245470@g4g2000hsf.googlegroups.com>
Source record: 39871

I am a consultant for an AVL (automatic vehicle location system) system used by the Southeastern counties of Michigan. The system is used on winter maintenance vehicles and works on 900 MHz. The vehicles are often stored overnight in metal buildings where it is difficult to obtain transceiver communication from the AVL system. Is there a low cost (possibly passive) way to port 900 MHz radio transmissions into these buildings?

Thanks,

Eric Anderson

2069. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 13:16:30 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182258207_22541@sp12lax.superfeed.net>
Source record: 39873

Thanks for interesting comments by all.

My question was prompted by reports of alleged matching difficulties, rather than by questions of general utility, feasibility, or ancillary problems. For example, Lee's Vertical Antenna Handbook discusses various conventional matching circuits for vertical antennas. For the half-wave vertical, he comments tersely that "It is difficult to match well and should be avoided if possible". (page 25, 2d edition; context makes clear he is referring to end- or base-feeding) He shows the usual parallel tuned circuit with tapped inductor as the appropriate matching device.

Although Lee doesn't logically link his assertion of matching difficulty with his admonition of avoidance, he conjoined them in the same sentence with abandon or intent. My interest is limited to the allegation of matching difficulty.

BTW, I was assuming a half-wave, horizontal antenna, one end of which is brought directly into the shack with no intervening transmission line. Definitely not a dipole, but not a monopole either, I suspect. There are some reports out there of RF in the shack with this arrangement, but who has experienced matching problems?

So if there were no common mode issues, the directly end-fed, half-wave wire would be an equal opportunity candidate along with the traditional dipole for the same radiator geometry? Or is that like saying if it weren't for gravity I could fly?

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2070. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 14:02:02 UTC
From: Jeff Dieterle <djdieterle@localnet.com>
Message-ID: <137fko9n8m04gfd@corp.supernews.com>
Source record: 39872

Hi John KD5YI,
Thanks for the link. That's the info I needed.
Jeff

"_._ _.. ..... _.__ .." <groups5not@verizon.net> wrote in message
news:7uAdi.1520$AR5.1490@trnddc06...
>
> "Jeff Dieterle" <djdieterle@localnet.com> wrote in message
> news:137cqmmi6lahbe6@corp.supernews.com...
>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>> planning to use a Channel Master rotor which I haven't purchased yet.
>> I've buried 1"pvc conduit to tower and planning the wire pull for the
>> antenna & satellite coax plus the rotor cable. From my research 3c/22ga.
>> wire will control all C M rotors. Since I don't know the power
>> requirements yet of the un-purchased rotor I can't calculate the voltage
>> drop on appx. 500ft of 22 ga wire to see if it will be sufficient. Can
>> somebody either reply with the typical C M rotor current/voltage/watts or
>> first hand knowledge of the correct wire gauge for a 500ft run. Thanks
>> Jeff
>
>
> Hi, Jeff -
>
> I could find only one rotator on the Channel Master Web site. The manual
> for it is
> http://www.pctinternational.com/channelmaster/0612/pdfs/manual_9521_37.pdf
> and page 1 tells required wire size vs length. Looks like you need 18ga.
>
> Cheers,
> John KD5YI
>

2071. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 14:05:45 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <1pRdi.10$P41.8@newsfe12.lga>
Source record: 39875

> I am not disapointed
> that the headhunters have not come after me, after all I am a fraud.
> Regards
> Art
>

Finally some sense :-)

bada goosian BUm

2072. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 14:13:33 UTC
From: Jeff Dieterle <djdieterle@localnet.com>
Message-ID: <137fldsptpb1o85@corp.supernews.com>
Source record: 39874

Hi Nick,
Not sure where you going with the larger conduit and what type of losses. From my limited knowledge, conduit fill is a function of the rated wire ampacity and the resultant I-sqr'd-R loss if the wire is pushed to rated ampacity, which shouldn't be an issue on the coax, and a later poster replied with the correct rotor wire size. If you talking about signal loss on RG6 over that distance I've had that cable laying on the ground to the tower location for a couple of years and get a strong signal, physical damage to the exposed wire is the problem. I assumed the coax shielding, properly grounded would take care of problems running in the same conduit with Sat. TV and Rotor wiring
Please reply if you have more insight on this.
Thanks Jeff

"Nick" <a@b.com> wrote in message
news:gpwdi.1712$_14.1383@newsfe2-gui.ntli.net...
>
> "Jeff Dieterle" <djdieterle@localnet.com> wrote in message
> news:137cqmmi6lahbe6@corp.supernews.com...
>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>> planning to use a Channel Master rotor which I haven't purchased yet.
>> I've buried 1"pvc conduit to tower and planning the wire pull for the
>> antenna & satellite coax plus the rotor cable. From my research 3c/22ga.
>> wire will control all C M rotors. Since I don't know the power
>> requirements yet of the un-purchased rotor I can't calculate the voltage
>> drop on appx. 500ft of 22 ga wire to see if it will be sufficient. Can
>> somebody either reply with the typical C M rotor current/voltage/watts or
>> first hand knowledge of the correct wire gauge for a 500ft run. Thanks
>> Jeff
>>
>
> I wonder if a larger conduit would be desirable for a larger diameter
> co-axes, else the losses might be
> unacceptable and to fit all these cable in - is it OK to run these so
> closely together over such a long distance ?
>
> Nick
>

2073. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 14:33:44 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <cPRdi.2837$Zh6.2290@trnddc04>
Source record: 39877

"eganders" <eganders@yahoo.com> wrote in message
news:1182253342.688113.245470@g4g2000hsf.googlegroups.com...
>I am a consultant for an AVL (automatic vehicle location system)
> system used by the Southeastern counties of Michigan. The system is
> used on winter maintenance vehicles and works on 900 MHz. The
> vehicles are often stored overnight in metal buildings where it is
> difficult to obtain transceiver communication from the AVL system. Is
> there a low cost (possibly passive) way to port 900 MHz radio
> transmissions into these buildings?
>
> Thanks,
>
> Eric Anderson

Hi Eric

How inconvenient would it be to use two antennas, one inside and one
outside, with coax connecting them, and *try it*?

Jerry

2074. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 14:58:55 UTC
From: Bill Ogden <wogden@attglobal.net>
Message-ID: <0vRdi.13$P41.7@newsfe12.lga>
Source record: 39876

FWIW, I worked ARISS with 50 watts and a simple ground plane. They were about 400 miles away (ground distance) and said I had full quieting. It was an almost random contact. A web site mentioned that they were active; I turned on my little FM rig and there he was. No one else called and we chatted for about two minutes.

Bill - W2WO

2075. Re: Antenna programming tool/language/compiler/preprocessor?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 15:08:21 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f58rhfrgq1@nnrp.linuxfan.it>
Source record: 39878

Richard Clark wrote:

> ...
> Nutz! And I thought I had the bathing suit competition in the palm of
> my hand.
>
> 73's
> Richard Clark, KB7QHC

ROFLOL!

Regards,
JS

2076. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 15:39:03 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf7fu4n.31kt.bit-bucket@shell.config.com>
Source record: 39780

On 18 Jun 2007 21:40:29 GMT, Allodoxaphobia wrote:
> On Mon, 18 Jun 2007 07:25:26 -0500, Jeff Dieterle wrote:
>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>> planning to use a Channel Master rotor which I haven't purchased yet. I've
>> buried 1"pvc conduit to tower and planning the wire pull for the antenna &
>> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
>> control all C M rotors. Since I don't know the power requirements yet of the
>> un-purchased rotor I can't calculate the voltage drop on appx. 500ft of 22
>> ga wire to see if it will be sufficient. Can somebody either reply with the
>> typical C M rotor current/voltage/watts or first hand knowledge of the
>> correct wire gauge for a 500ft run. Thanks Jeff

[Dunno what happened to the text of my original followup, so ...]

What I do is wait for one of the Big Box Stores to have a loss leader
sale on 100' extension cords. They'll usually be 16 ga. -- sometimes
you'll see 14 ga. My rotator requires 5-conductor -- so I buy two
100-footers and parallel the two green wires -- which are usually a
smaller guage than the other two.

WFM
HTH
73
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

2077. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 15:44:53 UTC
From: tclay@qmc.ph.msstate.edu
Message-ID: <86bqfcuex6.fsf@qmc.ph.msstate.edu>
Source record: 39782

>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>> planning to use a Channel Master rotor which I haven't purchased yet. I've
>> buried 1"pvc conduit to tower and planning the wire pull for the antenna &
>> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
>> control all C M rotors. Since I don't know the power requirements yet of the
I use all Ham-3 and Ham-4 type rotators which need 8 conductors. Only
two of those (which run the motor) need to be larger size. For long runs to
the tower I use Romex #14 for the motor wires and CAT5 for the other 6.
Cheaper than buying "heavy-duty" rotator cable.

BTW on VHF/UHF you probably want some serious hardline for the RF link if
you are looking at a 500' cable run.

Tor
N4OGW

2078. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 15:46:58 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182268018.457194.65490@p77g2000hsh.googlegroups.com>
Source record: 39781

On Jun 18, 4:57 pm, Jim Kelley <jwkel...@uci.edu> wrote:
> Two points here, one, I do not speak for others and they do not speak
> for me. Two, you do not speak for others as they do not speak for
> you. Please use quotes when referring to what I said.

Again, the pot calling the kettle black. In many replies to my
postings, you tell me what I have said in the past without quoting
anything I actually said. Why don't you hold yourself to the same
standards that you demand of me? I will honor your standard when you
begin to pay it more than lip service.
--
73, Cecil, w5dxp.com

2079. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 16:07:49 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182269269.662549.24740@k79g2000hse.googlegroups.com>
Source record: 39783

On Jun 18, 5:03 pm, Jim Higgins <inva...@invalid.invalid> wrote:
> Cecil, I challenge you to produce a link to a statement by anyone who
> said the above, including the words "The theory was never wrong" or
> words inarguably to that effect.

I already did that, Jim, twice now. If theories are "never discarded",
then it logically follows that theories are never wrong. If a theory
or any part of a theory is ever wrong, hindsight tells us that it was
only a hypothesis to start with, not a theory. Thus the ether theory
was not a theory at all. The atomic theory was not a theory at all.
The red shift theory of the expansion of the universe may not be a
theory at all and may have to be demoted to a hypothesis in order to
prove that theories are never wrong.
--
73, Cecil, w5dxp.com

2080. To James From Robert11 Re Yagi, etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 16:33:38 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <SaGdnXFXwNdomeXbnZ2dnUVZ_r-onZ2d@comcast.com>
Source record: 39784

Hi,

I truly apologize for not acknowledging your post, and the others.

First, let me say that I sincerely appreciate all the help, the replies, and certainly the time everyone took
to help me out. I am truly appreciative.

Usually, I always send a "thank you" to everyone, on any Group, that has taken the trouble to help me.
Frankly, I've kind of been waiting for the thread to "bottom-out" as well as being able to read the replies, before doing so.

The problem is I'm in my 70's now, and can't always use the PC as often as I like.
Or, read all the answers as often as I would like.

Hard to believe how these years catch up with you, and some of the limitations it apparently brings.

However, I still want to learn, and antenna theory is one area (among many) that I am particularly weak in.

So, please give me a while to read, and more important, digest, all the info. provided.
Will certainly look seriously into the various antennas suggested.

Again, thank you all very, very much.

Bob

2081. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 17:06:09 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <52Udi.101413$Sa4.2444@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39785

LA4RT Jon Kï¿½re Hellan wrote:
> Jim Lux <james.p.lux@jpl.nasa.gov> writes:
>
>> nm5k@wt.net wrote:
>>> I did away with the helical windings on mine. And I
>>> still have good current distribution.
>>> And slightly less loss.
>>>
>> But then you would have something that is prior art.
>
> It isn't prior art just because you did it.
> It isn't even prior art if you can prove you did it.
> It is only prior art if you published it. Or you can prove in some
> other way that the idea was well known among those skilled in the art,
> or obvious to them.
>
> 73
> Jon

That is completely incorrect in the US. Publication is NEVER required with respect to establishing prior art. At least two things automatically support "prior art" status:

1) Valid documentation (but not necessarily publication) of the prior art. This usually means something like a lab notebook entry, witnessed by others.

2) Shipping a product that contains the prior art. No notification or publication is required.

There are undoubtedly other means of establishing prior art that do not require "publication". In the US, establishing prior art is a matter for courts and lawsuits, so YMMV.

73,
Gene
W4SZ

2082. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 17:11:18 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <W6Udi.101424$Sa4.2731@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39786

Cecil Moore wrote:
> On Jun 18, 5:03 pm, Jim Higgins <inva...@invalid.invalid> wrote:
>> Cecil, I challenge you to produce a link to a statement by anyone who
>> said the above, including the words "The theory was never wrong" or
>> words inarguably to that effect.
>
> I already did that, Jim, twice now. If theories are "never discarded",
> then it logically follows that theories are never wrong. If a theory
> or any part of a theory is ever wrong, hindsight tells us that it was
> only a hypothesis to start with, not a theory. Thus the ether theory
> was not a theory at all. The atomic theory was not a theory at all.
> The red shift theory of the expansion of the universe may not be a
> theory at all and may have to be demoted to a hypothesis in order to
> prove that theories are never wrong.
> --
> 73, Cecil, w5dxp.com
>

Cecil,

This is really funny.

You just cannot do it, can you?

You rarely argue directly against someone's quote. You rephrase the issue "logically" into your own strawman, and then knock it down. A good debating trick, but not very effective here.

8-)

73,
Gene
W4SZ

2083. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 18:27:53 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f59779$t9b$2@nntp1.jpl.nasa.gov>
Source record: 39787

Steve Reinhardt wrote:
> Jerry Martes wrote:
>
>> "Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in
>> message news:Wfwdi.1$Ld6.0@newsfe03.lga...
>>
>>> I have read a circularly polarized Yagi is appropriate for ARISS
>>> communications. Is there a vendor that offers a crossed design? Or,
>>> better still, is there a construction article that I can refer to?
>>>
>>> What are you using for this type of communication?
>>>
>>> I'm trying to set up a contact for my son's school class.
>>>
>>> 73,
>>> Steve
>>> W1KF
>>
>>
>>
>> Hi Steve
>>
>> Have you contacted the AMSAT guys (www.amsat.org)? I assume you
>> are aware of the need for gain required for you particular station.
>> I thought a linearly polarized 3 or 4 element Yagi was adequate.
>> So, I wonder if the complexity of making a crossed Yagi CP is
>> justified when that will have only 3 dB improvement with that same
>> boom length.
>>
>> Jerry
>>
> Jerry,
>
> All news to me, so far. The ARISS website suggested circular
> polarization and up to 100W. AMSAT is saying 3 elements and an HT. Quite
> a variation...

that's the difference between "maybe I can hit them with a HT in the
parking lot" and "Guaranteed contact with lots of link margin in front
of a crowd of expectant school children and news media"

2084. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 19:02:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u79g735nqtpq591ju080he66qiqv2nut7f@4ax.com>
Source record: 39788

On Tue, 19 Jun 2007 09:16:30 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>BTW, I was assuming a half-wave,
>horizontal antenna, one end of which is
>brought directly into the shack with no
>intervening transmission line.
>Definitely not a dipole, but not a
>monopole either, I suspect.

Hi Chuck,

It is merely an off-center dipole that hasn't come out of the closet.
The wiring in your shack supplies that other half, and supports the
common mode current/voltage.

>There are
>some reports out there of RF in the
>shack with this arrangement, but
>who has experienced matching problems?

The complaints made here are far from sparse. On the other hand,
those who don't notice, don't complain. I will bet you have one
outlet in your home with inverted neutral/hot and a floating ground.
Does it bother how your lamp works? Plug in a toaster and reach for
the faucet and the morgue attendant will tie a nice card to your toe.

Some folks have common mode complaints, others don't.

>So if there were no common mode issues,
>the directly end-fed, half-wave wire
>would be an equal opportunity candidate
>along with the traditional dipole for
>the same radiator geometry? Or is that
>like saying if it weren't for gravity I
>could fly?

For wires less than 5/8ths (end-to-end), you have to work (or screw
up) damned hard to gain or lose half a dB from the typical lobe
geometry. I will be generous and call it a whole dB, but that is
barely the width of your S-meter's needle. There are other things to
worry about in life, like that outlet with a floating ground. In that
vein, you stand to come out ahead if you seriously examine your
shack's quality of ground for all applications.

73's
Richard Clark, KB7QHC

2085. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 19:08:15 UTC
From: You <You@shadow.orgs>
Message-ID: <You-B47013.11081519062007@netnews.worldnet.att.net>
Source record: 39789

In article <cPRdi.2837$Zh6.2290@trnddc04>,
"Jerry Martes" <j.jmartes@verizon.net> wrote:

> "eganders" <eganders@yahoo.com> wrote in message
> news:1182253342.688113.245470@g4g2000hsf.googlegroups.com...
> >I am a consultant for an AVL (automatic vehicle location system)
> > system used by the Southeastern counties of Michigan. The system is
> > used on winter maintenance vehicles and works on 900 MHz. The
> > vehicles are often stored overnight in metal buildings where it is
> > difficult to obtain transceiver communication from the AVL system. Is
> > there a low cost (possibly passive) way to port 900 MHz radio
> > transmissions into these buildings?
> >
> > Thanks,
> >
> > Eric Anderson
>
>
> Hi Eric
>
> How inconvenient would it be to use two antennas, one inside and one
> outside, with coax connecting them, and *try it*?
>
> Jerry
>
>

Yep, Passive Repeaters are the way to go.......just make sure you use
extreamly Low Loss Coax, and very good Connectors......

2086. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 19:51:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f59cotre1@news.service.uci.edu>
Source record: 39790

Cecil Moore wrote:
> On Jun 18, 4:57 pm, Jim Kelley <jwkel...@uci.edu> wrote:
>
>>Two points here, one, I do not speak for others and they do not speak
>>for me. Two, you do not speak for others as they do not speak for
>>you. Please use quotes when referring to what I said.
>
>
> Again, the pot calling the kettle black. In many replies to my
> postings, you tell me what I have said in the past without quoting
> anything I actually said. Why don't you hold yourself to the same
> standards that you demand of me? I will honor your standard when you
> begin to pay it more than lip service.

Cecil -

Since you can't provide an instance in which I disagreed with an IEEE definition, perhaps you'll be a gentleman and retract your comments.

Thanks,

Jim, AC6XG

2087. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 20:27:39 UTC
From: Nick <a@b.com>
Message-ID: <%_Wdi.609$KE1.329@newsfe1-win.ntli.net>
Source record: 39791

"Jeff Dieterle" <djdieterle@localnet.com> wrote in message
news:137fldsptpb1o85@corp.supernews.com...
> Hi Nick,
> Not sure where you going with the larger conduit and what type of losses.
> From my limited knowledge, conduit fill is a function of the rated wire
> ampacity and the resultant I-sqr'd-R loss if the wire is pushed to rated
> ampacity, which shouldn't be an issue on the coax, and a later poster
> replied with the correct rotor wire size. If you talking about signal
> loss on RG6 over that distance I've had that cable laying on the ground to
> the tower location for a couple of years and get a strong signal, physical
> damage to the exposed wire is the problem. I assumed the coax shielding,
> properly grounded would take care of problems running in the same conduit
> with Sat. TV and Rotor wiring
> Please reply if you have more insight on this.
> Thanks Jeff
>

Hi Jeff,

I may have read it wrong, but I understand that the run from the shack to
the tower
is some 400 feet, and the conduit is one inch diameter...

This to take a feeder (presumably co-ax) and a rotator control cable and
possibly a separate
co-ax for the satellite ?

I would have thought the co-ax would have to be quite a large diameter to
minimise losses, and this
with the other one (or two ?) cables down a 1" conduit that long just struck
me as completely impossible
and possibly undesirable from interaction effects ?

Nick

2088. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 20:44:03 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182285843.270321.23320@x35g2000prf.googlegroups.com>
Source record: 39793
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 18, 11:05 am, mzen...@eskimo.com (Mark Zenier) wrote:

> 1. What is the energy of a photon at 150 kHz?

6.2 X 10^-10 eV

2089. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 20:45:15 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182285130_24137@sp12lax.superfeed.net>
Source record: 39792

Hello Richard,

> Richard Clark wrote:
> It is merely an off-center dipole that hasn't come out of the closet.
> The wiring in your shack supplies that other half, and supports the
> common mode current/voltage.
>

Interesting concept. Not technically a
dipole, though. But similarly true of
less-than-perfect, center-fed dipoles, no?

>
> The complaints made here are far from sparse.

I've seen no complaints here at all
about matching difficulties. Even
posters who had used the antenna omitted
matching difficulties from their
reported experiences.

On the other hand,
> those who don't notice, don't complain. I will bet you have one
> outlet in your home with inverted neutral/hot and a floating ground.
> Does it bother how your lamp works?

I understand. But I really hoped to talk
about matching difficulties and find
myself awash in discussions of potential
common mode currents, about which I have
no truck. ;-)

> Some folks have common mode complaints, others don't.

Sure. And I'd extend that to real,
center-fed dipoles with less than
perfect transmission line/antenna
symmetry. All a matter of degree?

>
> For wires less than 5/8ths (end-to-end), you have to work (or screw
> up) damned hard to gain or lose half a dB from the typical lobe
> geometry. I will be generous and call it a whole dB, but that is
> barely the width of your S-meter's needle. There are other things to
> worry about in life,

Agreed.

like that outlet with a floating ground.
In that
> vein, you stand to come out ahead if you seriously examine your
> shack's quality of ground for all applications.

I'd do it immediately if it would help
explain the alleged matching
difficulties. ;-)

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2090. Re: To James From Robert11 Re Yagi, etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 21:03:26 UTC
From: James <jnipperxxx@nospamfdn.com>
Message-ID: <bYudnW3U_u4D2eXbnZ2dnUVZ_q6vnZ2d@comcast.com>
Source record: 39794

No problem Bob !! I think that the antenna from Arrow is very reasonably priced for what it is, and the company has a very good reputation. This antenna would be quite directional. I have used a similar ham antenna in the 2 meter (146 mhz) band, and it has very very good gain, and is quite directional.

As others have said, height is the most important thing. But, if you can't do that, then I think the next best thing is the yagi antenna.

Good luck !!

73 de Jim K4PYT

2091. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:38:53 UTC
From: Jeff Dieterle <djdieterle@localnet.com>
Message-ID: <137gj0u5lo9rt9f@corp.supernews.com>
Source record: 39795

Man you gotta help me here....

>BTW on VHF/UHF you probably want some serious hardline for the RF link if
> you are looking at a 500' cable run.

I'm just an old retired grunt electrician
Thanks
Jeff

<tclay@qmc.ph.msstate.edu> wrote in message
news:86bqfcuex6.fsf@qmc.ph.msstate.edu...
>>> I'm installing a 60ft tower about 400ft from my house for uhf/vhf. I'm
>>> planning to use a Channel Master rotor which I haven't purchased yet.
>>> I've
>>> buried 1"pvc conduit to tower and planning the wire pull for the antenna
>>> &
>>> satellite coax plus the rotor cable. From my research 3c/22ga. wire will
>>> control all C M rotors. Since I don't know the power requirements yet of
>>> the
> I use all Ham-3 and Ham-4 type rotators which need 8 conductors. Only
> two of those (which run the motor) need to be larger size. For long runs
> to
> the tower I use Romex #14 for the motor wires and CAT5 for the other 6.
> Cheaper than buying "heavy-duty" rotator cable.
>
> BTW on VHF/UHF you probably want some serious hardline for the RF link if
> you are looking at a 500' cable run.
>
> Tor
> N4OGW

2092. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:42:30 UTC
From: Jeff Dieterle <djdieterle@localnet.com>
Message-ID: <137gj7o1a3snka3@corp.supernews.com>
Source record: 39796

Nick
I'm not concerned with the wire pull, I'll come out of the ground to a pull box at the 1/2 way point and the 1"C will be large enough, with plenty of soap I should be able to pull it by hand. But can you expound on your concerns with the interaction effects.
Thanks
Jeff

"Nick" <a@b.com> wrote in message
news:%_Wdi.609$KE1.329@newsfe1-win.ntli.net...
>
> "Jeff Dieterle" <djdieterle@localnet.com> wrote in message
> news:137fldsptpb1o85@corp.supernews.com...
>> Hi Nick,
>> Not sure where you going with the larger conduit and what type of losses.
>> From my limited knowledge, conduit fill is a function of the rated wire
>> ampacity and the resultant I-sqr'd-R loss if the wire is pushed to rated
>> ampacity, which shouldn't be an issue on the coax, and a later poster
>> replied with the correct rotor wire size. If you talking about signal
>> loss on RG6 over that distance I've had that cable laying on the ground
>> to the tower location for a couple of years and get a strong signal,
>> physical damage to the exposed wire is the problem. I assumed the coax
>> shielding, properly grounded would take care of problems running in the
>> same conduit with Sat. TV and Rotor wiring
>> Please reply if you have more insight on this.
>> Thanks Jeff
>>
>
> Hi Jeff,
>
> I may have read it wrong, but I understand that the run from the shack to
> the tower
> is some 400 feet, and the conduit is one inch diameter...
>
> This to take a feeder (presumably co-ax) and a rotator control cable and
> possibly a separate
> co-ax for the satellite ?
>
> I would have thought the co-ax would have to be quite a large diameter to
> minimise losses, and this
> with the other one (or two ?) cables down a 1" conduit that long just
> struck me as completely impossible
> and possibly undesirable from interaction effects ?
>

> Nick
>

2093. blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:50:59 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <4678502a$0$4868$4c368faf@roadrunner.com>
Source record: 39797

When I build my new shack, I was thinking about lining the inside of the plywood with something, before it is installed, that would block outside radio transmissions inside the shack.
Mostly in the 2 meter range and higher.

Would simple aluminum foil work?

If so what frequency range could I expect it to work in?

If not any suggestions on material? The cheaper the better.

I know there is a term for a room like this but I can not rember it..faraday chamber?

The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF and 2m antennas on it. I have no idea how they will interact with such a building...

Thanks
Joe

2094. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:51:00 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <46785ddb$0$31297$4c368faf@roadrunner.com>
Source record: 39798

Hi Steve,

Take a look at the "Cheap Yagi" page of the Clear Lake (TX) ARC. You could make a very inexpensive crossed yagi following their instructions.

Good luck,

Bill, W4WNT

"Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message news:Wfwdi.1$Ld6.0@newsfe03.lga...
>I have read a circularly polarized Yagi is appropriate for ARISS
>communications. Is there a vendor that offers a crossed design? Or, better
>still, is there a construction article that I can refer to?
>
> What are you using for this type of communication?
>
> I'm trying to set up a contact for my son's school class.
>
> 73,
> Steve
> W1KF

2095. Re: rotor cable voltage drop

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:51:16 UTC
From: Nick <a@b.com>
Message-ID: <E5Zdi.5258$_l6.2064@newsfe6-win.ntli.net>
Source record: 39799

"Jeff Dieterle" <djdieterle@localnet.com> wrote in message
news:137gj7o1a3snka3@corp.supernews.com...
> Nick
> I'm not concerned with the wire pull, I'll come out of the ground to a
> pull box at the 1/2 way point and the 1"C will be large enough, with
> plenty of soap I should be able to pull it by hand. But can you expound on
> your concerns with the interaction effects.
> Thanks
> Jeff

I really don't know what, if any, there might be - bad swr would be worse
than good
of course but perhaps that will be sorted at the antenna end anyway -
inductive coupling
perhaps ?

All the best - looking forward to the update with results !

Nick

2096. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 22:52:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h6ng73ta46bsebbi0jb5errdock1ttebrc@4ax.com>
Source record: 39800

On Tue, 19 Jun 2007 18:50:59 -0400, "merlin-7" <merlin-7@sc.rr.com>
wrote:

> Would simple aluminum foil work?

Hi Joe,

Sure, but bonding one sheet to the next overlapping one might "foil"
your goal. Few of us with dominant Y genes realize that aluminum foil
is wax (an insulator) coated on one side.

> If so what frequency range could I expect it to work in?

Most. Depends on the gaps. Staple it every inch, and it may work
from LF to VHF.

>I know there is a term for a room like this but I can not rember it..faraday
>chamber?

Farady shield, room, chamber....

> The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF
>and 2m antennas on it. I have no idea how they will interact with such a
>building...

Are you doing the windows and doors too? Most doors have a gasket of
fringed fingers making contact with the conductive door.

You need to choke EVERY wire penetrating the walls. Any exception and
your room will fill like an RF gong.

73's
Richard Clark, KB7QHC

2097. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-19 23:16:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6kng73tdaitej9m1epk1h15h8dano521e6@4ax.com>
Source record: 39801

On Tue, 19 Jun 2007 16:45:15 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>Hello Richard,

>> The complaints made here are far from sparse.
>
>I've seen no complaints here at all
>about matching difficulties. Even
>posters who had used the antenna omitted
>matching difficulties from their
>reported experiences.

As I said, those that don't notice, don't complain. This is the human condition. If they didn't notice, it must have matched (or they didn't measure it, which is the same thing as not noticing).

We've seen plenty of complaints. Certainly they didn't lead with their chin, the symptoms bore out the problem and they were complaining of something they thought was remote from tuning; but not far remote - meaning they "thought" it was tuned, but their rig was going whacko.

>On the other hand,
>> those who don't notice, don't complain. I will bet you have one
>> outlet in your home with inverted neutral/hot and a floating ground.
>> Does it bother how your lamp works?
>
>I understand. But I really hoped to talk
>about matching difficulties and find
>myself awash in discussions of potential
>common mode currents, about which I have
>no truck. ;-)

You simply have to recognized the symptoms. If there are no symptoms, there are no complaints. However, that doesn't mean their systems are free of common modalities. It simply means the currents/voltages are below the threshhold of notice.

Common Mode currents/voltages exist in EVERY system. It is merely the degree and tolerance that become the issue.

>> Some folks have common mode complaints, others don't.
>
>Sure. And I'd extend that to real,
>center-fed dipoles with less than
>perfect transmission line/antenna

>symmetry. All a matter of degree?

Yup, as I anticipated in my earlier comment.

>> In that
>> vein, you stand to come out ahead if you seriously examine your
>> shack's quality of ground for all applications.
>
>I'd do it immediately if it would help
>explain the alleged matching
>difficulties. ;-)

One solution for common mode problems is a ground tuner. This is also called a virtual ground if the wire terminates in an open instead of going to ground. What this does is references your rig/bench/room to RF neutral. In that condition you don't notice that slight tingle from the chassis as you brush the back of your fingers over it; or the sizzle from the mike when your lips touch it. If your shack is relatively close to the service ground, and the wire from your rig/bench/ground runs only several feet; then everything should be hunky dory. That is: up to a point where that length becomes a significant fraction of the wavelength with a sizeable energy content.

At that point, you want to reduce the reactance of that wire by making it one big Honker! Or, for a bench, you use a conductive sheet and tack your equipment to the sheet. Usually a star (branching) system of grounds is the best, but our equipment rarely exists in isolation and there are cross connects. This can lead to ground loops (common mode really rears its ugly head in this circumstance). So in that instance, you cross connect like mad (and hence build your own mesh of that sheet you should have laid down in the first place).

Most folks we hear from who don't complain about tuning (it loaded fine, works fine, and lasts a long time) wail a tale of grief about RF getting into their speaker, bathroom fault isolation, hall dimmer, VCR - you name it, but it isn't called a tuning problem fer sure.

We ask them to jumper in an extra few feet of transmission line and check their SWR. They usually are astonished that their antenna needs tuning again. This is a slam dunk indication of common mode problems.

Like I said, these complaints are not uncommon. On the flip side, some folks think more tingle on the lips is simply their excitment of working DX (whose going to complain about that?).

73's
Richard Clark, KB7QHC

2098. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 00:23:26 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f59s29$j8i$1@nnrp.linuxfan.it>
Source record: 39802

Cecil Moore wrote:

> ... Thus the ether theory
> was not a theory at all.
> The atomic theory was not a theory at all. ...
> 73, Cecil, w5dxp.com

Cecil:

Really?

I thought "newtonian luminous ether" simply became "Einsteinian
Gravitational Ether."

Regards,
JS

2099. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 00:48:07 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <cP_di.20645$C96.9849@newssvr23.news.prodigy.net>
Source record: 39803

Try "Bronze, or copper" screen- this is used in
"Radio Shops", to limit RF interference to services
being used, so as to test (proof of performance)
equipment , without causing interference to each
other !
A.K.A. "Faraday Shield" - Jim NN7K

merlin-7 wrote:
> When I build my new shack, I was thinking about lining the inside of the
> plywood with something, before it is installed, that would block outside
> radio transmissions inside the shack.
> Mostly in the 2 meter range and higher.
>
> Would simple aluminum foil work?
>
> If so what frequency range could I expect it to work in?
>
> If not any suggestions on material? The cheaper the better.
>
> I know there is a term for a room like this but I can not rember it..faraday
> chamber?
>
> The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF
> and 2m antennas on it. I have no idea how they will interact with such a
> building...
>
>
>
> Thanks
> Joe
>
>

2100. Re: ARISS antenna selection?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 00:53:19 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <4U_di.20646$C96.6117@newssvr23.news.prodigy.net>
Source record: 39805

And, another- the "Eggbeater" Named for its looks
(omnidirectional- multi polarity, couple loops
offset 90 Degs) And BTW, ISS on packet, can be
heard useing ringo, or less! Getting back to
them may take MORE Umph, as they use two back to back
packsets for their packet/ ham station! Jim NN7K

W4WNT wrote:
> Hi Steve,
>
> Take a look at the "Cheap Yagi" page of the Clear Lake (TX) ARC. You could
> make a very inexpensive crossed yagi following their instructions.
>
> Good luck,
>
> Bill, W4WNT
>
>
> "Steve Reinhardt" <stevereinhardt@noearthspamlink.net> wrote in message
> news:Wfwdi.1$Ld6.0@newsfe03.lga...
>> I have read a circularly polarized Yagi is appropriate for ARISS
>> communications. Is there a vendor that offers a crossed design? Or, better
>> still, is there a construction article that I can refer to?
>>
>> What are you using for this type of communication?
>>
>> I'm trying to set up a contact for my son's school class.
>>
>> 73,
>> Steve
>> W1KF
>
>

2101. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 01:04:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <77vg73t58jj6n95shm4bpqpq2kitehm0ep@4ax.com>
Source record: 39807

On Tue, 19 Jun 2007 21:47:42 -0400, "merlin-7" <merlin-7@sc.rr.com>
wrote:

>I can deal with
>that even if I have to disconnect everything when needed. I just need a RF
>quiet room from time to time for searching for birdies and the like.

Hi Joe,

This is far easier to obtain through good grounding practices (as I've
discussed in the past hour in another thread).

73's
Richard Clark, KB7QHC

2102. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 01:16:31 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182301408_24359@sp12lax.superfeed.net>
Source record: 39806

Thanks for the elaboration, Richard.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2103. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 01:47:42 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <46787996$0$24709$4c368faf@roadrunner.com>
Source record: 39804

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:h6ng73ta46bsebbi0jb5errdock1ttebrc@4ax.com...
> On Tue, 19 Jun 2007 18:50:59 -0400, "merlin-7" <merlin-7@sc.rr.com>
> wrote:
>
> > Would simple aluminum foil work?
>
> Hi Joe,
>
> Sure, but bonding one sheet to the next overlapping one might "foil"
> your goal. Few of us with dominant Y genes realize that aluminum foil
> is wax (an insulator) coated on one side.

I understand this and was thinking about overlap and staples or possibley
tacks.

I guess I also have the Y gene, the only reason I was thinking about foil
is that it is cheap and easy to work with. Wire screen would work also (I
think) but much simpler, glueing foil to plywood than screen.
>
> > If so what frequency range could I expect it to work in?
>
> Most. Depends on the gaps. Staple it every inch, and it may work
> from LF to VHF.
>
> >I know there is a term for a room like this but I can not rember
it..faraday
> >chamber?
>
> Farady shield, room, chamber....
>
> > The shack will be 12 foot by 16 foot, right next to my 60' tower, with
HF
> >and 2m antennas on it. I have no idea how they will interact with such a
> >building...
>
> Are you doing the windows and doors too? Most doors have a gasket of
> fringed fingers making contact with the conductive door.
>
No window, kinda bytes but needed.

You did get me on the door, I didnt think of that one (DUH) I guess I will
have to use a metal door or coat it with foil and strap it to the rest of
the foil.

> You need to choke EVERY wire penetrating the walls. Any exception and
> your room will fill like an RF gong.
>
This is going to be a whole new problem.
With solar panel wire runs, coax runs for radio gear etc. I can deal with that even if I have to disconnect everything when needed. I just need a RF quiet room from time to time for searching for birdies and the like. I may even section off a small area of the shack for that.(big enough for a frequincy counter, a few other test instraments and the gear being tested.

Thanks
joe
KI4ILB

> 73's
> Richard Clark, KB7QHC

2104. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 02:11:15 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <F_KdnWsVU5OVEOXbnZ2dnUVZ8qeknZ2d@bt.com>
Source record: 39808

"merlin-7" <merlin-7@sc.rr.com> wrote in message
news:4678502a$0$4868$4c368faf@roadrunner.com...
> When I build my new shack, I was thinking about lining the inside of the
> plywood with something, before it is installed, that would block outside
> radio transmissions inside the shack.
> Mostly in the 2 meter range and higher.
>
> Would simple aluminum foil work?
>
> If so what frequency range could I expect it to work in?
>
> If not any suggestions on material? The cheaper the better.
>
> I know there is a term for a room like this but I can not rember
it..faraday
> chamber?
>
> The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF
> and 2m antennas on it. I have no idea how they will interact with such a
> building...
>
>
>
> Thanks
> Joe
>

Joe,

When working with a Faraday cage, remember that safety is of the utmost importance. Any mains voltage electrical supply fed into the cage must come in via an isolating transformer so that the mains voltages are floating. This will reduce the risk of electric shock if a chassis becomes live with respect to the earthed cage. It should not be possible to reach any 'ordinary' mains powered sockets, switches or devices outside the cage area when you are within the cage. No external mains earth should be brought into the cage area. The Faraday cage should be provided with its own completely separate electrical earth. Mains sockets within the cage area should not contain an earth connection.

British Standard 7671 contains some basic details but other equivalent legislation applies in many countries.

It's not just about slapping up some tin foil around the walls, floors and ceiling and then strapping it to the nearest convenient earth point. Your

safety and that of others who may enter the area are paramount.

Mike G0ULI

2105. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 02:38:14 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-3B865A.19381319062007@newsclstr02.news.prodigy.com>
Source record: 39809
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182252507.359024.113790@q69g2000hsb.googlegroups.com>,
Denny <k8do@mailblocks.com> wrote:

< Snip >

< plonk >

--
Telamon
Ventura, California

2106. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 03:12:08 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <5MCdnYTgxcndP-XbnZ2dnUVZ_jmdnZ2d@giganews.com>
Source record: 39811

merlin-7 wrote:
>
> Richard Clark wrote:
> > merlin-7" wrote:
> >
> > > Would simple aluminum foil work?
> >
> > Hi Joe,
> >
> > Sure, but bonding one sheet to the next overlapping one might "foil"
> > your goal. Few of us with dominant Y genes realize that aluminum foil
> > is wax (an insulator) coated on one side.

I understand it's typically a very thin plastic or paper, to which the
aluminum is laminated (http://en.wikipedia.org/wiki/Aluminium_foil).
Alternatively, aluminum window screen will work just as well, unless you're
working with frequencies approaching 19 GHz. This assumes screening of
1/16"x1/16" opening, and allowing for no more than 1/10 wavelength.

> I understand this and was thinking about overlap and staples or possibley
> tacks.

If (before you put the wall panels up) you attach a conductive strip of foil
or screen to the edges of the wall studs, you will have your overlap. If
you then use screws instead of nails, you can then (relatively) easily gain
access for future wiring changes.

> I guess I also have the Y gene, the only reason I was thinking about foil
> is that it is cheap and easy to work with. Wire screen would work also (I
> think) but much simpler, glueing foil to plywood than screen.
> >
> > > If so what frequency range could I expect it to work in?
> >
> > Most. Depends on the gaps. Staple it every inch, and it may work
> > from LF to VHF.
> >
> > >I know there is a term for a room like this but I can not rember
> it..faraday
> > >chamber?
> >
> > Farady shield, room, chamber....
> >
> > > The shack will be 12 foot by 16 foot, right next to my 60' tower, with
> HF
> > >and 2m antennas on it. I have no idea how they will interact with such

a
> > >building...
> >
> > Are you doing the windows and doors too? Most doors have a gasket of
> > fringed fingers making contact with the conductive door.
> >
> No window, kinda bytes but needed.

Welded "chicken wire" with ?x?" openings over any windows will pass light
but will represent less than 1/10 wavelength up to 4725 MHz.

>
> You did get me on the door, I didnt think of that one (DUH) I guess I
will
> have to use a metal door or coat it with foil and strap it to the rest of
> the foil.

Chomerics (http://www.chomerics.com/) and Tech Etch
(http://www.tech-etch.com/) -- among others -- produce compressible
shielding material that can be used to make a door RF-tight.

> > You need to choke EVERY wire penetrating the walls. Any exception and
> > your room will fill like an RF gong.
> >
> This is going to be a whole new problem.
> With solar panel wire runs, coax runs for radio gear etc. I can deal with
> that even if I have to disconnect everything when needed. I just need a RF
> quiet room from time to time for searching for birdies and the like. I may
> even section off a small area of the shack for that.(big enough for a
> frequincy counter, a few other test instraments and the gear being tested.

In that case, think about using a suitably-sized cardboard box (coated with
conductive material). It has the potential of being folded up when not in
use!

> Thanks
> joe
> KI4ILB
>
> > 73's
> > Richard Clark, KB7QHC

2107. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 03:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <pajmk4-s8l.ln1@mail.specsol.com>
Source record: 39810
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In rec.radio.amateur.antenna Denny <k8do@mailblocks.com> wrote:
> On Jun 18, 10:53 pm, Telamon
> <telamon_spamshi...@pacbell.net.is.invalid> wrote:
> > In article <1182167099.993022.147...@q69g2000hsb.googlegroups.com>,
> >
> >
> >
> > Denny <k...@mailblocks.com> wrote:
> > > On Jun 17, 10:37 pm, Richard Clark <kb7...@comcast.net> wrote:
> > > > On Sun, 17 Jun 2007 15:19:59 -0700, Radium <gluceg...@gmail.com>
> > > > wrote:
> >
> > < Snip >
> >
> > > > I need a beer...
> >
> > Nope. You just need to be added to the kill file.
> >
> > Cheers.
> >
> > < Plonk >
> >
> > --
> > Telamon
> > Ventura, California

> Oh gawd, now my life is over....

> denny / k8do

Maybe not.

Let's see how many more times you are added to his killfile.

--
Jim Pennino

Remove .spam.sux to reply.

2108. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 05:49:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5af60$49i$1@nnrp.linuxfan.it>
Source record: 39812

John Smith I wrote:
> Actually, old news from 3 years ago ...
>
> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> JS

This:
"It would seem that despite the naysayers, the DLM antenna does work and quite well at that. Rob suspects that many homemade DLMs are now on the air in Europe and on our US west coast, judging from the e mail traffic he has received. Nice work, Rob!"

Taken from here:
http://www.arrlri.org/modules/news/print.php?storyid=14

Should be a good indication of the power the naysayers here have to dis-inform and promote their own personal views. Close attention should be made to the names and calls involved, and especially in further use of this newsgroup.

Regards,
JS

2109. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 07:33:49 UTC
From: Jeff <jeff@local.host>
Message-ID: <4678d88c$0$1348$834e42db@reader.greatnowhere.com>
Source record: 39813

```
>> >
>> > Sure, but bonding one sheet to the next overlapping one might "foil"
>> > your goal. Few of us with dominant Y genes realize that aluminum foil
>> > is wax (an insulator) coated on one side.
>
> I understand it's typically a very thin plastic or paper, to which the
> aluminum is laminated

It is just plain aluminium, no wax, no paper, no plastic. Just think of the
results if you cooked something wrapped in a foil with a wax or plastic
coating!!! The matt finish on one side is just a result of the way that the
foil is rolled when being manufactured.

Jeff
```

2110. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 08:06:34 UTC
From: Jeff <jeff@local.host>
Message-ID: <4678e045$0$1350$834e42db@reader.greatnowhere.com>
Source record: 39814

"> When working with a Faraday cage, remember that safety is of the utmost
> importance. Any mains voltage electrical supply fed into the cage must
> come
> in via an isolating transformer so that the mains voltages are floating.
> This will reduce the risk of electric shock if a chassis becomes live with
> respect to the earthed cage. It should not be possible to reach any
> 'ordinary' mains powered sockets, switches or devices outside the cage
> area
> when you are within the cage. No external mains earth should be brought
> into
> the cage area. The Faraday cage should be provided with its own completely
> separate electrical earth. Mains sockets within the cage area should not
> contain an earth connection.

That is certainly not the way any screened room I have worked is has been wired, and sounds extremely dangerous. Not having the earths connected inside the room is potentially lethal should a case go live.This is a particular problem with a lot of test equipment where the input filtering causes the case to float to 1/2 mains voltage without an earth. An RCD will not protect you in this situation because of the isolating transformer.

Imaging the situation where you are conducting emc tests with the UUT on an earthed copper sheet but all the test equipment is floating at 120V!!

It is also a common requirement to have test equipment outside the screened room but connected to equipment inside, isolating transformers and the lack of mains earth would complicate this set up immensely.

All the installations that I have seen have not used isolating transformers, just filtering on the incoming mains with a mains earth connection.
Protection being provided by an RCD on the mains input.

Jeff

2111. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 08:30:56 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <1my7if3u4f.fsf@persaunet.uninett.no>
Source record: 39815

Richard Clark <kb7qhc@comcast.net> writes:

> On Tue, 19 Jun 2007 16:45:15 -0400, Chuck <no.spam@no.spam.at.all>

I'm not trying to argue against your main points, but I have a problem
with this:

> We ask them to jumper in an extra few feet of transmission line and
> check their SWR. They usually are astonished that their antenna needs
> tuning again. This is a slam dunk indication of common mode problems.

Unless the SWR on the line is 1:1, changing the length of transmission
line *will* change the impedance seen. Whether there is common mode
current or not.

73
LA4RT Jon

2112. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 10:03:50 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <kJOdnQeJv5XsZuXbnZ2dnUVZ8tChnZ2d@bt.com>
Source record: 39816

"Jeff" <jeff@local.host> wrote in message
news:4678e045$0$1350$834e42db@reader.greatnowhere.com...
>
> "> When working with a Faraday cage, remember that safety is of the utmost
> > importance. Any mains voltage electrical supply fed into the cage must
> > come
> > in via an isolating transformer so that the mains voltages are floating.
> > This will reduce the risk of electric shock if a chassis becomes live
with
> > respect to the earthed cage. It should not be possible to reach any
> > 'ordinary' mains powered sockets, switches or devices outside the cage
> > area
> > when you are within the cage. No external mains earth should be brought
> > into
> > the cage area. The Faraday cage should be provided with its own
completely
> > separate electrical earth. Mains sockets within the cage area should not
> > contain an earth connection.
>
>
> That is certainly not the way any screened room I have worked is has been
> wired, and sounds extremely dangerous. Not having the earths connected
> inside the room is potentially lethal should a case go live.This is a
> particular problem with a lot of test equipment where the input filtering
> causes the case to float to 1/2 mains voltage without an earth. An RCD
will
> not protect you in this situation because of the isolating transformer.
>
> Imaging the situation where you are conducting emc tests with the UUT on
an
> earthed copper sheet but all the test equipment is floating at 120V!!
>
> It is also a common requirement to have test equipment outside the
screened
> room but connected to equipment inside, isolating transformers and the
lack
> of mains earth would complicate this set up immensely.
>
> All the installations that I have seen have not used isolating
transformers,
> just filtering on the incoming mains with a mains earth connection.
> Protection being provided by an RCD on the mains input.
>
> Jeff

>
>

Jeff

If you are working surrounded on all sides by earth potential and you touch a mains live wire, then the current has a path through you to earth. In theory, only the phase (or live) wire represents a serious hazard but in the event of a chassis going live, this could be fatal.

By having mains voltages floating, earthing either side of the isolated mains accidently to earth should not result in a lethal shock as the potential on the touched wire only will move down to earth. An RCD is not needed because although one side of the mains has become earthed through you, there should be no return path unless you are touching the other mains wire somehow, in which case you would get a shock whether you were in contact with earth or not!

110v Isolating transformers with their central point earthed are used on all building sites in the UK to limit shock voltages to 55v AC. In this case the transformer is earthed because it is impossible to work away from other natural earth points, girders, trusses, rods, etc. To a large extent this also prevents the risk of inappropriate equipment designed only for domestic purposes being used on site.

For a Faraday cage installation, the mains supply should be completely isolated and floating using a double insulated approved transformer, no autotransformers.

I previously worked in a test environment where isolating transformers and a rubber mat were regarded as adequate protection against shock. Times change. A proper Faraday cage setup does represent quite a complex environment to design, is potentially (sorry) very dangererous to work in and so it is worth looking at the official documents available for their recommendations. In the UK at least, the standards are recommendations rather than statutory requirements although you will have a tough time in court if someone is injured or killed as a result of non-compliance.

Before attempting to set up this sort of testing room, consider carefully what your requirements are, the safety implications and design accordingly. Sticking a load of earthed foil and mesh around the inside of a shed is only the start.

Better safe than crispy fried critter.

Mike G0ULI

2113. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 10:49:46 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46790646$0$16599$4c368faf@roadrunner.com>
Source record: 39817

"Jon K&#65533;re Hellan" <dev@null.com> wrote in message
news:1my7if3u4f.fsf@persaunet.uninett.no...
> Richard Clark <kb7qhc@comcast.net> writes:
>
>> On Tue, 19 Jun 2007 16:45:15 -0400, Chuck <no.spam@no.spam.at.all>
>
> I'm not trying to argue against your main points, but I have a problem
> with this:
>
>> We ask them to jumper in an extra few feet of transmission line and
>> check their SWR. They usually are astonished that their antenna needs
>> tuning again. This is a slam dunk indication of common mode problems.
>
> Unless the SWR on the line is 1:1, changing the length of transmission
> line *will* change the impedance seen. Whether there is common mode
> current or not.
>
> 73
> LA4RT Jon

True it will change the impedance seen but not the SWR so unless you are checking your line with an impedance bridge you should see no change except that due to cable loss and normally a few feet of feedline does not add any significant loss. If you do see a change it will be due to currents on thec coax.

Jimmie

2114. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 11:10:29 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <1mps3q51ay.fsf@persaunet.uninett.no>
Source record: 39818

"Jimmie D" <GFENDER@carolina.rr.com> writes:

> "Jon Kåre Hellan" <dev@null.com> wrote in message
> news:1my7if3u4f.fsf@persaunet.uninett.no...
>> Richard Clark <kb7qhc@comcast.net> writes:
>>
>>> On Tue, 19 Jun 2007 16:45:15 -0400, Chuck <no.spam@no.spam.at.all>
>>
>> I'm not trying to argue against your main points, but I have a problem
>> with this:
>>
>>> We ask them to jumper in an extra few feet of transmission line and
>>> check their SWR. They usually are astonished that their antenna needs
>>> tuning again. This is a slam dunk indication of common mode problems.
>>
>> Unless the SWR on the line is 1:1, changing the length of transmission
>> line *will* change the impedance seen. Whether there is common mode
>> current or not.
>>
>> 73
>> LA4RT Jon
>
> True it will change the impedance seen but not the SWR so unless you are
> checking your line with an impedance bridge you should see no change except
> that due to cable loss and normally a few feet of feedline does not add any
> significant loss. If you do see a change it will be due to currents on thec
> coax.
>
> Jimmie

If you only measure SWR, you will see no change. But the text I
commented said "their antenna needs tuning again". You *will* have to
adjust your antenna tuner. Antenna tuner settings don't only care
about the magnitude of SWR, but also about the specific resistive and
reactive impedances.

73
LA4RT Jon

2115. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 11:50:07 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1182340207.168083.19300@i38g2000prf.googlegroups.com>
Source record: 39819

On Jun 19, 3:08 pm, You <Y...@shadow.orgs> wrote:
> In article <cPRdi.2837$Zh6.2290@trnddc04>,
> "Jerry Martes" <j.jmar...@verizon.net> wrote:
>
>
>
>
>
>
> > "eganders" <egand...@yahoo.com> wrote in message
> >news:1182253342.688113.245470@g4g2000hsf.googlegroups.com...
> > >I am a consultant for an AVL (automatic vehicle location system)
> > > system used by the Southeastern counties of Michigan. The system is
> > > used on winter maintenance vehicles and works on 900 MHz. The
> > > vehicles are often stored overnight in metal buildings where it is
> > > difficult to obtain transceiver communication from the AVL system. Is
> > > there a low cost (possibly passive) way to port 900 MHz radio
> > > transmissions into these buildings?
>
> > > Thanks,
>
> > > Eric Anderson
>
> > Hi Eric
>
> > How inconvenient would it be to use two antennas, one inside and one
> > outside, with coax connecting them, and *try it*?
>
> > Jerry
>
> Yep, Passive Repeaters are the way to go.......just make sure you use
> extreamly Low Loss Coax, and very good Connectors......- Hide quoted text -
>
> - Show quoted text -

I think they also make active repeaters that do this. If this works
just send me $1000 consultation fee.

Jimmie

2116. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 12:04:18 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1182341058.217021.146830@e9g2000prf.googlegroups.com>
Source record: 39820

On Jun 17, 11:07 pm, art <aun...@insightbb.com> wrote:
> On 17 Jun, 19:34, Mike Coslo <mco...@youknow.comcast.net> wrote:
>
>
>
>
>
> > "Jimmie D" <GFEN...@carolina.rr.com> wrote
innews:4675eb9a$0$28142$4c368faf@roadrunner.com:
>
> > > I did nt see any qualitative data given
> > > in the test results except saying that the short antennas performed
> > > nearly as well as the full size antennas. Hell, Ive heard 20db down
> > > reported as "nearly as well" or as "comparable with". Im sure the
> > > numbers had to be available so why werent they posted.
>
> > Heh, heh. Jimmie youze is throwin' 'round them scientifical terms
> > like "nearly as well" and "comparable to". Heck I'ze gettin' all
> > confoozlated. But not so confusticated that I'll not get me wonna them
> > mircle antennies!
>
> > Seriously though, you are right. There has been precious little
> > real data on this antenna since the first press release in '04.
>
> > - 73 de Mike KB3EIA -
>
> Look at the patent request to obtain the basics.
> The testing station tested it with a set up that is tracable
> to normal standard antennas. Results therefor can be compared against
> a standard antennas with confidence. The testing was done by a
> independent source so a review of the results shows what you get.
> The patent was accepted by the PTO so on the surface it would
> appear that there is something new here even if the experts are
> baying at the moon ahead of time knowing that all is known about
> antennas. It would be interesting if the independent test reports
> were included in the patent request which would infere that the PTO
> confirmed the propriety of the tests, usually by being present.
> Note the antenna was designed using a propriety computor program
> which the range test confirmed after the fact.- Hide quoted text -
>
> - Show quoted text -

BIG DEAL, I can stick up a 6ft radiator over a good ground sytem like the one in the article add the appropriate inductance and capacitance to make it resonant ant match it to the feed and most people will be impressed by how well it works. Take that same antenna ,stick it in my back yard using the best ground system as will be practical there whith a feedline that is also practical with my backyard installation and that antenna is going to suck bilge water. The fact is if you have the real estate and the financial means for the kind og ground system you need to make a short antenna work as well as the claims made in the article you might as weel go ahead and erect a full size antenna.

Jimmie

2117. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 12:32:40 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <ch7i73tq7hs4073899skgv08179ic6o473@4ax.com>
Source record: 39821

On Wed, 20 Jun 2007 05:04:18 -0700, JIMMIE <JIMMIEDEE123@YAHOO.COM>
wrote:

>BIG DEAL, I can stick up a 6ft radiator over a good ground sytem like
>the one in the article add the appropriate inductance and capacitance
>to make it resonant ant match it to the feed and most people will be
>impressed by how well it works. Take that same antenna ,stick it in my
>back yard using the best ground system as will be practical there
>whith a feedline that is also practical with my backyard installation
>and that antenna is going to suck bilge water. The fact is if you have
>the real estate and the financial means for the kind og ground system
>you need to make a short antenna work as well as the claims made in
>the article you might as weel go ahead and erect a full size antenna.
>
>
>Jimmie

Why erect a full sized 160 meter vertical IF a 40 foot vertical can do
as well?

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2118. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 12:35:33 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <jn7i73la6qb0qpmm213jab4s495rjklb1r@4ax.com>
Source record: 39822

On Tue, 19 Jun 2007 22:49:42 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>John Smith I wrote:
>> Actually, old news from 3 years ago ...
>>
>> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>>
>> JS
>
>This:
>"It would seem that despite the naysayers, the DLM antenna does work and
>quite well at that. Rob suspects that many homemade DLMs are now on the
>air in Europe and on our US west coast, judging from the e mail traffic
>he has received. Nice work, Rob!"
>
>Taken from here:
>http://www.arrlri.org/modules/news/print.php?storyid=14
>
>Should be a good indication of the power the naysayers here have to
>dis-inform and promote their own personal views. Close attention should
>be made to the names and calls involved, and especially in further use
>of this newsgroup.
>
>Regards,
>JS

Where are instructions on building them?
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2119. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 12:40:50 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182343250.760621.68830@n2g2000hse.googlegroups.com>
Source record: 39823

Chuck,
I just recently finished a round of antenna tuner thrashing that included some vertical, half wave wire, bottom fed antennas... This was through a tuner(s) of my own design and construction <including hand built variable caps>, with the feed points being head high and the 1/2 wave antenna worked against a half wave elevated counterpoise, with the coax dropping straight to the ground and running on the ground hundreds of feet to the shack..... The ground was wet with half melted snow and rain during most of the test... I had to stand in a flowing stream to make tuner adjustments - snow melt water will get your attention when it runs over the top of your boots!

While I got the tuner design to work - which was the whole reason for the exercise as opposed to being primarily an antenna test - I was not impressed with the half wave, end fed, vertical antenna overall - 80, 40, and 20 meter antennas were tested...
They were distinctly more noisy than ground mounted quarter wave antennas for the same bands... Often, deafeningly more noisy...
The recovered signal strengths were:
1. often less than for the quarter waves -
2. sometimes comparable -
3. the strong signal exceptions being the times that the very low arrival angles were exactly what the half wave vertical wanted to see...
(you can never have too many antennas)

On 20 meters the separation between the two antennas was 500 feet, and expanding to some 900 feet for 80 meters <test antenna being the half wave end fed, and the reference antenna being 1/4 wave ground mounted>... I feel that the distances were sufficient that mutual coupling was minimized enough as to not skew the results - it certainly was not eliminated, however...

The circulating tank current on a tuner used transform 50 ohms to an end fed half wave is impressive - often melting the dielectrics used for the variable caps...

denny

2120. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 12:54:09 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5b81r$v24$1@nnrp.linuxfan.it>
Source record: 39824

Buck wrote:

> ...
> Where are instructions on building them?

Buck:

You just have to go on the scanty details presented in the news releases, I can't even find a picture of the darn thing.

However, I threw together a 1/2 wave - 6.5 ft. (includes 12 inch adjustable whip and disc top hat at base of whip.) "Plano Helix Coil" constructed by drilling two sets of holes on opposing sides of 1.125 pvc pipe, wire is then "laced" through these holes - forming a series of "hair pin loops" running the length of the pvc pipe.

This gives an apparent equal radiated power on a sensitive homebrew FSM located ~3 wavelengths away as compared to a 1/4 wave 102 inch whip w/loading coil on 10 meters, both mounted as mobile antennas on the auto.

I have no idea how close the design of this antenna matches Mr. Vincents design ...

The antenna is worth playing with, definitely! I too would like more details on Mr. Vincents designs ...

Regards,
JS

2121. Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 13:01:56 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <v69i73d0adm7duvq690gicl1boi856gect@4ax.com>
Source record: 39826

I have looked, but cannot find, some kind of formula to indicate the approximate diameter and number of turns needed to build an ugly balun for some specific frequency.

Does anyone know where I might find that formula?

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2122. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 13:14:04 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182344459_26553@sp12lax.superfeed.net>
Source record: 39825

Jon Kï¿½re Hellan wrote:

> If you only measure SWR, you will see no change. But the text I
> commented said "their antenna needs tuning again". You *will* have to
> adjust your antenna tuner. Antenna tuner settings don't only care
> about the magnitude of SWR, but also about the specific resistive and
> reactive impedances.

There are some, like Cebik,

http://www.cebik.com/trans/cmp.html
A Common-Mode Current Picture Show

who believe common mode RF getting into
some electronic metering circuits
produces erroneous SWR readings. Could
that be the reason small changes in
transmission line length sometimes
result in apparent changes in SWR?

Of course, if there are common mode
currents on a coax transmission line,
the impedance of the line seen by the
SWR meter (50 ohms in parallel with the
impedance between the shield's outer
surface and ground) is no longer 50 ohms
and the meter calibration is no longer
correct regardless of whether RF is
getting into the electronics of the
meter. Changing the length of the coax
gives you a new, out-of-calibration
measurement. ;-)

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
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2123. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 13:20:15 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182344831_26559@sp12lax.superfeed.net>
Source record: 39827

Denny wrote:

>
> The circulating tank current on a tuner used transform 50 ohms to an
> end fed half wave is impressive - often melting the dielectrics used
> for the variable caps...
>

Thanks for the report, Denny. Some of
the T- and L- network tuners also pass
some hefty currents at high power.

It is difficult to find much enthusiasm
for the performance of half-wave
verticals from folks who have actually
tried them. Your experience sure
supports that.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2124. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 13:40:34 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5baot$v24$2@nnrp.linuxfan.it>
Source record: 39828

Buck wrote:

> ...
> Does anyone know where I might find that formula?
>

Buck:

Some designs for the "ugly balun" appear to vary, sometimes widely.

I don't know how a fellow could go wrong if they take into the reactance of the coil (to the freq/freqs in question) and make that at least 5X the impedance of the coax in question. At the higher freqs, I prefer a 10X ratio, 160m makes the 10X ratio cumbersome.

Others may provide info to suggest other routes ... or more desirable solutions ...

Regards,
JS

2125. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 14:31:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lhei73lkc5qm36e1gd9g93ch5mbqbflajs@4ax.com>
Source record: 39729

On Wed, 20 Jun 2007 08:32:40 -0400, Buck <usenet01@lumpuckeroo.com>
wrote:

>Why erect a full sized 160 meter vertical IF a 40 foot vertical can do
>as well?

Why indeed if you live in a saltwater marsh.

73's
Richard Clark, KB7QHC

2126. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 14:34:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1kei739t53p0b2crl3p7grf0tmpe8b7b0i@4ax.com>
Source record: 39730

On Wed, 20 Jun 2007 06:49:46 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:

>> Unless the SWR on the line is 1:1, changing the length of transmission
>> line *will* change the impedance seen. Whether there is common mode
>> current or not.
>>
>True it will change the impedance seen but not the SWR

You are both wrong.

73's
Richard Clark, KB7QHC

2127. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 14:38:34 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1182350314.460946.73700@j4g2000prf.googlegroups.com>
Source record: 39731

On Jun 17, 8:34 pm, art <aun...@insightbb.com> wrote:
> On 17 Jun, 17:24, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > Jimmie D wrote:
>
> > > ...
>
> > > Still, nothing new, short antennas work quite well especially when used with
> > > a very high quality ground system.
>
> > > Jimmie
>
> > Actually, antennas that short, at least normally, perform quite poorly,
> > with efficiencies in the single digits ...
>
> > JS
>
> I assume that the testing people know their business so why can't hams
> accept it?
> I know that a member of this group attended one of the lectures of
> this
> inventor so a check of the archives might provide the extra info.
> The patent was awarded so one can assume that the design is providing
> something new.
> Art

I also assume they know their business, I also assume that if they
tested the antenna they actually collected qualitative information if
they knew their business. It seems obvious to me that this data was
intentionally left out . Deception by ommission.

If the inventor does not want these types of assumptions being made
then he should provide all information to clarify the issue.

Jimmie

2128. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 14:40:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qpei7359kumjqcvjncrrj55nnbqn8pp5kq@4ax.com>
Source record: 39732

On Wed, 20 Jun 2007 09:14:04 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>who believe common mode RF getting into
>some electronic metering circuits
>produces erroneous SWR readings.

This would be an exceedingly strange meter. Of course, there are any
number of ways to do something wrong. If this were the case (the
"infected" meter) then the antenna's being tuned is also suspicious.

>Could
>that be the reason small changes in
>transmission line length sometimes
>result in apparent changes in SWR?

No.

>Of course, if there are common mode
>currents on a coax transmission line,
>the impedance of the line seen by the
>SWR meter (50 ohms in parallel with the
>impedance between the shield's outer
>surface and ground) is no longer 50 ohms
>and the meter calibration is no longer
>correct regardless of whether RF is
>getting into the electronics of the
>meter.

What you have done is tuned the entire antenna/feedline system to 50
Ohms (this includes the common mode effects). Changing the length of
the line (which should not change the SWR in a CM free system) also
changes the reactance of the this length that was formerly tuned out.

>Changing the length of the coax
>gives you a new, out-of-calibration
>measurement. ;-)

By giving you an out-of-50-Ohm load (antenna plus unchoked line).

Fellows, this is all classic stuff and has been fodder for discussion
for years. The solutions have met the test of time.

73's
Richard Clark, KB7QHC

2129. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 14:43:05 UTC
From: Jeff <jeff@local.host>
Message-ID: <46793d3d$0$1343$834e42db@reader.greatnowhere.com>
Source record: 39733

> If you are working surrounded on all sides by earth potential and you
> touch
> a mains live wire, then the current has a path through you to earth. In
> theory, only the phase (or live) wire represents a serious hazard but in
> the
> event of a chassis going live, this could be fatal.

This is exactly the recommended situation in a 'normal' UK mains enviroment where all exposed metal must be bonded to mains earth (equi-potential bonding). An RCD is used to provide protection.

>
> By having mains voltages floating, earthing either side of the isolated
> mains accidently to earth should not result in a lethal shock as the
> potential on the touched wire only will move down to earth. An RCD is not
> needed because although one side of the mains has become earthed through
> you, there should be no return path unless you are touching the other
> mains
> wire somehow, in which case you would get a shock whether you were in
> contact with earth or not!

Whilst that is true, not having a earth on equipment *inside* the screened room is still a hazard.For Example; If due to a fault a case goes to mains potential, the the case of adjacent equipment will be at some other potential, that could be anything from 'real' ground (the earthed wall potential of the cage) to perhaps 1/2 rail due the filtering components. Either way there exists the possiblity of lethal shocks. It is not easy to control what the case potential or connection will be. Commonly there will be a connection to the screened room ground on at least some of the equipment, and that will aslo be external mains ground by default. A lot of equipment cases will float to 1/2 mains due to the input filtering. Once a fault develops it is very easy for the isolation barrier provided by the transformer to be by-passed leaving you with no protection. A neutral to ground fault could go undetected forever until someone touches something at line potential. At least with an earth and an rcd there is some protection in this situation.

> 110v Isolating transformers with their central point earthed are used on
> all
> building sites in the UK to limit shock voltages to 55v AC. In this case
> the
> transformer is earthed because it is impossible to work away from other
> natural earth points, girders, trusses, rods, etc. To a large extent this
> also prevents the risk of inappropriate equipment designed only for
> domestic

> purposes being used on site.

True, 55V is considered 'safe', but it is not common to have 110V test equipment and mains in a screened room in the UK, so it is not really relavent.

> For a Faraday cage installation, the mains supply should be completely
> isolated and floating using a double insulated approved transformer, no
> autotransformers.

As I said this has never been the case in the dozen or so screened rooms that I have worked in!!

73
Jeff

2130. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 15:39:53 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182353209_26971@sp12lax.superfeed.net>
Source record: 39734

Richard Clark wrote:

>
> What you have done is tuned the entire antenna/feedline system to 50
> Ohms (this includes the common mode effects). Changing the length of
> the line (which should not change the SWR in a CM free system) also
> changes the reactance of the this length that was formerly tuned out.
>

Thank you for that
clarification/correction, Richard. What
I should have said was that with CM
effects, the SWR meter will not show the
actual SWR "in" the coax, which could be
wildly different from the 1:1 measured
for the entire antenna/feedline system.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2131. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 15:58:32 UTC
From: richardharrison@webtv.net
Message-ID: <2573-46794EA8-1001@storefull-3253.bay.webtv.net>
Source record: 39736

Art wrote:
"Thought I would give you another example to laugh at."

Laughing is good for you but I`m still not laughing. Art may have a valuable contribution to make. He gave some respectable performance figures but I`m in the dark on how to reproduce them.

How an antenna`s gain adds up is shown by Kraus in his explanation of the Deutche Welle antenna featured on the rear cover of the paperback 3rd edition of "Antennas". It starts on page 703 and continues on page 705.
"Solution:
(a) The gain of a single half-wave dipole is 2.15 dBi and of 2 collinear in-phase half-wave dipoles is 3.8 dBi. The array of 8 such collinear dipoles adds 3+3+3=9 dB. The reflector screen adds 3 dB more and the ground bounce another 6 dB for a total gain of 3.8+9+3+6=21.8 dBi or a directivity of 151 approx."

As for denigration, John D. Kraus was a radio amateur, W8JK.

Best regards, Richard Harrison. KB5WZI

2132. Re: Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 16:03:34 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <lnji73lee6l1qa33s2quu5jqs8k3s1arel@4ax.com>
Source record: 39735

On Sun, 17 Jun 2007 18:56:40 -0400, "Robert11" <rgsros@notme.com>
wrote:

>Hi,
>
>Not very knowledgeable at all re antennas, but let me ask the following,
>please.
>
>Would like to try a Yagi for up in my attic to hopefully receive maritime
>comms from the harbor, about 20 miles away, on my scanner (receive only
>usage).
>Presently using a Scantenna, but without much luck.
>Probably just a bit too far.
>
>Anyway, i read that a very directional Yagi, with its inherent gain, is
>probably worth a try. Willing to do so.
>
>Am not able now at my age to build anything, no matter how simple.
>
>So, I tried to find a Yagi antenna I could purchase for perhaps $ 75 or so,
>max.
>
>I looked all over the web, but the only Yagis I could find around the Marine
>freq's of
>156-163 MHz approx are ones for the 2m bands, which apparently are in the
>144 MHz range, and therefore not too suitable for the marine VHF freq's.
>
>Really spent a lot of time looking and searching.
>
>Might anyone know of a suitable Yagi I can consider purchasing for the
>marine freq's ?
>
>Much thanks,
>Bob
>

I'm not sure you can buy a yagi beam for the marine band -- a beam
doesn't make much sense in a boat that is traveling in every which
direction. So if home-brewing one is out of the question, you might
look at 2 meter ham band yagi beams -- they'll be within yelling
distance of the marine band.

bob
k5qwg

2133. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 16:26:17 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <1182356777.731034.236940@n2g2000hse.googlegroups.com>
Source record: 39737

On 19 Jun, 23:50, "merlin-7" <merli...@sc.rr.com> wrote:
> When I build my new shack, I was thinking about lining the inside of the
> plywood with something, before it is installed, that would block outside
> radio transmissions inside the shack.
> Mostly in the 2 meter range and higher.
>
> Would simple aluminum foil work?
>
> If so what frequency range could I expect it to work in?
>
> If not any suggestions on material? The cheaper the better.
>
> I know there is a term for a room like this but I can not rember it..faraday
> chamber?
>
> The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF
> and 2m antennas on it. I have no idea how they will interact with such a
> building...
>
> Thanks
> Joe

We had very expensive screened rooms at Racal's Bracknell site when I
worked there a few years ago. They were double-screened with copper
sheet on the inside and outside. We had to use double-screened cables
for some measurements, there was too much leakage from standard coax.

Leon

2134. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 16:54:21 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <6rmi7317tm4b51bbbd4d6qoqenldjuq1ff@4ax.com>
Source record: 39738

On Wed, 20 Jun 2007 06:40:34 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Buck wrote:
>
>>to indicate the approximate diameter and number of turns ...
>> Does anyone know where I might find that formula?
>>
>
>Buck:
>
>Some designs for the "ugly balun" appear to vary, sometimes widely.
>
>I don't know how a fellow could go wrong if they take into the reactance
>of the coil (to the freq/freqs in question) and make that at least 5X
>the impedance of the coax in question. At the higher freqs, I prefer a
>10X ratio, 160m makes the 10X ratio cumbersome.
>
>Others may provide info to suggest other routes ... or more desirable
>solutions ...
>
>Regards,
>JS

Is this 5 times the diameter in turns?

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2135. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 17:28:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kfoi73da0imocjekg15ejdfm0naahk62g7@4ax.com>
Source record: 39739

On Wed, 20 Jun 2007 09:20:15 -0400, Chuck <no.spam@no.spam.at.all>
wrote:

>It is difficult to find much enthusiasm
>for the performance of half-wave
>verticals from folks who have actually
>tried them. Your experience sure
>supports that.

Hi Chuck,

I can report a bright side. During one field day, years ago, one fellow brought in a baloon and hoisted enough wire into the sky to work it as a halfwave 160M vertical. He used an optical rangefinder to measure the height. He had this Army surplus tuner that tuned it up to his rig. The 160M contacts he made told him he was the strongest signal on the band (working 100W). Perhaps it helped that we were in a school ball field on the top of a hill. To further add to the mix, I suggested he tie the tuner to the fence line and backstop.

73's
Richard Clark, KB7QHC

2136. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 17:34:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <91pi731mai2q8vfpn20quqk70v880k7mgu@4ax.com>
Source record: 39740

On Wed, 20 Jun 2007 09:26:17 -0700, Leon <leon355@btinternet.com>
wrote:

>We had to use double-screened cables
>for some measurements, there was too much leakage from standard coax.

The term for this is Tri-axial cable. Often each end of the braid is
left open but each connector has one braid. In other words, there is
no braid to braid connection, and there is no shell to shell
connection. The braids overlap.

It is very simple to violate shielding through the wrong sequence of
groundings from the source to the load. The art of shielding is
actually found in the practice of finding your reference (ground).

73's
Richard Clark, KB7QHC

2137. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 17:49:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rdpi73tnev4p25kkkn7tjmmi7ih3bubn39@4ax.com>
Source record: 39741

On Wed, 20 Jun 2007 07:38:34 -0700, JIMMIE <JIMMIEDEE123@YAHOO.COM>
wrote:

>If the inventor does not want these types of assumptions being made
>then he should provide all information to clarify the issue.

Hi Jimmie,

I've read the reports. The "inventor" wrote his paper with about as
much class as an 5th grade science report. It was a hodge-podge of
statements and intellectual clutter reminiscent of Arthur's writing.
The technical report merely confirms the performance being no better
than any small antenna. In other words, no surprise, and certainly no
advancement over, say, any of dozen variations of the common
screwdriver antenna of the same size.

73's
Richard Clark, KB7QHC

2138. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 17:49:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <isni73leg8tj21et8pns2mkg38fp40cv54@4ax.com>
Source record: 39742

On Wed, 20 Jun 2007 09:01:56 -0400, Buck <usenet01@lumpuckeroo.com>
wrote:

>I have looked, but cannot find, some kind of formula to indicate the
>approximate diameter and number of turns needed to build an ugly balun
>for some specific frequency.
>
>Does anyone know where I might find that formula?

Hi Buck,

One does not normally build a frequency specific BalUn, unless it is
tuned transmission line based. As you are speaking in terms of
"turns," then that is obviously not the case.

73's
Richard Clark, KB7QHC

2139. Re: Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 17:54:27 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <g3pi735s1kk4cjniq06rt5q7csc4024mae@4ax.com>
Source record: 39743

On Wed, 20 Jun 2007 11:03:34 -0500, Bob Miller <NOSPAM@neosoft.com>
wrote:

>On Sun, 17 Jun 2007 18:56:40 -0400, "Robert11" <rgsros@notme.com>
>wrote:
>
>>Hi,
>>
>>Not very knowledgeable at all re antennas, but let me ask the following,
>>please.
>>
>>Would like to try a Yagi for up in my attic to hopefully receive maritime
>>comms from the harbor, about 20 miles away, on my scanner (receive only
>>usage).
>>Presently using a Scantenna, but without much luck.
>>Probably just a bit too far.
>>
>>Anyway, i read that a very directional Yagi, with its inherent gain, is
>>probably worth a try. Willing to do so.
>>
>>Am not able now at my age to build anything, no matter how simple.
>>
>>So, I tried to find a Yagi antenna I could purchase for perhaps $ 75 or so,
>>max.
>>
>>I looked all over the web, but the only Yagis I could find around the Marine
>>freq's of
>>156-163 MHz approx are ones for the 2m bands, which apparently are in the
>>144 MHz range, and therefore not too suitable for the marine VHF freq's.
>>
>>Really spent a lot of time looking and searching.
>>
>>Might anyone know of a suitable Yagi I can consider purchasing for the
>>marine freq's ?
>>
>>Much thanks,
>>Bob
>>
>
>I'm not sure you can buy a yagi beam for the marine band -- a beam
>doesn't make much sense in a boat that is traveling in every which
>direction. So if home-brewing one is out of the question, you might
>look at 2 meter ham band yagi beams -- they'll be within yelling
>distance of the marine band.

Good grief.

He's not in a boat, he's at home. He wants to listen to traffic in the harbor, which I assume isn't moving around either. It's 20 miles away so the angular separation of any ship traffic moving around in the harbor will be nill; well within the beamwidth of a Yagi small enough in his attic.

Someone else has already given him a link to Arrow Antennas, who does make a marine-band Yagi. A two-meter Yagi that is worth its salt will be horrible on the marine band.

All of those non-issues aside, to the OP, I would suggest that you consider instead of a Yagi, that may not work well in the attic environment, a non-directional ground plane (or even rabbit-ears) with an antenna-mounted low-noise preamp to overcome transmission line loss and what is probably lousy noise figure in your scanner.

I've had excellent luck receiving DTV signals over a 40-mile obstructed path and 100+ miles over a non-obstructed, but over the horizon path, using a very modest vhf-uhf combo log periodic antenna and a Channel Master Model 7777 preamp. I got this at Stark

http://www.starkelectronic.com/allamps.htm

Wes N7WS

2140. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 18:29:04 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5brlr$i0j$1@nnrp.linuxfan.it>
Source record: 39744

Buck wrote:

> ...
> Is this 5 times the diameter in turns?

Buck:

No, I meant using a "single layer solenoid formula"/table/graph, pick an inductive reactance which would offer an impedance (choking effect) of 10X the impedance of the coax in question--or in effect, 50 X 10 = 500 (depending on your physical limitations for the choke, this may not achievable ... a lower value may have to be accepted.)

Also, you may wish to check the self-capacitance against the inductance of the coil and note the resonate freq of the choke, making sure it is working to your advantage rather than you disadvantage.

Regards,
JS

2141. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 18:31:19 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5brq4jbi1@nnrp.linuxfan.it>
Source record: 39745

Buck wrote:

> [stuff]

Or, you may just want to use an, apparently, tried and accepted design:

http://www.hamuniverse.com/balun.html

Regards,
JS

2142. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 18:39:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5bs9kjbi2@nnrp.linuxfan.it>
Source record: 39746

merlin-7 wrote:

> ...

In the end, I would make sure that large of cube of metal sheet
(capacitor plate) was grounded, finally, to some ground close to the
shack--I'd image if that "capacitor plate" was allowed to float it may
well be able to store a lethal charge in itself (if well insulated enough.)

The main ground, tied to close earth ground at the shack, would be my
goal, whether it filled code requirements or not ... damn inspector
can't sleep in my shack!

Of course, you are talking to guy who has worn a grounding strap on his
wrist ...

Regards,
JS

2143. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 18:41:06 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182364866.282282.255710@q69g2000hsb.googlegroups.com>
Source record: 39747

On Jun 20, 8:01 am, Buck <usene...@lumpuckeroo.com> wrote:
> Does anyone know where I might find that formula?

How about a rule of thumb? Using a 2 liter pop bottle, make the number
of turns equal to the wavelength in meters. That will optimize for a
specific wavelength but will render it not very useful for any shorter
wavelengths, e.g. 20 turns is too many for 10m.
--
73, Cecil, w5dxp.com
.

2144. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 19:02:22 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182366142.606733.198950@k79g2000hse.googlegroups.com>
Source record: 39748

On Jun 19, 4:58 pm, Jim Higgins <inva...@invalid.invalid> wrote:
> You have NOT posted the link I asked for.

Since I have quoted the posting three times now, I guess I am not
understanding what you mean by "link". It is pretty easy to understand
assuming the rules of classical logic. A logical assertion (theory) is
either true or false. If any part of it is false, the entire assertion
is false and is therefore logically rejected as false (discarded).
--
73, Cecil, w5dxp.com

2145. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 19:10:28 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <f5idndl6OuUS5uTbnZ2dnUVZ8tSdnZ2d@bt.com>
Source record: 39749

"Jeff" <jeff@local.host> wrote in message
news:46793d3d$0$1343$834e42db@reader.greatnowhere.com...
>
> > If you are working surrounded on all sides by earth potential and you
> > touch
> > a mains live wire, then the current has a path through you to earth. In
> > theory, only the phase (or live) wire represents a serious hazard but in
> > the
> > event of a chassis going live, this could be fatal.
>
> This is exactly the recommended situation in a 'normal' UK mains
enviroment
> where all exposed metal must be bonded to mains earth (equi-potential
> bonding). An RCD is used to provide protection.
>
> >
> > By having mains voltages floating, earthing either side of the isolated
> > mains accidently to earth should not result in a lethal shock as the
> > potential on the touched wire only will move down to earth. An RCD is
not
> > needed because although one side of the mains has become earthed through
> > you, there should be no return path unless you are touching the other
> > mains
> > wire somehow, in which case you would get a shock whether you were in
> > contact with earth or not!
>
> Whilst that is true, not having a earth on equipment *inside* the screened
> room is still a hazard.For Example; If due to a fault a case goes to
mains
> potential, the the case of adjacent equipment will be at some other
> potential, that could be anything from 'real' ground (the earthed wall
> potential of the cage) to perhaps 1/2 rail due the filtering components.
> Either way there exists the possiblity of lethal shocks. It is not easy
to
> control what the case potential or connection will be. Commonly there will
> be a connection to the screened room ground on at least some of the
> equipment, and that will aslo be external mains ground by default. A lot
of
> equipment cases will float to 1/2 mains due to the input filtering. Once a
> fault develops it is very easy for the isolation barrier provided by the
> transformer to be by-passed leaving you with no protection. A neutral to
> ground fault could go undetected forever until someone touches something
at
> line potential. At least with an earth and an rcd there is some protection

> in this situation.
>
> > 110v Isolating transformers with their central point earthed are used on
> > all
> > building sites in the UK to limit shock voltages to 55v AC. In this case
> > the
> > transformer is earthed because it is impossible to work away from other
> > natural earth points, girders, trusses, rods, etc. To a large extent
this
> > also prevents the risk of inappropriate equipment designed only for
> > domestic
> > purposes being used on site.
>
> True, 55V is considered 'safe', but it is not common to have 110V test
> equipment and mains in a screened room in the UK, so it is not really
> relavent.
>
> > For a Faraday cage installation, the mains supply should be completely
> > isolated and floating using a double insulated approved transformer, no
> > autotransformers.
>
> As I said this has never been the case in the dozen or so screened rooms
> that I have worked in!!
>
> 73
> Jeff
>
>

Jeff

You are quite correct in what you say, however working in a Faraday cage is inherently unsafe. You are surrounded on all sides by earth potential and in the event of any fault, the path is more than likely going to go through you to earth. Not a desirable situation. If mains supplies are floating, then there should be no return path to provide a lethal shock.

Further provisions in the BS 7671 regs suggest that items of equipment are separated so that a person cannot be in contact with two items of equipment for precisely the reasons you give, to eliminate the risk of shock if two items of equipment are faulty with the case of each item being connected to a different side or phase of the mains.

The Faraday cage is designed to prevent all external influences from affecting experiments and tests inside the cage. Careful design and consideration of the inherent risks need to be taken into account at every stage. A lot of stuff in commercial labs is hidden behind panels or incorporated into the building design at the planning stage, so may not be apparent in everyday use. Commercial labs also have the resorces to put screening materials behind insulated walls, floors and ceilings and to employ special techniques around window and door openings. These techniques

are simply too time consuming and expensive for most people to use in a domestic shed type environment. The standard insulation tests for floors using heavy, sharp, pointy objects with high voltage applied are just not practical for a shed, the floor would collapse under the stress.

It is quite feasible to build a Faraday cage in a room or shed within a domestic environment. It will be inherently unsafe to work in the shed with live equipment exhibiting certain fault conditions unless additional precautions are taken to ensure that no contact whatsoever can be made with the screening material. Floating power supplies are a requirement due to the need to maintain isolation of the interior of the cage from the outside conditions.

None of these regulations are a statutory requirement in the UK but are based on best practice as identified by the IET (formerly IEE). My concern is to point out the safety implications and not dictate how the project is finally built. Under UK law, electrical contractors are not allowed to disconnect a customer's supply no matter how unsafe it may be. They can only advise the customer not to use the installation/equipment and advise the electrical supply company of the defects. The supply company can disconnect a supply, but rarely do so as long as they are getting paid.

Mike G0ULI

2146. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 20:01:55 UTC
From: mzenier@eskimo.com
Message-ID: <f5e75j$1t0$1@eskinews.eskimo.com>
Source record: 39687
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182285843.270321.23320@x35g2000prf.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:
>On Jun 18, 11:05 am, mzen...@eskimo.com (Mark Zenier) wrote:
>
>> 1. What is the energy of a photon at 150 kHz?
>
>6.2 X 10^-10 eV
>

You didn't answer the other questions. How much power does a good radio
need to get a listenable signal?

Here's some numbers

input impedance 50 ohms
Noise Figure 5 db
Bandwidth 6 kHz
signal to noise ratio 40 dB

(This would be what some of the newsgroups listeners here would want if
they had one of their pretty damn good radios listening to a broadcast
station. Really picky ones would probably want a 8-15 kHz bandwidth
with a 60 dB s/N ratio).

There are equations out there that will give you how much power
you need for this signal...

Mark Zenier mzenier@eskimo.com
Googleproofaddress(account:mzenier provider:eskimo domain:com)

2147. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 20:02:10 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5c143$j40$1@nntp1.jpl.nasa.gov>
Source record: 39752

JIMMIE wrote:

>
>
> I also assume they know their business, I also assume that if they
> tested the antenna they actually collected qualitative information if
> they knew their business. It seems obvious to me that this data was
> intentionally left out . Deception by ommission.
>
> If the inventor does not want these types of assumptions being made
> then he should provide all information to clarify the issue.
>
>
> Jimmie

Not necessarily. Patents are a strategic weapon in the technology business. Your best bet is to have your patent have a sort of vague title and have text that isn't likely to show up in a cursory search (harder to do these days, since the PTO's search engine works quite well). You'd have just enough detail in the disclosure to convince the examiner to grant the patent, and have lots of claims that cover a lot of various schemes. Then, if someone else builds something that covers the same general application, there's a high probability that your patent "might" be infringed, or, more importantly, that there's a possibility. If they are already in manufacturing (i.e. have invested significant dollars in the product), then it's easy to negotiate a license and royalty, just to lay to rest the risk that you might file suit and force them to stop mfr and distribution.

The LAST thing you want is enough detail to let someone figure out how to design around your patent or to unambiguously determine that their new product isn't infringing. You WANT vagueness, because from vagueness comes liability uncertainty, and the elimination of that uncertainty has definite business value.

The other reason to build a patent portfolio is that it allows you to cross license other patents that you might need to infringe to build your device. Imagine if A has a patent on female screw threads and B has a patent on male screw threads. A could make nuts, but not bolts; and B can make bolts, but not nuts. However, if A and B agree to license each others patents, then between them, they can control the nut and bolt market, without money needing to change hands. Again, vagueness works to your advantage here.

Go look up "submarine patent" for more details on how this works.

2148. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 20:15:03 UTC
From: richardharrison@webtv.net
Message-ID: <22598-46798AC7-1253@storefull-3258.bay.webtv.net>
Source record: 39750

Buck, N4PGW wrote:
"Does anyone know where I might find that formula?"

Look at the ARRL Antenna Book. The 19th edition (old) has a choke balun for low-frequency antennas on page 6-9. The text says:
"In general, an isolation choke inductance of 50 to 100 microhenries will be needed for 3.5 and 1.8 MHz, ground-plane antennas. One of the easiest ways to make the required isolation choke is to wind a length of coaxial cable into coil as shown in Hig 18. For 1.8 Mhz, 30 turns of RG-213 wound on a 14-inch length of of 8-inch diameter PVC pipe, will make a very good isolation choke that can handle full legal power continuously."

On page 11 of Terman`s 1955 opus is found formula (2-2):
Inductance in microhenries = F n(sqared) d

F is a constant that depends on length/diameter. There`s a chart in the book for F.
n is the number of turns.
d is the diameter of the coil measured between the centers of the wire in the coil.

The purpose of the coil is to present a high impedance to currents on the outsifde of the coax so quick and dirty is OK so long as there is enough impedance. You may get away without a coil form at all. You might lose some of the isolation that coil length provides so I don`t recommend just coiling coax like garden hose.

Best regards, Richard Harrison, KB5WZI

2149. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 20:39:43 UTC
From: richardharrison@webtv.net
Message-ID: <22598-4679908F-1257@storefull-3258.bay.webtv.net>
Source record: 39751

Joe wrote:
"I know there is a term for a room like this but I can not remember
it..''

The term that comes to mind for me is "screened room".

I`ve used them in shortwave broadcasting stations where they provided excellent isolation. They were constructed of ordinary copper windowscreen wire which solders well for good continuity. Sometimes the rooms were double screened with wire on both sides of the supporting structure. You`ve already been given the caveats on joints and bypassing every conductor which punctures the structure. That`s necessary.

Best regards, Richard Harrison, KB5WZI

2150. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 21:13:53 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46799889$0$3147$4c368faf@roadrunner.com>
Source record: 39753

"Buck" <usenet01@lumpuckeroo.com> wrote in message
news:ch7i73tq7hs4073899skgv08179ic6o473@4ax.com...
> On Wed, 20 Jun 2007 05:04:18 -0700, JIMMIE <JIMMIEDEE123@YAHOO.COM>
> wrote:
>
>
>>BIG DEAL, I can stick up a 6ft radiator over a good ground sytem like
>>the one in the article add the appropriate inductance and capacitance
>>to make it resonant ant match it to the feed and most people will be
>>impressed by how well it works. Take that same antenna ,stick it in my
>>back yard using the best ground system as will be practical there
>>whith a feedline that is also practical with my backyard installation
>>and that antenna is going to suck bilge water. The fact is if you have
>>the real estate and the financial means for the kind og ground system
>>you need to make a short antenna work as well as the claims made in
>>the article you might as weel go ahead and erect a full size antenna.
>>
>>
>>Jimmie
>
>
> Why erect a full sized 160 meter vertical IF a 40 foot vertical can do
> as well?
>
> --
> 73 for now
> Buck, N4PGW
>
> www.lumpuckeroo.com
>
> "Small - broadband - efficient: pick any two."

If I had the real estate and the ground sytem I would probably erect a 1/2
wl or a 5/8.

2151. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 21:22:19 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46799a86$0$30602$4c368faf@roadrunner.com>
Source record: 39754

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f5c143$j40$1@nntp1.jpl.nasa.gov...
> JIMMIE wrote:
>
>>
>>
>> I also assume they know their business, I also assume that if they
>> tested the antenna they actually collected qualitative information if
>> they knew their business. It seems obvious to me that this data was
>> intentionally left out . Deception by ommission.
>>
>> If the inventor does not want these types of assumptions being made
>> then he should provide all information to clarify the issue.
>>
>>
>> Jimmie
>
> Not necessarily. Patents are a strategic weapon in the technology
> business. Your best bet is to have your patent have a sort of vague title
> and have text that isn't likely to show up in a cursory search (harder to
> do these days, since the PTO's search engine works quite well). You'd
> have just enough detail in the disclosure to convince the examiner to
> grant the patent, and have lots of claims that cover a lot of various
> schemes. Then, if someone else builds something that covers the same
> general application, there's a high probability that your patent "might"
> be infringed, or, more importantly, that there's a possibility. If they
> are already in manufacturing (i.e. have invested significant dollars in
> the product), then it's easy to negotiate a license and royalty, just to
> lay to rest the risk that you might file suit and force them to stop mfr
> and distribution.
>
> The LAST thing you want is enough detail to let someone figure out how to
> design around your patent or to unambiguously determine that their new
> product isn't infringing. You WANT vagueness, because from vagueness
> comes liability uncertainty, and the elimination of that uncertainty has
> definite business value.
>
> The other reason to build a patent portfolio is that it allows you to
> cross license other patents that you might need to infringe to build your
> device. Imagine if A has a patent on female screw threads and B has a
> patent on male screw threads. A could make nuts, but not bolts; and B can
> make bolts, but not nuts. However, if A and B agree to license each
> others patents, then between them, they can control the nut and bolt

> market, without money needing to change hands. Again, vagueness works to
> your advantage here.
>
> Go look up "submarine patent" for more details on how this works.
>

Dont think I metioned patents at any time. On the other hand if you want someone to buy your new miracle whiz bang antenna you either let people know how great it is with data from a reliable source or you omit your data giving vague discriptions to pull in the suckers. I dont think an affidavit from the testing facility on measured field strength compared to a full size antenna who have endangered his product.

2152. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 21:42:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5c70niim1@nnrp.linuxfan.it>
Source record: 39755

John Smith I wrote:

> [stuff]

This:
"Our Technical Coordinator, Rob, K1DFT was guest presenter at the April 5th meeting of the Dallas (Texas) Amateur Radio Club. He thrilled a packed house with a multimedia presentation concerning his invention, the Distributed Loaded Monopole or DLM.
Rob telephoned me after the event in addition to one of my Dallas friends who was in the audience to tell me how well the presentation was received. Congratulations Rob!! The Naval Undersea Warfare Center (NUWC) antenna testing range performed a full day of tests on a great many different versions of the DLM just the week before he left for Texas and validated every one of the DLMï¿½s performance claims. That should quiet the nay sayers out there who wanted proof of the antennaï¿½s efficiency and bandwidth."

From here:
http://www.arrlri.org/modules/news/article.php?storyid=12

JS

2153. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 21:56:02 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5c7puiim2@nnrp.linuxfan.it>
Source record: 39757

John Smith I wrote:

> [stuff]

This page:
http://lists.contesting.com/_towertalk/2004-06/msg00225.html

shows someone is "listening", however, somehow he missed the
"plano-helical coil", where each hairpin "turn" is serving as a small
capacitance ...

Also, the "plano-spiral top hat" seems to have been missed, essentially,
I picture a concentric wound "flat" coil which also seems to present
itself to being available to the "capacitive loading" effect. I have
simply taken a flat sheet of 1/16 aluminum and cut a continuous spiral
to create one to experiment with ...

Geesh, I would trade a few hours work for just a good pic of this
antenna, or at least a better description! Save a LOT of experimental
work on this end ...

And, then, there is that nagging mention about some sort of loading
device in the center ... oh well, where is that hacksaw?

JS

2154. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:07:56 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5c8g8iim3@nnrp.linuxfan.it>
Source record: 39758

John Smith I wrote:

> [stuff]

http://www.freepatentsonline.com/7187335.html

JS

2155. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:09:47 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5c8jc$n47$1@nntp1.jpl.nasa.gov>
Source record: 39761

John Smith I wrote:
> John Smith I wrote:
>
> > [stuff]
>
> This:
> "Our Technical Coordinator, Rob, K1DFT was guest presenter at the April
> 5th meeting of the Dallas (Texas) Amateur Radio Club. He thrilled a
> packed house with a multimedia presentation concerning his invention,
> the Distributed Loaded Monopole or DLM.
> Rob telephoned me after the event in addition to one of my Dallas
> friends who was in the audience to tell me how well the presentation was
> received. Congratulations Rob!! The Naval Undersea Warfare Center (NUWC)
> antenna testing range performed a full day of tests on a great many
> different versions of the DLM just the week before he left for Texas and
> validated every one of the DLMï¿½s performance claims. That should quiet
> the nay sayers out there who wanted proof of the antennaï¿½s efficiency
> and bandwidth."

If the NUWC range is like most other ranges, it's a facility that is essentially for rent to anybody who wants to use it. The range provides the site, the equipment, and the technicians. You tell them what tests you want to run, operate your equipment if needed, and they make the measurements and give you the data. As a rule, they'd make no substantive evaluation of the worth of anything tested there. You could hire them to make measurements on a 100ft spool of 20year old zipcord sitting on a folding chair, and they'd happily fire up the signal generator, measure the field strength, etc. It's not even all that expensive.. It could be something like $1000 to do a day's testing, and in comparison to what URI has already paid for their patent applications and K1DFT's salary, that's not a big deal. It might even be cheaper, since there's a variety of programs for government facilities to provide services and such to universities. If the range wasn't otherwise being used, all the equipment and staff is sitting around anyway, so the differential cost to run the tests is small.

In other words, to say that "the range performed tests and validated claims" is probably not technically true. The range performed the tests, and presumably provided a report of the data they collected. The validation of claims is up to the person who writes the analytical report who takes the test data (presumably with it's measurement uncertainties identified) and shows that test data matches expected values within experimental error.

>
> From here:
> http://www.arrlri.org/modules/news/article.php?storyid=12
>
> JS

2156. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:19:58 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5c96e$ne2$1@nntp1.jpl.nasa.gov>
Source record: 39762

Jimmie D wrote:
> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> news:f5c143$j40$1@nntp1.jpl.nasa.gov...
>
>>JIMMIE wrote:
>>
>>
>>>
>>>I also assume they know their business, I also assume that if they
>>>tested the antenna they actually collected qualitative information if
>>>they knew their business. It seems obvious to me that this data was
>>>intentionally left out . Deception by ommission.
>>>
>>>If the inventor does not want these types of assumptions being made
>>>then he should provide all information to clarify the issue.
>>>
>>>
>>>Jimmie
>>
>>Not necessarily. Patents are a strategic weapon in the technology
>>business. Your best bet is to have your patent have a sort of vague title

>
>
> Dont think I metioned patents at any time.

True enough.. However, URI has filed for patents on this antenna. And,
there's lots of ways an inventor can use their invention for financial
gain, only some of which involve convincing folks that it's a good
invention.

On the other hand if you want
> someone to buy your new miracle whiz bang antenna you either let people know
> how great it is with data from a reliable source or you omit your data
> giving vague discriptions to pull in the suckers.

Perhaps the goal isn't to sell antennas in this case? Maybe it's to
burnish the reputation of a university? Maybe it's to establish a patent
portfolio in the burgeoning world of wireless communications, and just
hope somebody else with deep pockets (e.g. a cellphone mfr) comes up
with a practical idea that's close enough to what you patented.

I dont think an affidavit
> from the testing facility on measured field strength compared to a full size

> antenna who have endangered his product.

The test facility would normally provide a copy of the data to whoever paid for the tests. The data package would include appropriate certifications that the equipment was calibrated and to what standards. It would also usually have a description of the test procedure used, either explicitly, or by reference to some standard published procedure.

It's the buyer of the data that has the responsibility to make the claims and comparisons. (or not... I've been involved in some measurement campaigns where the data wasn't disclosed, for competitive reasons.) In any event, the independent test facility would almost never make any sort of "summarizing conclusions", except, perhaps for a regulatory compliance test, where they'd say: The tested device (S/N #001) met all requirements for XYZ, as demonstrated by the attached test data and procedures. Note well the reference to a single test article. All the lab can say is that "the thing we tested did this".. they won't (and can't) make any assertions about the design or whether other articles of the same design will perform the same, etc.
>
>

2157. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:23:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5c9d1$oj8$1@nnrp.linuxfan.it>
Source record: 39759

John Smith I wrote:
> John Smith I wrote:
>
> > [stuff]
>
> http://www.freepatentsonline.com/7187335.html
>
> JS

Here is the URL of the actual .pdf document and is chock-full of pics,
details, and description:
http://www.freepatentsonline.com/7187335.pdf

Now there is no reason that anyone cannot confirm or deny the hype ...

JS

2158. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:24:54 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <iv9j73tgeltt1b5jbof3npenruj9bn35j9@4ax.com>
Source record: 39760

On Wed, 20 Jun 2007 15:15:03 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Buck, N4PGW wrote:
>"Does anyone know where I might find that formula?"
>
>Look at the ARRL Antenna Book. The 19th edition (old) has a choke balun
>for low-frequency antennas on page 6-9. The text says:
>"In general, an isolation choke inductance of 50 to 100 microhenries
>will be needed for 3.5 and 1.8 MHz, ground-plane antennas. One of the
>easiest ways to make the required isolation choke is to wind a length of
>coaxial cable into coil as shown in Hig 18. For 1.8 Mhz, 30 turns of
>RG-213 wound on a 14-inch length of of 8-inch diameter PVC pipe, will
>make a very good isolation choke that can handle full legal power
>continuously."

Page 26-21 of the same 19th edition ARRL Antenna Book has a whole table of choke baluns sized for each of the HF bands. I believe Mr. Lewallen worked out the specs.

bob
k5qwg

>
>On page 11 of Terman`s 1955 opus is found formula (2-2):
>Inductance in microhenries = F n(sqared) d
>
>F is a constant that depends on length/diameter. There`s a chart in the
>book for F.
>n is the number of turns.
>d is the diameter of the coil measured between the centers of the wire
>in the coil.
>
>The purpose of the coil is to present a high impedance to currents on
>the outsifde of the coax so quick and dirty is OK so long as there is
>enough impedance. You may get away without a coil form at all. You might
>lose some of the isolation that coil length provides so I don`t
>recommend just coiling coax like garden hose.
>
>Best regards, Richard Harrison, KB5WZI

2159. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 22:41:57 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <46799f8d$0$24708$4c368faf@roadrunner.com>
Source record: 39756

Thanks everyone

The shack will be run off of solar power only and 95% of everything it it will be 12 volt. It will have a 1200 watt inverter to run different AC items as needed (a soldering iron comes to mind)

I plan on grounding the sheild (for lack of a better term) of the shack, to my lightning /RF grounding system. There is no way that I would not ground the hell out of something like this.

I use LMR 600 and 400 for the coax runs.

The sheilding does not need to be perfect, just good.

thanks again..
joe
KI4ILB

2160. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 23:32:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5cdev$15o$1@nnrp.linuxfan.it>
Source record: 39763

Jim Lux wrote:

> [stuff]

I see!

So now, old Rob-boy has not only whamboozled a whole bunch of Phd's and physics personnel at URI, he how as a "bunch" of hams from arrlri.org to carve notches on his pistol grips for ... interesting, the only hams able to see though his sham are here ... or else, the reverse is true!

As my buddy Arnie would say, "Enteresting, veeerrry enteresting ... "

JS

2161. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-20 23:38:23 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5cdpr$2i4$1@nnrp.linuxfan.it>
Source record: 39764

Jim Lux wrote:

> [stuff]

A thought came to me when this all set the naysayers off, "Don't wait for him/URI to come courting amateurs and attempting to sell 'em antennas." The amount of profit to be had might not cover his dinner and drinks ...

I'd imagine we need to search cell phones, wireless routers/switches/etc., military, cell towers, gov't, etc. to find the antennas--where profits are to be had ...

JS

2162. Re:Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 01:01:01 UTC
From: John <vk2kce@yahoo.com.au>
Message-ID: <h5kei.16710$wH4.1943@news-server.bigpond.net.au>
Source record: 39765

Hello to all,

I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in stainless steel.

I don't mind if they are in USA.

Can anyone help?

VK2KCE
John in Australia

2163. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 01:42:07 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <fplj73diktqjpbojt70i94a2385ibpfhv1@4ax.com>
Source record: 39767

On Thu, 21 Jun 2007 01:01:01 GMT, "John" <vk2kce@yahoo.com.au> wrote:

>Hello to all,
>
>I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in stainless
>steel.
>
>I don't mind if they are in USA.
>
>Can anyone help?
>
>VK2KCE
>John in Australia
>

This outfit shows they have 3/8-24 x 1-1/8

http://www.boltdepot.com/Coupling-Nuts.aspx

Danny, K6MHE

2164. Re: Re:Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 01:53:57 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <ySkei.3881$C31.3383@bignews3.bellsouth.net>
Source record: 39768
Body handling: Inline uuencoded payload not displayed: icon_help.gif

"John" <vk2kce@yahoo.com.au> wrote in message
news:h5kei.16710$wH4.1943@news-server.bigpond.net.au...
> Hello to all,
>
> I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in
> stainless
> steel.
>
> I don't mind if they are in USA.
>
> Can anyone help?
>
> VK2KCE
> John in Australia
>

In Yellow pages, look up "Fasteners" and when you call, I think they refer
to it as "Rod couplings"

check here - at Grainger
http://www.grainger.com/Grainger/wwg/guideBrowse.shtml

Rod Coupling Nut,Pk 5
Rod Coupling Nut, Fully Threaded, Grade 5 Steel, Zinc Chromate Plated
Finish, Thread Size 3/8-24, Thread Type Standard, Right Hand Thread
Direction, Width 5/8 In, Length 1 3/4 In, Min Tensile Strength 105,000 PSI,
Min Yield 90,000 PSI, Straight Line Pull Max 5500 lbs Dead Load, Package 5
Grainger Item # 1JA16
Price (pk.) $20.19
Brand APPROVED VENDOR
Mfr. Model # 1JA16
Ship Qty. 1
Sell Qty. (Will-Call) 1
Ship Weight (lbs.) 0.55
Usually Ships** Today

[Inline uuencoded payload not displayed: icon_help.gif]

2165. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 02:09:48 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <Lb2dnbCAPcgnTeTbnZ2dnUVZ_jednZ2d@bright.net>
Source record: 39766

Submarine patents have gone away with a change in the maximum duration of a
patent being measured from the date of filing (and not the date of issue).
Additionally, almost all applications are published 1.5 years after filing.
Can not hide.
73, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net
"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message

>
> Go look up "submarine patent" for more details on how this works.
>

2166. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 02:14:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5cmus$p2g$1@nnrp.linuxfan.it>
Source record: 39769

Hal Rosser wrote:

Was looking around for some of the like, found this catalog page:

http://www.grainger.com/Grainger/wwg/viewCatalogPDF.shtml?browserCompatable=true&adobeCompatable=true&toolbar=false&CatPage=2289

JS

2167. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 02:45:35 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4679e63e$0$21250$39cecf19@news.twtelecom.net>
Source record: 39770
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Telamon wrote:
> In article <1182252507.359024.113790@q69g2000hsb.googlegroups.com>,
> Denny <k8do@mailblocks.com> wrote:
>
> < Snip >
>
> < plonk >
>

Anyone who would do that deserves a

< Bigger SNIP >

and a

< Monster PLONK >

tom
K0TAR

2168. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 02:53:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5cp79vti1@nnrp.linuxfan.it>
Source record: 39771

art wrote:

> [stuff]

Obviously, all he might have done is found a way to use existing
methods, techniques and knowledge to be able to change the loading and
radiation characteristics ...

However, that might just be enough to be usable. I have needed a
stealth antenna more times than I could shake a stick at. And, smaller
mobile antennas with improved characteristics are always desirable ...

It is easier to bend laws than to break 'em ...

JS

2169. Re: Re:Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 04:50:32 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <ktudnWwMN4ETnufbnZ2dnUVZ_smonZ2d@giganews.com>
Source record: 39772

Hal Rosser wrote:
>
> John VK2KCE wrote:
> > Hello to all,
> >
> > I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in
> > stainless
> > steel.
> >
> > I don't mind if they are in USA.
> >
> > Can anyone help?
> >
> > VK2KCE
> > John in Australia
> >
>
> In Yellow pages, look up "Fasteners" and when you call, I think they refer
> to it as "Rod couplings"
>
> check here - at Grainger
> http://www.grainger.com/Grainger/wwg/guideBrowse.shtml
>
> Rod Coupling Nut,Pk 5
> Rod Coupling Nut, Fully Threaded, Grade 5 Steel, Zinc Chromate Plated
> Finish, Thread Size 3/8-24, Thread Type Standard, Right Hand Thread
> Direction, Width 5/8 In, Length 1 3/4 In, Min Tensile Strength 105,000
PSI,
> Min Yield 90,000 PSI, Straight Line Pull Max 5500 lbs Dead Load, Package 5
> Grainger Item # 1JA16
> Price (pk.) $20.19
> Brand APPROVED VENDOR
> Mfr. Model # 1JA16
> Ship Qty. 1
> Sell Qty. (Will-Call) 1
> Ship Weight (lbs.) 0.55
> Usually Ships** Today

McMaster-Carr (http://www.mcmaster.com) is also a great online source of materials. They have &#65533;" hex x 1.125"L coupling nuts in your choice of either 18-8 or 316 stainless steel:

18-8 = PN 90268A335 = $2.82 USD each
316 = PN 90104A012 = $17.36 USD each

73,
Bryan WA7PRC

2170. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 04:56:35 UTC
From: Dave Heil <k8mn@earthlink.net>
Message-ID: <7ynei.2477$W_6.144@newsread1.news.pas.earthlink.net>
Source record: 39773

Cecil Moore wrote:
> On Jun 20, 8:01 am, Buck <usene...@lumpuckeroo.com> wrote:
>> Does anyone know where I might find that formula?
>
> How about a rule of thumb? Using a 2 liter pop bottle, make the number
> of turns equal to the wavelength in meters. That will optimize for a
> specific wavelength but will render it not very useful for any shorter
> wavelengths, e.g. 20 turns is too many for 10m.

So it is your "rule of thumb" that 160 turns would be used for 160m?
I don't think so, Cecil. Six or eight turns on such a form should work
fine for 20-10m.

Dave K8MN

2171. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 06:45:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tr4k73186j5jbo83ofoh66s4f9pqmcfns3@4ax.com>
Source record: 39774

On Thu, 21 Jun 2007 03:30:53 GMT, no.spam@no.uce.bellatlantic.net
wrote:

>On Tue, 19 Jun 2007 16:45:15 -0400, Chuck <no.spam@no.spam.at.all>
>wrote:
>
>>Hello Richard,
>>
>> > Richard Clark wrote:
>>> It is merely an off-center dipole that hasn't come out of the closet.
>>> The wiring in your shack supplies that other half, and supports the
>>> common mode current/voltage.
>>>
>>
>>Interesting concept. Not technically a
>>dipole, though. But similarly true of
>>less-than-perfect, center-fed dipoles, no?
>
>Seperate generic dipoles from resonant dipole halfwave antennas
>or other resonat half wave antennas with unusual feeds.
>It's possible to have a nonresonant dipole that is an effective
>antenna but that a whole different animal.

This doesn't make much sense. A dipole is a generic term for two
poles. There are very few monopoles in nature in spite of the term
being used generally for a vertical. Even then, there is the plane of
ground (or a ground plane when elevated) that serves as the other half
fulfilling the sense of "dipole" (two poles, i.e. points that are
separated by 180 degrees of voltage sense).

Irrespective of being a true or other dipole, resonance comes with the
nature of the system, which may include the feedline, and any wiring
that is substantially (in terms of wavelength) remote from ground. It
takes extreme effort to remove these effects of elevated wiring. These
same wires radiated, even if ineffectively (or even effectively) or,
rather, unmanageably (the operator never intended, or considered them,
part of the radiator).

>Be careful as the average OCF is an antenna that longer than a
>halfwave. Though for instructional value there is one aspect there
>in that at the center the feed point in free space is 72ohms (or there
>abouts). As you move the feed point to the ends the feed resistance
>goes up untill you reach the and where it's the highest at that point.

That, in fact, is not true. You may find certain "sweet" or "sour"
spots along the length. Some can effectively render a 50 Ohm match

(if you take great care to both choke the feed and isolate it from the imbalanced fields). You can also elevate the Z too. Transformation along the length of a wire renders many Rs and Zs. The OCF will generally resonate at the same frequencies regardless of feed point. So a half wave of wire can be induced to match different Zs and Rs by feed placement (although maintaining isolation, as mentioned, can be exceedingly difficult).

>Shack wiring is not RF.

This is the desire of the operator, but rarely given enough consideration to be generally true. The further your operating position is from ground, in terms of wavelength, the higher potentials your position supports in the presence of Common Mode excitation. Second story shacks are notorious for these problems.

>The difference if the home power was DC
>it will still require a return path and there is no way to virtualize
>it. At RF ground is/can be a virtual thing.

You can force the solution through tuning the ground wire, or providing for a virtual ground, certainly. This, however, is rarely practiced. Faith does not replace ground.

>Having built end fed half waves (and full waves) for 40-6m
>I can say I've had RF problems. There is a reason for that.
>If the radiator is not a resonant half wave there will be problems
>and that length is affected by position and environment
>just like any dipole.

Common mode cares not a whit about resonance. It is a condition driven by imbalance. That imbalance arrives either electrically or physically (both of which are so intimately intertwined as to be inseparable in the common antenna installation).

>That is the first step, if the radiator is
>not resonant it will induce reflections in the system just like a half
>wave dipole.

All antennas that are short are by definition (the halfwave and even full waves discussed here) are Standing Wave antennas. They ALL reflect regardless of resonance. You only encounter non-reflective antennas by one of two means:
1. Large dimensions (Rhombics are classic) that are terminated;
2. Short antennas provided with buffering resistors.

>The second reason I've had problems is
>going from 50 ohms to around 3500 to 5500ohms (assuming a
>resonant radiator) and the network for that if wrong will induce
>all manner of problems.

Of course. A Hi-Z feed point is nearly impossible to choke. That feedpoint looking back at the entire system will endeavor to feed

everything, including the transmission line and thus induce Common Mode currents. These currents are a random and opportunistic fact of life, and across the variety of situations will either present problems or appear to be benign.

>When I have it right there is no common
>mode RF on the outside of the coax (other than induced by the near
>field of the antenna) and this is similar to what would be expected
>from a properly fed half wave dipole.

On the face of it, an OCF (or end fed) antenna is distinctly different from a "properly fed half wave dipole" by simple, geometrical analysis. The Common Modality follows this with strong correlation. A standard dipole, "properly fed" assumes a strong symmetry which precludes Common Mode induction when also properly choked. An OCF does not exhibit symmetry, and typically suffers considerable Common Mode induction which often precludes attempts to suppress conduction through choking.

>Voltage fed antennas
>(halfwave) have too low a current at the feed point to have common
>mode problems

This is simply wrong. There is nothing inherent about Common Mode that is extinguished by any distinction of being "voltage fed." You may experience a condition that supports this statement as an example, but it does not create a rule. Luck does not define the condition.

Allison, you mix so many examples of problematic episodes and conflicting advice as to negate most of what you offer. Common Mode is dominated by balance or imbalance. There are certainly expectations of resonance that follow from need, but they have absolutely nothing to do with the CM problems that are encountered, nor dodging the CM bullet through happenstance.

Common Mode issues are induced, controlled, or cured through very simple considerations and they never appeal to resonance. The problem for the typical Ham is these simple considerations are not simply solved. Balance is not achieved by the wave of a hand. You cannot force CM away through careful tuning. If you don't notice CM, all fine and well, but that does nothing to solve an imbalance either - you simply don't care about it is all.

73's
Richard Clark, KB7QHC

2172. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 11:34:14 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182425654.749406.122010@n2g2000hse.googlegroups.com>
Source record: 39775

To further add
> to the mix, I suggested he tie the tuner to the fence line and
> backstop.
>
> 73's
> Richard Clark, KB7QHC

That was canny advice, Richard... The top rail of the fence and backstop 'could' have been an NVIS antenna - which will get you smokin' reports out to a few hundred miles...
I do this routinely for Field Day with a horizontal loop for 80 meters being strung about 20 feet high over a low, wet, fertilized field next to a river... The guys run QRP off a battery and are amazed how they can break pile ups... I have never bothered to point out to them that the vast majority of their contacts are within a 500 mile circle... They are happy and I believe in ignorance being bliss...

denny / k8do

2173. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 12:45:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Qpuei.3153$Rw1.2723@newssvr25.news.prodigy.net>
Source record: 39776

Jim Kelley wrote:
> Since you can't provide an instance in which I disagreed with an IEEE
> definition, perhaps you'll be a gentleman and retract your comments.

I will provide that quote from you when I have
time to perform the Google search.
--
73, Cecil http://www.w5dxp.com

2174. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 13:08:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2Luei.3157$Rw1.1966@newssvr25.news.prodigy.net>
Source record: 39777

Dave Heil wrote:
> Cecil Moore wrote:
>> How about a rule of thumb? Using a 2 liter pop bottle, make the number
>> of turns equal to the wavelength in meters. That will optimize for a
>> specific wavelength but will render it not very useful for any shorter
>> wavelengths, e.g. 20 turns is too many for 10m.
>
> So it is your "rule of thumb" that 160 turns would be used for 160m?
> I don't think so, Cecil. Six or eight turns on such a form should work
> fine for 20-10m.

For maximum impedance, i.e. optimized for a single frequency,
the ugly balun would be 1/4WL self-resonant. I think you will
find that, for HF frequencies, the number of turns of RG-213
on a 4 inch coil form is in the ballpark of the wavelength in
meters. Thus, close to ten turns would be optimum for 10m.
Such a balun, although it would work, would not be optimized
for 20m as the impedance would be maximum around 10m.
--
73, Cecil http://www.w5dxp.com

2175. Screw NBC/Universal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 14:57:25 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <plwei.35737$G23.26845@newsreading01.news.tds.net>
Source record: 39778

http://www.afterdawn.com:80/news/archive/10111.cfm

2176. Re: Screw NBC/Universal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:00:22 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <aowei.35738$G23.33104@newsreading01.news.tds.net>
Source record: 39681

Please accept my apology. It was not my intent to post this item to this news group.
John, N9JG

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message news:plwei.35737$G23.26845@newsreading01.news.tds.net...
> http://www.afterdawn.com:80/news/archive/10111.cfm
>

2177. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:25:34 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f5e59d$1gr4$1@f04n12.cac.psu.edu>
Source record: 39682

art wrote:
>
> I really don't think there is a market for antennas other than the IR
> antenna I went to a couple of ham fests last year and they closed
> early because of the lack of buyers.

Most Hamfests these days start too early and end too early. That has
been a trend for several years now.

It's short sighted though. If I want to go to say the Butler or Timonium
Hamfests, both around 2.5 hours from Happy Valley, I have to get up at
around 3 a.m. so I can be there when they open.

Now it's getting to the point that unless you're a local, going to a
Hamfest can be a great way to wreck your weekend. Sheer timing is the
big problem IMO. Not Ebay or the actuarial tables.

> I suppose ham radio reflects the
> veterans of WW2 where many of those who were doers are gradually dying off
> leaving former CBers in the majority.

I suppose that some of the Amateurs in that age group may believe such a
thing. I kind of doubt it is the actual case though.

- 73 de Mike KB3EIA -

2178. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:29:13 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1182439753.677466.163040@w5g2000hsg.googlegroups.com>
Source record: 39683

On Jun 21, 5:45 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > Since you can't provide an instance in which I disagreed with an IEEE
> > definition, perhaps you'll be a gentleman and retract your comments.
>
> I will provide that quote from you when I have
> time to perform the Google search.

Sure you will. :-)

Concentrate your search on the original discussion where you were
claiming that an IEEE definition proves that power flows through
transmission lines. (I think you referred to that one again just
recently.)

73, ac6xg

2179. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:44:44 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1182440684.360681.133180@d30g2000prg.googlegroups.com>
Source record: 39684

On Jun 21, 12:50 am, "Bryan" <bryan.swadenerNOS...@comcast.net> wrote:
> Hal Rosser wrote:
>
> > John VK2KCE wrote:
> > > Hello to all,
>
> > > I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in
> > > stainless
> > > steel.
>
> > > I don't mind if they are in USA.
>
> > > Can anyone help?
>
> > > VK2KCE
> > > John in Australia
>
> > In Yellow pages, look up "Fasteners" and when you call, I think they refer
> > to it as "Rod couplings"
>
> > check here - at Grainger
> >http://www.grainger.com/Grainger/wwg/guideBrowse.shtml
>
> > Rod Coupling Nut,Pk 5
> > Rod Coupling Nut, Fully Threaded, Grade 5 Steel, Zinc Chromate Plated
> > Finish, Thread Size 3/8-24, Thread Type Standard, Right Hand Thread
> > Direction, Width 5/8 In, Length 1 3/4 In, Min Tensile Strength 105,000
> PSI,
> > Min Yield 90,000 PSI, Straight Line Pull Max 5500 lbs Dead Load, Package 5
> > Grainger Item # 1JA16
> > Price (pk.) $20.19
> > Brand APPROVED VENDOR
> > Mfr. Model # 1JA16
> > Ship Qty. 1
> > Sell Qty. (Will-Call) 1
> > Ship Weight (lbs.) 0.55
> > Usually Ships** Today
>
> McMaster-Carr (http://www.mcmaster.com) is also a great online source of
> materials. They have ½" hex x 1.125"L coupling nuts in your choice of
> either 18-8 or 316 stainless steel:
>
> 18-8 = PN 90268A335 = $2.82 USD each
> 316 = PN 90104A012 = $17.36 USD each

>
> 73,
> Bryan WA7PRC- Hide quoted text -
>
> - Show quoted text -

If you mess around with antennas very much a tap and die can be very useful. I have a small lathe for fabricating parts but befoe I acquired it I found I could chuck metal in a drill fasten to my work bench and machine out a lot of small parts, after that came a drill press bought at auction, and finally I came by a lathe I could fit in the radio budget.

Jimmie

2180. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:48:31 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <j5xei.10769$ya1.423@news02.roc.ny>
Source record: 39685

Michael Coslo wrote:
...
>
> Most Hamfests these days start too early and end too early. That has
> been a trend for several years now.
>
> It's short sighted though. If I want to go to say the Butler or Timonium
> Hamfests, both around 2.5 hours from Happy Valley, I have to get up at
> around 3 a.m. so I can be there when they open.
>
> Now it's getting to the point that unless you're a local, going to a
> Hamfest can be a great way to wreck your weekend. Sheer timing is the
> big problem IMO. Not Ebay or the actuarial tables.

I have to agree. I'm 4-6 hours from just about any hamfest I'd want to attend so I have to leave around midnight or get a hotel room. Not being in my 20's anymore it's a hotel room and that adds quite a bit of overhead to what would be low hamfest prices, and faced with that I usually put a search on ebay and wait for the email.

If they started at noon or even 10:00 it would be a whole different story, I'd much prefer to buy at fests simply for the eyeball contacts.

- Galen, W8LNA

2181. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 15:53:52 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5e6ut$d31$1@nnrp.linuxfan.it>
Source record: 39686

JIMMIE wrote:

> ... and finally I came by a lathe I could fit in
> the radio budget.
> Jimmie

Jimmie:

Since a lathe can build every tool in a machine shop, including itself,
you have a most desirable setup!

Regards,
JS

2182. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 16:00:50 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Sgxei.15429$2v1.11454@newssvr14.news.prodigy.net>
Source record: 39688

Jim Kelley wrote:
> On Jun 21, 5:45 am, Cecil Moore <nos...@w5dxp.com> wrote:
>> I will provide that quote from you when I have
>> time to perform the Google search.
>
> Sure you will. :-)

The only computer to which I have present access blocks
Google Group access so bear with me on that one. Or you
could simply prove it to yourself. It would be during
the time when you were asserting, "No work = no power",
while the IEEE Dictionary requires no such limitations
on the definition of "power".
--
73, Cecil, w5dxp.com

2183. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 16:27:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hq5l735d6rftmgeg2nnl2886kb5casrm2g@4ax.com>
Source record: 39689

On Thu, 21 Jun 2007 11:49:39 GMT, no.spam@no.uce.bellatlantic.net
wrote:

>Half wave antenna can be a monopole however the reverse is
>can only be true if its resonanance is at 1/2 wave.

Hi Allison,

This still lacks common sense. What is the reverse? What are you
comparing? Apples to Apples and saying one is not an Apple?

>>Irrespective of being a true or other dipole, resonance comes with the
>>nature of the system, which may include the feedline, and any wiring
>>that is substantially (in terms of wavelength) remote from ground. It
>>takes extreme effort to remove these effects of elevated wiring. These
>>same wires radiated, even if ineffectively (or even effectively) or,
>>rather, unmanageably (the operator never intended, or considered them,
>>part of the radiator).
>
>Explain the EDZ which is a doublet and the 5/8s wave both of wich do
>not resonate at the operating frequency.

What is there to explain? Resonance is remarkable only to the
measurement of Z. None of this has anything to do with either
encountering Common Mode nor imbalance, nor feedline problems.

Your questions would be more meaningful if they contained some
context. I don't see that in relation to my comments.

>Physical imbalance is not an issue. Electrical imbalance is.

How you can separate the two in a structure of several tens of meters
is a painful conceit. Physical balance with even the best of dipole
implementations is a rarity. Lacking that balance, electrical
imbalance follows to the same degree. This is simple physics.

>What is required for balance is less understood.

I understand it quite well, and I have designed instrumentation that
requires it without fail. To extend this knowledge to common Ham
situations is not a leap of faith, merely the practice of common
sense.

>Ground however is not required.

The dismissal of ground is specious. No one here has any power to
achieve that or have options in that regard.

>No it's easy to deal with. Chokes however to be effective at hi-z
>must also exhibit hi-z.

You have some really easy answers to difficult situations; and yet you describe situations fraught with challenge and unknowns. For instance this effective choke for feedpoint Zs in the 5000+ Ohm region: you don't describe it.

I dare say your best approximation would be a line that is halfwave long itself. In that case, the choking action would, at best, equal the feedpoint Z. Not much of a choke there; you simply end up with a new, lazy dipole.

OK then, the matching tank? You still need to choke the line going to the tank and the loaded Q of the tank does not present choking to the extent of the unloaded Q.

In fact, the only saving grace is that your matching tank is located at the base of the antenna (not uncommon), and the path back to the transmitter is immaterial because of the proximity of lossy earth snubbing the Common Mode. This Hail Mary solution inverts your dictum above: an effective choke for Hi-Z should be low and lossy.

Unfortunately this fails for end-fed horizontals on high, and achieving the Hi-Z choking is not guaranteed of being achieved nor a guarantor of being effective.

By and large, success in these scenarios is often a greater part of luck, or the skill of practicing luck.

>>On the face of it, an OCF (or end fed) antenna is distinctly different
>>from a "properly fed half wave dipole" by simple, geometrical
>>analysis. The Common Modality follows this with strong correlation. A
>>standard dipole, "properly fed" assumes a strong symmetry which
>>precludes Common Mode induction when also properly choked. An OCF
>>does not exhibit symmetry, and typically suffers considerable Common
>>Mode induction which often precludes attempts to suppress conduction
>>through choking.
>
>You've convinced yourself. And an end fed is not an OCF.

I fully know what I am convinced of. Your statement is merely a mis-interpretation without explanation.

>Luck is random. The condition achived is not and is predictable as
>well as reproduceable.

I roll the dice, 7 comes up, I win from that being the highest probability and that is an achieved condition. It is predicable too. Reproducing it conforms to common odds. Winning does not explain HOW to win.

>No you wish that. However there is no confilct in what I gave. If
>you do it worng it doen't work right. IF you do it right the most if
>not all of the issues will not arise.

This is an homily, not an explanation.

> They were examples of things done wrong and in most cases seriously
>wrong. I may point out the people that had problems I'd helped could
>not get a basic monoband dipole to work because the idea of keeping
>the antenna away from the trunk of a tree or measuring accurately was
>not taken seriously. I offered those to point out that many who claim
>"It doesnt work" did enough wrong that the expectation of proper
>operation was unreasonable.

Certainly problems are invested with this common condition.

>Generally I've had more problems with
>RF getting into places I didn't want it due to radiation (desired)
>than common mode currents in a working system of any sort.

This is exactly the situation of Common Modality. It arrives by induction or conduction. Over the air, or over the wire. Both over the air AND over the wire. The path and the imbalance define the Z and the linkage excites it to exhibit voltages and currents consistent with that impedance.

Conceptually it is very simple to understand CM: imbalance. One can start with a "perfect" dipole in free space. At a great distance, and at a point along the same axis you can not perceive any signal from it. Move off bore-sight and the signal becomes perceptible to the degree of the imbalanced condition you have now entered into.

Place the same dipole over a "perfect" ground, and you will never find a "perfect" null because the "perfect" (or even imperfect) ground disturbs the balance. Common Mode, by definition, arrives over the air. In a real world, it is impossible to remove. You can reduce the effects to below the threshold of irritation, certainly.

Stand below the "perfect" dipole on a "perfect" ground, and feed it with a balanced line and you will obtain a Common Mode free condition. Draw the line to one side by a degree, or droop an element of the (now non) "perfect" dipole one degree, and that condition will be lost - to that "degree." Physical symmetry informs the degree of balance. Electrical balance slavishly follows physical balance, there are no solutions that can repair this without answering the physical state.

Now, excite an end-fed anything (it is immaterial how long the wire is) that travels at some height over a real ground (it is also immaterial that it be ground, it can be in relation to an airplane, or a Zeppelin, or lunar lander). You must have a dipole somewhere. Most ignore the obvious: the bulk of the transmitter is enough, even it if it is battery operated and self contained and remote from any operator or shack. A current will not flow without a potential difference, and that difference requires some anchor - however small. Common sense informs us that there is not such thing as a monopole generator.

The average Ham transmitting into an end-fed antenna does not do it in such isolation. The bulk of the transmitter is not without wiring

that can be substantially elevated from the ground below the antenna. That complete circuit is not balanced. The lack of balance necessarily injects Common Mode into the picture. The degree by which it interferes (in all senses of the word) is found in the combination of balance and the Z presented by this random path. If the operator can tolerate it, it isn't a problem. Not being a problem does not wish away CM.

73's
Richard Clark, KB7QHC

2184. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 17:17:58 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ebsj$d31$2@nnrp.linuxfan.it>
Source record: 39690

Richard Clark wrote:

>> Half wave antenna can be a monopole however the reverse is
>> can only be true if its resonanance is at 1/2 wave.

> ...
> Richard Clark, KB7QHC

Richard:

I think he means a half-wave monopole is quite possible (I use 'em all the time!), and a half-wave dipole can exist with each leg being 1/4 wave ... both (having in common) being a half-wave antenna.

Or, at least, that is the way I read it ...

Regards,
JS

2185. Patent realities was Re: Guy from university physics dept.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 17:58:13 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5ee7m$8be$1@nntp1.jpl.nasa.gov>
Source record: 39695

art wrote:
> On 20 Jun, 13:02, Jim Lux <james.p....@jpl.nasa.gov> wrote:

>
> Glad you wrote that Jim. A lot of people have no real idea of how
> the patent idea is used in commerce or that the claims are the
> most important part so at to protect in the event of new
> advances in science.When competing for contracts it is
> important to protect your designs even tho trivial incase
> the contract is put out again.
>
> I do have a question tho
> and that is with respect to trade secrets/utility patents.
> If a person decides not to patent and the idea is later
> deciphered does that prevent a patent issued to either
> party?

Nope.. he who discovers first gets the potential ability to patent, regardless of what you've done in the past. "first to discover vs first to disclose". (US vs EU) If you've disclosed it, you have a year to get the app filed (in the US.. everywhere else, you have to file before first public disclosure) "disclosure" is kind of a tricky thing too.

That's why that evidence of date of invention (the classic bound notebook with the signature on the page of someone who "read and understood") is handy. That establishes "priority"

From a strategic point, it used to be (before the started publishing apps) that you'd have a trade secret AND file an application. You'd mark your thing "Patent Pending". You'd make little changes (possibly in response to an examiner's questions, or possibly as a "Continuation in Part" CIP) in the application to extend the time before the patent gets granted and published. If someone looked like they had independently discovered what your secret is (or they acquired it by espionage), you'd let the application start running, and then you'd go to the competitor and say, "Hey, we've got this patent application in the works, and YOU don't know what's in it, and we're NOT going to tell you what's in it. When the patent issues, we might be able to put you out of business. Feel Lucky?" Then, negotiations for a license ensue.

This is all changing though, so don't take what I write as gospel.

With respect to submarines I thought the last
> changes to patent law now prevents this.
> Another posting stated that it is for the courts to determine
> if a patent was authentic yet I read that the courts have now

> stated that they are not in the game of overuling the
> patent office any more.

There is that, too...

However, you still have to go to court to enforce your patent. The alleged infringer has to say why your patent is invalid or why they don't infringe. This isn't cheap. If the infringer is an off-shore mfr, then you might get a customs order to stop importation, but that's like playing whack-a-mole, because each and every container load will likely be from a (ostensibly)different infringer.

2186. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:01:53 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5eeeh$8f3$1@nntp1.jpl.nasa.gov>
Source record: 39696

J. Mc Laughlin wrote:
> Submarine patents have gone away with a change in the maximum duration of a
> patent being measured from the date of filing (and not the date of issue).
> Additionally, almost all applications are published 1.5 years after filing.
> Can not hide.
> 73, Mac N8TT
>

Gone mostly away, I'd say...
There is an "art" in the writing of disclosures and claims that cause the patent to not look applicable. I knew someone who patented everything using the word "Catalyst" in the title, etc. There are thousands and thousands of catalyst patents issued all the time, so yours would be lost in the morass, and nobody has the time to read ALL the patents.

Modern search engines help a lot to fight this.

There's also the fact that standards bodies are much better about making participants in a standards setting process disclose their "patents in waiting" so you don't get submarined by adopting a standard, only to find the next year that it requires a license from some patent holder.

2187. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:08:50 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f5eerh$1ffc$1@f04n12.cac.psu.edu>
Source record: 39691
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Telamon wrote:
> In article <1182252507.359024.113790@q69g2000hsb.googlegroups.com>,
> Denny <k8do@mailblocks.com> wrote:
>
> < Snip >
>
> < plonk >
>

Do you only post here to plonk people? I guess that could be fun.... ;^)

- 73 de Mike KB3EIa -

2188. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:10:19 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f5eeub$1ffc$2@f04n12.cac.psu.edu>
Source record: 39692
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

jimp@specsol.spam.sux.com wrote:

> Let's see how many more times you are added to his killfile.

Beware lest thou enrage the gods of plonkification, Jim.

- 73 de Mike KB3EIA -

2189. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:15:58 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f5ef8u$1ffe$1@f04n12.cac.psu.edu>
Source record: 39693

gwatts wrote:
> Michael Coslo wrote:
> ...
>>
>> Most Hamfests these days start too early and end too early. That
>> has been a trend for several years now.
>>
>> It's short sighted though. If I want to go to say the Butler or
>> Timonium Hamfests, both around 2.5 hours from Happy Valley, I have to
>> get up at around 3 a.m. so I can be there when they open.
>>
>> Now it's getting to the point that unless you're a local, going to
>> a Hamfest can be a great way to wreck your weekend. Sheer timing is
>> the big problem IMO. Not Ebay or the actuarial tables.
>
> I have to agree. I'm 4-6 hours from just about any hamfest I'd want to
> attend so I have to leave around midnight or get a hotel room. Not
> being in my 20's anymore it's a hotel room and that adds quite a bit of
> overhead to what would be low hamfest prices, and faced with that I
> usually put a search on ebay and wait for the email.
>
> If they started at noon or even 10:00 it would be a whole different
> story, I'd much prefer to buy at fests simply for the eyeball contacts.

I really enjoy the hamfest at Dayton, where they start at 0800, and
sell all day. I think how this got started was that the sellers agitated
for earlier starts, and earlier begat earlier, until we ended up with
what we have now. One of our semi local fests starts at 0700 and is over
at noon.

Obviously not going to get the church crowd either.. 8^)

So I guess they got everything they wanted - and lost a lot of the
customers in the deal.

- 73 de Mike KB3EIA -

2190. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:17:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5efu0$c48$1@news.service.uci.edu>
Source record: 39694

Cecil Moore wrote:

> The only computer to which I have present access blocks
> Google Group access so bear with me on that one.

You know what they say about excuses, Cecil. :-)

Will you never tire of calling people liars?

73, ac6xg

2191. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 18:49:24 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <AFILDVG0gseGFwSc@g3ohx.demon.co.uk>
Source record: 39698

In message <f5ef8u$1ffe$1@f04n12.cac.psu.edu>, Michael Coslo
<mjc5@psu.edu> writes
>gwatts wrote:
>> Michael Coslo wrote:
>> ...
>>>
>>> Most Hamfests these days start too early and end too early. That
>>>has been a trend for several years now.
>>>
>>> It's short sighted though. If I want to go to say the Butler or
>>>Timonium Hamfests, both around 2.5 hours from Happy Valley, I have to
>>>get up at around 3 a.m. so I can be there when they open.
>>>
>>> Now it's getting to the point that unless you're a local, going
>>>to a Hamfest can be a great way to wreck your weekend. Sheer timing
>>>is the big problem IMO. Not Ebay or the actuarial tables.
>> I have to agree. I'm 4-6 hours from just about any hamfest I'd want
>>to attend so I have to leave around midnight or get a hotel room. Not
>>being in my 20's anymore it's a hotel room and that adds quite a bit
>>of overhead to what would be low hamfest prices, and faced with that I
>>usually put a search on ebay and wait for the email.
>> If they started at noon or even 10:00 it would be a whole different
>>story, I'd much prefer to buy at fests simply for the eyeball contacts.
>
>
> I really enjoy the hamfest at Dayton, where they start at 0800,
>and sell all day. I think how this got started was that the sellers
>agitated for earlier starts, and earlier begat earlier, until we ended
>up with what we have now. One of our semi local fests starts at 0700
>and is over at noon.
>
> Obviously not going to get the church crowd either.. 8^)
>
> So I guess they got everything they wanted - and lost a lot of
>the customers in the deal.
>
>
> - 73 de Mike KB3EIA -

In the UK, amateur 'hamfests' and 'tailgate sales' used to be a fairly
leisurely affair, starting at a round 11am, and go on until 5 or even
6pm, allowing lots of time to wander around, meet your long-lost friends
etc (ie a 'good day out'). These days, opening time is often as early as

9am, with some dealers starting to pack up around noon. Ordinary tailgate sales sometimes do start at early as 7am. Things ain't what they used to be.
Ian.
--

2192. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 19:01:52 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mRzei.5534$bP5.1812@newssvr19.news.prodigy.net>
Source record: 39697

John Smith I wrote:
> I think he means a half-wave monopole is quite possible (I use 'em all
> the time!), and a half-wave dipole can exist with each leg being 1/4
> wave ... both (having in common) being a half-wave antenna.

"Pole" can have two different meanings in this context.
A physical fishin' "pole" is different from an electrical
or magnetic "pole". Seems the word "pole" requires an
adjective to define the context for antennas.
--
73, Cecil, w5dxp.com

2193. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 19:29:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <AkAei.17365$y_7.10193@newssvr27.news.prodigy.net>
Source record: 39699

Jim Kelley wrote:
> Will you never tire of calling people liars?

Pot: Kettle, Kettle: Pot. A few postings ago, you used 23
words to call me a liar - not a very efficient use of words.
--
73, Cecil, w5dxp.com

2194. Re: Patent realities was Re: Guy from university physics dept.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 19:40:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qukl7310n2c70nefn4v2uqj325th7f8ejv@4ax.com>
Source record: 39700

On Thu, 21 Jun 2007 10:58:13 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

> "Hey, we've got this patent application in the works, and YOU
>don't know what's in it, and we're NOT going to tell you what's in it.
>When the patent issues, we might be able to put you out of business.
>Feel Lucky?"

In fact, the manufacturer is completely lucky. Their product line can
continue forever based on the design preceeding publication - even if
the design and the publication are the same. They just can't change
it.

73's
Richard Clark, KB7QHC

2195. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 19:44:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <t3ll73l5fa1u6v9hg73h9gf23h3k9vlc3r@4ax.com>
Source record: 39701

On Thu, 21 Jun 2007 10:45:53 -0700, art <aunwin@insightbb.com> wrote:

>On the other side of the coin, all details are clearly stated
>over the past year or more on this newsgroup.

Bull Looney. You have simply robbed graves and used the headstones to adorn your postings. You couldn't even explain the significance of "equilibrium." However, that hardly matters because in plain English it maintains the entire absence of dynamism. Antennas are dynamic. Yours are dead?

73's
Richard Clark, KB7QHC

2196. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:21:11 UTC
From: nm5k@wt.net
Message-ID: <1182457271.928463.81500@o61g2000hsh.googlegroups.com>
Source record: 39702
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 21, 1:08 pm, Michael Coslo <m...@psu.edu> wrote:
> Telamon wrote:
> > In article <1182252507.359024.113...@q69g2000hsb.googlegroups.com>,
> > Denny <k...@mailblocks.com> wrote:
>
> > < Snip >
>
> > < plonk >
>
> Do you only post here to plonk people? I guess that could be fun.... ;^)
>
> - 73 de Mike KB3EIa -

Thats about it. Don't mind him. He was abused as a child. He's
plonked
me twice in the last 5 years or so, and I'm sure this post will bring
me
up to three.. Which begs the answer... If I was plonked before, how
can I be replonked, unless I was unplonked..
I noticed he had to plonk Denny twice.. I guess his plonking
device is about as effective as viagra on a 98 year old..
I call him Telaprick... And yes, he has worked hard in the past
to deserve the new name I have bestowed upon him. I quit posting to
the shortwave group about a year ago, cuz I got tired of dealing
with a couple of brain dead morons that think they own the whole
show over there. And if you post anything that is even slightly
technical, they will whine and complain that it's too much for
the average shortwave listener to handle, or comprehend.
So I decided, $%&* em if they can't take a joke.
The only thing that goes "plonk" around here are the turds
that fall into the toilet each morning after I've had my first cup
of go juice. Only a whiny bitchette would go around constantly
"plonking" people. It adds more clutter than the posts he is
plonking..
MK

2197. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:23:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5emom$qf9$1@nnrp.linuxfan.it>
Source record: 39703

Cecil Moore wrote:

> ...
> "Pole" can have two different meanings in this context.
> ...
> 73, Cecil, w5dxp.com

Cecil:

You'd love to meet my mom; she is still alive, yanno?

Anyway, her good advice was to always keep my "pole" in my pants, said
something about children not needing to be raising children ...

Anyway, the word "pole" has always been confusing to me ... <grin>

Regards,
JS

2198. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:26:32 UTC
From: richardharrison@webtv.net
Message-ID: <24270-467ADEF8-975@storefull-3252.bay.webtv.net>
Source record: 39705

Cecil, W5DXP wrote:
"Seems the word "pole" requires an adjective to define the context for antennas."

It should not hurt. My dictionary says a dipole antenna is a straight conductor usually fed in the center.

However, dipole characteristics are determined by current distribution, not the feeding if the reeder doesn`t radiate.

Best regards, Richard Harrison, KB5WZI

2199. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:29:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5en34$s1j$1@nnrp.linuxfan.it>
Source record: 39704

John Smith I wrote:

> [stuff]

Anyway, the context used here relates to north pole vs. south pole, up
vs. down, right vs. left ...

Regards,
JS

2200. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:30:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5ens9jdn1@news.service.uci.edu>
Source record: 39706

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Will you never tire of calling people liars?
>
>
> Pot: Kettle, Kettle: Pot.

The frequency of repetition begins to suggest a big lie.

> A few postings ago, you used 23
> words to call me a liar - not a very efficient use of words.

You are able to count the words, yet you neglect once again to include them as a reference. Apparently that wouldn't have suited your purpose. It never does.

I'm certain that my comments were along the lines of a correction to one of your frequent mis-statements regarding something that I "said". I suggest that, rather than reading so much between the lines, supplementing and substituting your own words and ideas, you should give more regard to the explicit meaning conveyed by the words provided by the author.

ac6xg

2201. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 20:58:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CDBei.41306$5j1.37110@newssvr21.news.prodigy.net>
Source record: 39707

Jim Kelley wrote:
> Concentrate your search on the original discussion where you were
> claiming that an IEEE definition proves that power flows through
> transmission lines. (I think you referred to that one again just
> recently.)

Please follow your own advice and quote what I actually
said instead of making it up as you go along. As I remember,
here was my response - a quote from my years-old magazine
article:

"The term "power flow" has been avoided in favor of "energy
flow". Power is a measure of that energy flow per unit time
through a plane."
--
73, Cecil http://www.w5dxp.com

2202. how to generate a rectangle face by drawing a rectangle?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:00:19 UTC
From: lixiaoyao <liletian@gmail.com>
Message-ID: <1182459619.127001.313830@g4g2000hsf.googlegroups.com>
Source record: 39708

Hi all
I want to generate a rectangle surface by drawing a rectangle, can
anyone tell me how to do the last step?
Thanks,

2203. how to generate a rectangle face by drawing a rectangle?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:00:45 UTC
From: lixiaoyao <liletian@gmail.com>
Message-ID: <1182459645.735668.104770@n60g2000hse.googlegroups.com>
Source record: 39709

Hi all
I want to generate a rectangle surface by drawing a rectangle, can
anyone tell me how to do the last step? My software is HFSS 9.2
Thanks,

2204. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:02:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <nHBei.41308$5j1.32041@newssvr21.news.prodigy.net>
Source record: 39710

John Smith I wrote:
> Anyway, the word "pole" has always been confusing to me ... <grin>

Are you familiar with a plot of the poles and
zeros on a unit circle, e.g. filter response?
--
73, Cecil http://www.w5dxp.com

2205. Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:03:51 UTC
From: Dave <W1MCE@comcast.net>
Message-ID: <v5KdnQify68ueufbnZ2dnUVZ_tjinZ2d@comcast.com>
Source record: 39711

I've been off this list for quite some time.

Re-subscribed yesterday.

Ad Hominem continues ... that's the reason I left in past.

Good Bye!!

It's a shame to waste such potential.

2206. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:10:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bPBei.41311$5j1.1285@newssvr21.news.prodigy.net>
Source record: 39712

Richard Harrison wrote:
> Cecil, W5DXP wrote:
> "Seems the word "pole" requires an adjective to define the context for
> antennas."
>
> It should not hurt. My dictionary says a dipole antenna is a straight
> conductor usually fed in the center.
>
> However, dipole characteristics are determined by current distribution,
> not the feeding if the feeder doesn`t radiate.

Seems to me, technically speaking, the two poles in
a "dipole" are electrical with opposite voltage polarities
at each end of the 1/2WL dipole. An electric monopole
has only one electrical pole, like a magnetic monopole
has only one magnetic pole.

A 1/2WL end-fed wire would then technically be a dipole
and the passive elements on a resonant Yagi would be
dipoles.
--
73, Cecil http://www.w5dxp.com

2207. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:11:09 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f5ephh$rp3$1@aioe.org>
Source record: 39713

Art wrote about "Gaussian antenna in planar form"
> Newsgroup members,
> Thought I would give you another example to laugh at.
> (etc)

ART: Probably some of your readers are hoping for your posts in plainer form, so they might hope to understand what you mean.

RF

2208. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 21:19:20 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1182460760.705237.166470@c77g2000hse.googlegroups.com>
Source record: 39714

On Jun 21, 12:44 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 21 Jun 2007 10:45:53 -0700, art <aun...@insightbb.com> wrote:
> >On the other side of the coin, all details are clearly stated
> >over the past year or more on this newsgroup.
>
> Bull Looney. You have simply robbed graves and used the headstones to
> adorn your postings. You couldn't even explain the significance of
> "equilibrium." However, that hardly matters because in plain English
> it maintains the entire absence of dynamism. Antennas are dynamic.
> Yours are dead?
>
> 73's
> Richard Clark, KB7QHC

OED's at home, but I doubt that the definition found there is much different than, "a condition of balance between opposites," found in an American Heritage desk dictionary, or "equal balance between any powers, influences, etc.; equality of effect," found at www.dictionary.com. Systems in equilibrium can be very dynamic, with lots going on, as in chemical reactions. Old-growth forests reach a state of equilibrium, but that certainly doesn't mean they are static. When you turn on a faucet, there's an initial transient but quite rapidly, a condition of equilibrium is reached wherein the amount of water flowing into the far end of the pipe equals the amount delivered by the faucet (assuming no leaks along the way); but that's a dynamic system too.

Just what Art means when he writes about "equilibrium" with respect to antennas is a total mystery to me, though. I have not a clue in what way his "Gaussian" antenna is either more in equilibrium than a Yagi or a doublet or a coat-hanger or a bed-spring, or for that matter is "Gaussian" in any sense that my dictionaries define "Gaussian." (I suppose he'll say I've become "indignant" about it, or that I have dismissed his ideas, in which case he's totally missed the point...)

But then, I'd probably get fired and sued for publicly writing details about an idea that was the subject of a patent application...

Cheers,
Tom

2209. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 22:11:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1itl735d58pan6s70h2sf409v3eso30nv6@4ax.com>
Source record: 39715

On Thu, 21 Jun 2007 14:19:20 -0700, K7ITM <k7itm@msn.com> wrote:

>OED's at home, but I doubt that the definition found there is much
>different than, "a condition of balance between opposites,"

Which is rather static. Balance (passive) is not the same as
balancing (active); otherwise the term would be equilibrating - and it
is not.

However, the OED does offer:
"The condition of indecision or indifference...."
which seems wholly appropriate, but unintentionally ironic.

73's
Richard Clark, KB7QHC

2210. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 22:16:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MMCei.5803$c06.5675@newssvr22.news.prodigy.net>
Source record: 39716

Jim Kelley wrote:
> Concentrate your search on the original discussion where you were
> claiming that an IEEE definition proves that power flows through
> transmission lines. (I think you referred to that one again just
> recently.)

I remember that one, Jim. It was when you and I sided
together against the IEEE Dictionary. The IEEE Dictionary
says that power propagates. You and I agreed that power
doesn't propagate.
--
73, Cecil http://www.w5dxp.com

2211. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 22:21:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5eugpoll1@news.service.uci.edu>
Source record: 39717

Cecil Moore wrote:

> I remember that one, Jim. It was when you and I sided
> together against the IEEE Dictionary. The IEEE Dictionary
> says that power propagates. You and I agreed that power
> doesn't propagate.

I don't recall you saying that you agreed with me about that, or
anything else.

The IEEE definition you refer to probably deserves a direct quote
here, too. I don't wish to be a party to their being unfairly
maligned.

ac6xg

2212. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 22:43:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o0ul73pkaouec7lt8pphgi7upoonp8fbk1@4ax.com>
Source record: 39718

On Thu, 21 Jun 2007 21:14:58 GMT, no.spam@no.uce.bellatlantic.net
wrote:

>In engineering there is good, fast and cheap. Pick any two.

That summary fails at every turn.

73's
Richard Clark, KB7QHC

2213. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 23:23:48 UTC
From: Deek <Deek@comcast.net>
Message-ID: <L8WdnWSK5pAclebbnZ2dnUVZ_jqdnZ2d@comcast.com>
Source record: 39719

> Richard Harrison wrote:
>
SNIPPED
>
>
> Seems to me, technically speaking, the two poles in
> a "dipole" are electrical with opposite voltage polarities
> at each end of the 1/2WL dipole. An electric monopole
> has only one electrical pole, like a magnetic monopole
> has only one magnetic pole.
>
> A 1/2WL end-fed wire would then technically be a dipole
> and the passive elements on a resonant Yagi would be
> dipoles.

RE: DIPOLE: If there is a polarity DIFFERENCE between the ends of a wire it qualifies as a dipole [two poles ... two different charge levels ... two different voltages ... etc.]

A RESONANT DIPOLE is a dipole with the voltages at the ends both equal in magnitude and opposite in polarity.

Am I missing something?

2214. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-21 23:46:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5f3m73d438kianh2qlkn0ice4ms7grj6sl@4ax.com>
Source record: 39720

On Thu, 21 Jun 2007 22:49:39 GMT, no.spam@no.uce.bellatlantic.net
wrote:

>>>In engineering there is good, fast and cheap. Pick any two.
>>
>>That summary fails at every turn.
>
>Fails what?

Quality.

73's
Richard Clark, KB7QHC

2215. What is the best software to model HF Quads 4el and larger

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 00:04:53 UTC
From: videorov <videorov@verizon.net>
Message-ID: <1182470693.166290.159710@o61g2000hsh.googlegroups.com>
Source record: 39721

Multiband also .

2216. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 00:58:54 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <i9Fei.35749$G23.10730@newsreading01.news.tds.net>
Source record: 39722

I imagine you are following the Biblical injunction of
"neither cast ye your pearls before swine", Matthew 7:6

"Dave" <W1MCE@comcast.net> wrote in message
news:v5KdnQify68ueufbnZ2dnUVZ_tjinZ2d@comcast.com...
> I've been off this list for quite some time.
>
> Re-subscribed yesterday.
>
> Ad Hominem continues ... that's the reason I left in past.
>
> Good Bye!!
>
> It's a shame to waste such potential.
>

2217. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 01:25:32 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5f8ep$695$1@nnrp.linuxfan.it>
Source record: 39723

Cecil Moore wrote:

> ...
> Seems to me, technically speaking, the two poles in
> ...

In the following find, "# A monopole with a ground balance (mirror image).
www.novastars.com/antenna/antenna-glossary.htm"

However, this is far from what I expect to see when someone mentions "dipole." The use of dipole to indicate a monopole with the mirrored "pole" being created in the earth seems sparse in the material I have digested--however, technically, you seem to have a argument in the use you indicated ... however, I usually work with 1/2 wave monopoles exclusively ... a small counterpoise allows me to divorce the antenna from need of the ground (well, kinda ...)

I usually figure monopoles to be non-symmetrical, most-usually vertical, unbalanced, and requiring a counterpoise ...

Dipoles I figure to be symmetrical balanced antennas ...

1) Monopole (wikipedia):
A label used on some French wines to indicate sole ownership, or monopoly, of the wine's name, with no bearing on the wine's quality.
www.valleyvineyards.com/wine_glossary_ijkl.htm

A single self-supporting vertical pole with no guy wire anchors, usually consisting of a galvanized or other unpainted metal or a wooden pole with below grade foundations.
www.vapda.org/bylaw/gloss.htm

A single exposed radiator, usually requiring a ground plane to provide directivity (gain).
www.novastars.com/antenna/antenna-glossary.htm

All known magnets have two poles, one south pole and one north pole. The existence of a single such pole, termed a monopole, has not yet been established but is believed by many physicists to exist on the basis of theoretical studies. Lunar samples have been carefully searched on Earth for the presence of monopoles.
history.nasa.gov/EP-95/glossary.htm

The French term for a vineyard that is wholly owned by one estate. The German word is "Alleinbesitz."
www.rieslingreport.com/glossary.html

Used to denote a vineyard owned exclusively by one proprietor, the
word monopole appears on the label of a wine made from such a vineyard.
www.weinbauer.com/glossary/index.cfm

A structure composed of a single spire used to support
telecommunications equipment.
www.co.jefferson.co.us/ext/dpt/public_works/planning/tele/tele-glossary.htm

In physics, magnetic monopole is a term describing a hypothetical
particle that could be quickly clarified to a person familiar with
magnets but not electromagnetic theory as "a magnet with only one pole".
In more accurate terms, it would have net "magnetic charge". Interest in
the concept stems from particle theories like Grand Unified Theories and
superstring theories that predict either the existence or the
possibility of magnetic monopoles.
en.wikipedia.org/wiki/Monopole

2) Dipole (wikipedia):
Speakers with drivers on opposite faces that are wired electrically
out of phase, creating an area of cancellation to the sides. Recommended
by THX for use as surround speakers, with null directed at the listener
to create a more ambient and non-localizable effect.
www.hometheatermag.com/glossary/

Chemical compounds with an unequally distributed electric charge, such
as the water molecule: the oxygen atom is of negative charge and the two
hydrogen atoms are of positive charge. Dipolar molecules mutually
attract each other. This is how water molecules connect into clusters
via hydrogen bridges.
www.himalayasaltcrystal.com/glossary.htm

A type of antenna with two defined opposing radiating elements, both
of the proper length for the frequency of operation, and each forming
the counterpoise for the other.
www.kareoke.com/glossary/microphone_glossary_of_terms.htm

A monopole with a ground balance (mirror image).
www.novastars.com/antenna/antenna-glossary.htm

a compact source of magnetic force, with two magnetic poles. A bar
magnet, coil or current loop, if their size is small, create a dipole
field. The Earth's field, as a crude approximation, also resembles that
of a dipole.
www-spof.gsfc.nasa.gov/Education/wgloss.html

(diï¿½pole) (diï¿½p[omacr]l) 1. a molecule having charges of equal and
opposite signs but in which the center of the positive charge does not
coincide with that of the negative charge, a property which enables the
molecule to be bound electrostatically by both positively and negatively
charged groups. See polar compounds, under compound. 2. a pair of
electric charges or magnetic poles separated by a short distance.
www.mercksource.com/pp/us/cns/cns_hl_dorlands.jspzQzpgzEzzSzppdocszSzuszSzcommonzSzdorland
szSzdorlandzSzdmd_d_21zPzhtm

a basic antenna element to which most other antennas are compared for gain
fwie.fw.vt.edu/tws-gis/glossary.htm

1. Without qualification usually means electric dipole, a system composed of two charges of equal and opposite sign separated by a distance. A magnetic dipole is an electric current loop enclosing a finite area in a plane. See dipole moment. 2. Same as dipole antenna.
amsglossary.allenpress.com/glossary/browse

A type of low-gain (2.2 dBi) antenna consisting of two (often internal) elements.
www.wirelesstelcorp.com/glossary_of_terms.htm

A molecule which has a definite separation between its center of positive charge and center of negative charge. Such a molecule is said to be polar. A polar species will be more attracted to a charged species than will a non-polar one.
eies.njit.edu/~kebbekus/definitions-aquatic-chem%20htm.htm

Magnetized object that possesses north and south magnetic poles. A bar magnet and Earth are two examples.
www.physics.gmu.edu/~jevans/astr103/CourseNotes/Glossary/astrgl_d.htm

An object whose centers of positive and negative charge do not coincide. For example, a hydrogen chloride (HCl) molecule is an electric dipole because bonding electrons are on average closer to the chlorine atom than the hydrogen, producing a partial positive charge on the H end and a partial negative charge on the Cl end.
www.madison.k12.wi.us/west/science/biotech/vocabulary.htm

Gentian Violet.
www.centurionndt.com/glossary.htm

This is an antenna that is fed from the center (such as rabbit ears).
www.satellite-tv-hq.com/telecom-glossary-d.htm

A speaker which radiates sound primarily in opposite directions, 180 degrees out of phase, This creates a null, or area with no sound, to the sides of the speaker. Such designs are engineered by using drivers wired out of phase, or by using both sides of a flat driver.
www.oregondv.com/Audio_FAQ_A-F.htm

a pair of equal and opposite electric charges or magnetic poles separated by a small distance
an aerial half a wavelength long consisting of two rods connected to a transmission line at the center
wordnet.princeton.edu/perl/webwn

Regards,
JS

2218. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 03:02:02 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-929315.20020221062007@newsclstr02.news.prodigy.com>
Source record: 39725
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <f5eerh$1ffc$1@f04n12.cac.psu.edu>,
Michael Coslo <mjc5@psu.edu> wrote:

> Telamon wrote:
> > In article <1182252507.359024.113790@q69g2000hsb.googlegroups.com>,
> > Denny <k8do@mailblocks.com> wrote:
> >
> > < Snip >
> >
> > < plonk >
> >
>
> Do you only post here to plonk people? I guess that could be fun.... ;^)

Nope. I just figure that if a person will entertain a Troll then they
are not worth reading.

< Plonk >

--
Telamon
Ventura, California

2219. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 03:02:24 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-DCBEC2.20022421062007@newsclstr02.news.prodigy.com>
Source record: 39724
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <4679e63e$0$21250$39cecf19@news.twtelecom.net>,
Tom Ring <news0003@taring.org> wrote:

> Telamon wrote:
> > In article <1182252507.359024.113790@q69g2000hsb.googlegroups.com>,
> > Denny <k8do@mailblocks.com> wrote:
> >
> > < Snip >
> >
> > < plonk >
> >
>
> Anyone who would do that deserves a
>
> < Bigger SNIP >
>
> and a
>
> < Monster PLONK >

Good for you.

< Plonk >

--
Telamon
Ventura, California

2220. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 03:36:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5fg4pjpt1@nnrp.linuxfan.it>
Source record: 39726

John Smith I wrote:

> ...
> Here is the URL of the actual .pdf document and is chock-full of pics,
> details, and description:
> http://www.freepatentsonline.com/7187335.pdf
>
> Now there is no reason that anyone cannot confirm or deny the hype ...
>
> JS

These images:
http://assemblywizard.tekcities.com/images/bottomhelix.jpg
http://assemblywizard.tekcities.com/images/Loading_Coil.jpg
http://assemblywizard.tekcities.com/both.jpg

Depict a "test fixture" I kludged together. It allows quick changing of coils, wire conductors between coils, top hats, tap points, etc.

A 1/2 pipe flange is screwed onto the board. A 3/4 slip to 1/2 threaded pvc adapter is screwed into the flange and holds the 3/4 pvc pipe errect. All connectors which are clamping the wires are ground clamps purchased at home depot, they are made to clamp onto glavanized/copper pipe and provide a grounding point for a ground wire.

1) 1/2 pipe flange $2.09
2) (5) 3/4" and 1" ground clamps (clamps both sizes) $1.49 X 5 = $7.45
3) 10 ft. of 3/4" pvc pipe $3.19
4) Board dumped in my yard by some bum! $free

materials $12.73
tax $1.18
---
total $13.75

Now there is no reason for anyone not to experiment a bit ... the fixture is far from ideal, your improvements are welcome--it is quick and dirty to construct!

Regards,
JS

2221. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 04:04:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bTHei.17440$y_7.11920@newssvr27.news.prodigy.net>
Source record: 39727

Jim Kelley wrote:
> I don't recall you saying that you agreed with me about that, or
> anything else.

Good grief, Jim. In private email you said my article
was "great" except for two items, neither of which
had anything to do with power flow, a term you well
know I discarded years ago at your insistence.

The following statement has been in my magazine article
for three years. I put it there after your critique of my
unpublished article 3+ years ago. I have quoted the article
probably a dozen times over the past few years as a result
of your strawman accusations about what I have said.

"The term 'power flow' has been avoided in favor of 'energy
flow'. Power is a measure of that energy flow per unit time
through a plane."

> The IEEE definition you refer to probably deserves a direct quote here,
> too. I don't wish to be a party to their being unfairly maligned.

"power-flow vector ... giving magnitude and direction of *power*
per unit-area *propagating* in the wave." emphasis mine.
--
73, Cecil http://www.w5dxp.com

2222. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 04:09:44 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1182485384.824372.184280@i13g2000prf.googlegroups.com>
Source record: 39728
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Jun 20, 1:01 pm, mzen...@eskimo.com (Mark Zenier) wrote:
> In article <1182285843.270321.23...@x35g2000prf.googlegroups.com>,
>
> Radium <gluceg...@gmail.com> wrote:
> >On Jun 18, 11:05 am, mzen...@eskimo.com (Mark Zenier) wrote:
>
> >> 1. What is the energy of a photon at 150 kHz?
>
> >6.2 X 10^-10 eV
>
> You didn't answer the other questions. How much power does a good radio
> need to get a listenable signal?
>
> Here's some numbers
>
> input impedance 50 ohms
> Noise Figure 5 db
> Bandwidth 6 kHz
> signal to noise ratio 40 dB
>
> (This would be what some of the newsgroups listeners here would want if
> they had one of their pretty damn good radios listening to a broadcast
> station. Really picky ones would probably want a 8-15 kHz bandwidth
> with a 60 dB s/N ratio).
>
> There are equations out there that will give you how much power
> you need for this signal...

I guess the dynamic range needs to be at least 140 dB [to match human
ear's loudness perception] and bandwidth at least 40 KHz [to match
human's pitch perception].

I am not sure about the input impedance or noise figure.

2223. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 04:12:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <c%Hei.5655$bP5.2721@newssvr19.news.prodigy.net>
Source record: 39631

Deek wrote:
> A RESONANT DIPOLE is a dipole with the voltages at the ends both equal
> in magnitude and opposite in polarity.
>
> Am I missing something?

Any center-fed dipole, fed differentially and shorter
than 1/2WL, i.e. not resonant, has the voltages at the
ends both equal in magnitude and opposite in polarity.
--
73, Cecil http://www.w5dxp.com

2224. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 05:26:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rimm73pb3vgq4crdb5ld037451cjanfmhe@4ax.com>
Source record: 39632

On Thu, 21 Jun 2007 21:09:04 -0700, art <aunwin@insightbb.com> wrote:

>On 21 Jun, 20:36, John Smith I <assemblywiz...@gmail.com> wrote:
>> John Smith I wrote:
>>
>> > ...
>>
>> > Here is the URL of the actual .pdf document and is chock-full of pics,
>> > details, and description:
>> >http://www.freepatentsonline.com/7187335.pdf
>>
>> > Now there is no reason that anyone cannot confirm or deny the hype ...
>>
>> > JS
>>
>> These images:http://assemblywizard.tekcities.com/images/bottomhelix.jpghttp://assemblyw
izard.tekcities.com/images/Loading_Coil.jpghttp://assemblywizard.tekcities.com/both.jpg
>>
>> Depict a "test fixture" I kludged together. It allows quick changing of
>> coils, wire conductors between coils, top hats, tap points, etc.
>>
>> A 1/2 pipe flange is screwed onto the board. A 3/4 slip to 1/2 threaded
>> pvc adapter is screwed into the flange and holds the 3/4 pvc pipe
>> errect. All connectors which are clamping the wires are ground clamps
>> purchased at home depot, they are made to clamp onto glavanized/copper
>> pipe and provide a grounding point for a ground wire.
>>
>> 1) 1/2 pipe flange $2.09
>> 2) (5) 3/4" and 1" ground clamps (clamps both sizes) $1.49 X 5 = $7.45
>> 3) 10 ft. of 3/4" pvc pipe $3.19
>> 4) Board dumped in my yard by some bum! $free
>>
>> materials $12.73
>> tax $1.18
>> ----------------
>> total $13.75
>>
>> Now there is no reason for anyone not to experiment a bit ... the
>> fixture is far from ideal, your improvements are welcome--it is quick
>> and dirty to construct!
>>
>> Regards,
>> JS
>

>Thanks for sharing, please keep us informed
>Regards
>Art

Truth is often stranger than fiction, but patents have the monopoly on
the absurd.

Taken from top of Page 2 "Other publications"

T. Simpson, "The Dick Loaded Monopole Antenna,"
IEEE Transactions of Antennas and Propagation,
vol. 52, No. 2, Feb. 2004, pp. 542-545.

Hardly worth going any further into the mysteries of this invention.
Dipole envy? :-0

73's
Richard Clark, KB7QHC

2225. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 06:35:07 UTC
From: John <vk2kce@yahoo.com.au>
Message-ID: <v4Kei.17132$wH4.2513@news-server.bigpond.net.au>
Source record: 39633

Jimmie,
I have a lathe and a milling machine in my shed, but to make a 3/8 x 24 x 1.25" out of stainless steel, would cost me a lot more than what I can buy them in USA. The cost from McMaster in USA is $US2.11 each for a buy of 50!
Thanks for your input!
John

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message news:1182440684.360681.133180@d30g2000prg.googlegroups.com...
On Jun 21, 12:50 am, "Bryan" <bryan.swadenerNOS...@comcast.net> wrote:
> Hal Rosser wrote:
>
> > John VK2KCE wrote:
> > > Hello to all,
>
> > > I am looking for a source of 3/8 x 24tpi x 1 inch coupling nuts in
> > > stainless
> > > steel.
>
> > > I don't mind if they are in USA.
>
> > > Can anyone help?
>
> > > VK2KCE
> > > John in Australia
>
> > In Yellow pages, look up "Fasteners" and when you call, I think they
> > refer
> > to it as "Rod couplings"
>
> > check here - at Grainger
> >http://www.grainger.com/Grainger/wwg/guideBrowse.shtml
>
> > Rod Coupling Nut,Pk 5
> > Rod Coupling Nut, Fully Threaded, Grade 5 Steel, Zinc Chromate Plated
> > Finish, Thread Size 3/8-24, Thread Type Standard, Right Hand Thread
> > Direction, Width 5/8 In, Length 1 3/4 In, Min Tensile Strength 105,000
> PSI,
> > Min Yield 90,000 PSI, Straight Line Pull Max 5500 lbs Dead Load, Package
> > 5
> > Grainger Item # 1JA16
> > Price (pk.) $20.19
> > Brand APPROVED VENDOR
> > Mfr. Model # 1JA16

> > Ship Qty. 1
> > Sell Qty. (Will-Call) 1
> > Ship Weight (lbs.) 0.55
> > Usually Ships** Today
>
> McMaster-Carr (http://www.mcmaster.com) is also a great online source of
> materials. They have &#65533;" hex x 1.125"L coupling nuts in your choice of
> either 18-8 or 316 stainless steel:
>
> 18-8 = PN 90268A335 = $2.82 USD each
> 316 = PN 90104A012 = $17.36 USD each
>
> 73,
> Bryan WA7PRC- Hide quoted text -
>
> - Show quoted text -

If you mess around with antennas very much a tap and die can be very useful. I have a small lathe for fabricating parts but befoe I acquired it I found I could chuck metal in a drill fasten to my work bench and machine out a lot of small parts, after that came a drill press bought at auction, and finally I came by a lathe I could fit in the radio budget.

Jimmie

2226. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 11:29:38 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182511778.406685.68200@m36g2000hse.googlegroups.com>
Source record: 39634

Did you know that 6.02x10^23 angels dance on the head of a pin....

denny / k8do

2227. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 11:41:25 UTC
From: nm5k@wt.net
Message-ID: <1182512485.051441.12510@q75g2000hsh.googlegroups.com>
Source record: 39635

On Jun 21, 9:36 pm, John Smith I <assemblywiz...@gmail.com> wrote:

>
> Now there is no reason for anyone not to experiment a bit ... the
> fixture is far from ideal, your improvements are welcome--it is quick
> and dirty to construct!
>
> Regards,
> JS

Hummm, I would use a slightly wider spacing with the
loading coil wires.. Too tightly wound.. I assume the
wire is enameled... The problem with this, is your
lower coil is the same diameter as the center load.
But, your lower coil is actually the more efficient
of two, being it's wider spaced. You are stunting
your upper coil with too close together windings.
I actually believe the current distribution would be
slightly better with all center loading, than with the
mix of two coils, one being basically a base load.
I would also clip those "mast" wires where they
don't run along side of that coil. Thats not good.
Like I say, I've already tried all this with helical
glass whips combined with larger hi-Q coils.

I don't use it anymore. Now all my loading is one
center loading coil.
I once combined the glass stick helical windings
with the larger lumped coil. But came to the conclusion
it was a bad idea because the narrow helical windings
on mine were more lossy than the larger coil.
But on yours, all windings are the same size dia..
So it really doesn't matter, except as far as current
distribution. My gut instinct is that you would force
more current up the mast , using only the upper
center loading coil. This is what you should test.
Use equal whip and stinger sizes, and compare
the "split loading", with a loosely wound all
center coil. Not tight wound like you have.
Have about at least a wires width of space between the
windings.
If the all center loaded antenna didn't win, I'd be kinda
surprised. The way I see it, if you share loading
locations, the current distribution will also share
the two locations.. IE: you should have more current

lower on the mast with the split coils, than with only a center coil. To me, this should offset any advantage of less total turns being needed, from using partly a base load. All center loading should need a few extra turns to tune vs the split setup I would think, but it's not enough to hurt you much.
MK

2228. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 12:24:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <xcPei.5907$c06.5115@newssvr22.news.prodigy.net>
Source record: 39636

nm5k@wt.net wrote:
> I actually believe the current distribution would be
> slightly better with all center loading, than with the
> mix of two coils, one being basically a base load.

Yes, you are right. One high-Q coil with linked flux
is more efficient than two half coils in different
locations. Splitting one coil into two can be considered
the first delta step toward linear loading, known to
be lossier than single-coil center loading.
--
73, Cecil http://www.w5dxp.com

2229. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 12:36:48 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <AnPei.10853$B25.3791@news01.roc.ny>
Source record: 39637

Dave wrote:
> I've been off this list for quite some time.
>
> Re-subscribed yesterday.
>
> Ad Hominem continues ... that's the reason I left in past.
>
> Good Bye!!
>
> It's a shame to waste such potential.

Yes, it is. Your loss.

How the hell do you even get through traffic with skin that thin?

2230. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 12:54:11 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ggq2$dd8$1@nnrp.linuxfan.it>
Source record: 39638

nm5k@wt.net wrote:

> ...
> Hummm, I would use a slightly wider spacing with the
> loading coil wires ...

The coils used were used only as a visual aid. That part is left up to the individual experimenter ... no attempt was made to do the actual experiments for the reader ...

However, if you read Mr. Vincents data, this coil is "closely wound." And, I documented the construction of the jig itself, not the individual components to be used. The importance here is how quickly components can be swapped in and out ...

Low Q might be very desirable to someone valuing bandwidth over other aspects ... not only out of the box thinking is necessary, out-of-the-box-experimenting is accepted here ...

Regards,
JS

2231. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 13:03:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <0NPei.5910$c06.4862@newssvr22.news.prodigy.net>
Source record: 39639

Dave wrote:
> I've been off this list for quite some time.
> Re-subscribed yesterday.
> Ad Hominem continues ... that's the reason I left in past.
> Good Bye!! It's a shame to waste such potential.

I've noticed that it usually happens when there is
a lull (or null) in the flow of technical information
within a thread or the newsgroup in general. It is
probably a human instinct left over from cave man
days when club waving and growls were preferable to
actual physical combat.
--
73, Cecil http://www.w5dxp.com

2232. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 13:14:34 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5gi08fgm1@nnrp.linuxfan.it>
Source record: 39640

Cecil Moore wrote:
> Dave wrote:
>> I've been off this list for quite some time.
>> Re-subscribed yesterday.
>> Ad Hominem continues ... that's the reason I left in past.
>> Good Bye!! It's a shame to waste such potential.

Cecil:

Makes you wonder what these people do when a real problem comes along ... if you become that dependent on a psychiatrists help, you might be better off to never venture out of doors ... and exercise great care in text and verbal exchange of ideas with others ...

I would have responded to the threads creator, directly; however, it is obvious he has already left in pursuit of his valium.

Regards,
JS

2233. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 14:46:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <vhRei.633$K44.425@newssvr13.news.prodigy.net>
Source record: 39641

John Smith I wrote:
> Makes you wonder what these people do when a real problem comes along

Maybe the real problem is that such people were born
with half a brain - right side missing. :-)
--
73, Cecil, w5dxp.com

2234. Re: Coupling nut

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 16:42:34 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <_ZSei.52759$NV3.46372@pd7urf2no>
Source record: 39642

John wrote:

> Jimmie,
> I have a lathe and a milling machine in my shed, but to make a 3/8 x 24 x
> 1.25" out of stainless steel, would cost me a lot more than what I can buy
> them in USA. The cost from McMaster in USA is $US2.11 each for a buy of 50!
> Thanks for your input!
> John

Go for the 50! It reminds me of my experience with the chuck wrench for my drill. I could never seem to find where I'd left it. So I bought a spare. It too never seemed to be around, so now I buy a box of fifty. That works well -- seems to last me for about two weeks! :-)

Irv VE6BP

2235. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 17:54:29 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5h443klp1@news.service.uci.edu>
Source record: 39645

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> I don't recall you saying that you agreed with me about that, or
>> anything else.
>
>
> Good grief, Jim. In private email you said my article
> was "great" except for two items, neither of which
> had anything to do with power flow, a term you well
> know I discarded years ago at your insistence.

I can recall saying that I agreed with you on many occasions. I haven't known you to say that you agreed with anything I said. I believe there's a difference.

>> The IEEE definition you refer to probably deserves a direct quote
>> here, too. I don't wish to be a party to their being unfairly maligned.
>
>
> "power-flow vector ... giving magnitude and direction of *power*
> per unit-area *propagating* in the wave." emphasis mine.

I can't say there's enough there to do a proper grammatical analysis. I suppose they could be accused of using poor sentence structure. I'm not prepared to argue that someone in the IEEE believes that vectors are actually 'propagating in the wave'. :-)

73, ac6xg

2236. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 17:57:01 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5h48sklp2@news.service.uci.edu>
Source record: 39646

Cecil Moore wrote:

> Cecil Moore wrote:
>
>> Jim Kelley wrote:
>>
>>> The IEEE definition you refer to probably deserves a direct quote
>>> here, too. I don't wish to be a party to their being unfairly maligned.
>>
>>
>> "power-flow vector ... giving magnitude and direction of *power* per
>> unit-area *propagating* in the wave." emphasis mine.
>
>
> Also for the record: 3+ years ago, Jim Kelley convinced
> me that "power flow" was a misconception. I agreed with him
> and revised my magazine article to reflect that concept. Yet,
> many times since then, Jim Kelley has attempted to propagate
> the Big Lie that I support the concept of "power flow" all the
> while being fully aware that I agree with him on the subject.
> I have never encountered anyone before who refuses to allow me
> to agree with him/her.

That's hilarious. You've been more than welcome to agree with me as much as you like. As I said, I can't recall a single instance in which you said you did. I got nothing but grief from you on the subject - as anyone reading this group can bear witness.

73, Jim AC6XG

2237. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:05:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <obUei.21393$C96.5906@newssvr23.news.prodigy.net>
Source record: 39643

Cecil Moore wrote:
> Jim Kelley wrote:
>> The IEEE definition you refer to probably deserves a direct quote
>> here, too. I don't wish to be a party to their being unfairly maligned.
>
> "power-flow vector ... giving magnitude and direction of
> *power* per unit-area *propagating* in the wave." emphasis mine.

Also for the record: 3+ years ago, Jim Kelley convinced
me that "power flow" was a misconception. I agreed with him
and revised my magazine article to reflect that concept. Yet,
many times since then, Jim Kelley has attempted to propagate
the Big Lie that I support the concept of "power flow" all the
while being fully aware that I agree with him on the subject.
I have never encountered anyone before who refuses to allow me
to agree with him/her.
--
73, Cecil http://www.w5dxp.com

2238. Re: Fed up!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:20:41 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1182536441.962021.183940@m37g2000prh.googlegroups.com>
Source record: 39644

On Jun 22, 9:14 am, John Smith I <assemblywiz...@gmail.com> wrote:
> Cecil Moore wrote:
> > Dave wrote:
> >> I've been off this list for quite some time.
> >> Re-subscribed yesterday.
> >> Ad Hominem continues ... that's the reason I left in past.
> >> Good Bye!! It's a shame to waste such potential.
>
> Cecil:
>
> Makes you wonder what these people do when a real problem comes along
> ... if you become that dependent on a psychiatrists help, you might be
> better off to never venture out of doors ... and exercise great care in
> text and verbal exchange of ideas with others ...
>
> I would have responded to the threads creator, directly; however, it is
> obvious he has already left in pursuit of his valium.
>
> Regards,
> JS

Could be this is why they dont need a psychiatrist.

Jimmie

2239. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:37:13 UTC
From: herbert.don@gmail.com
Message-ID: <1182537433.031777.203050@m37g2000prh.googlegroups.com>
Source record: 39647

On Jun 21, 10:26 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 21 Jun 2007 21:09:04 -0700, art <aun...@insightbb.com> wrote:
> >On 21 Jun, 20:36, John Smith I <assemblywiz...@gmail.com> wrote:
> >> John Smith I wrote:
>
> >> > ...
>
> >> > Here is the URL of the actual .pdf document and is chock-full of pics,
> >> > details, and description:
> >> >http://www.freepatentsonline.com/7187335.pdf
>
> >> > Now there is no reason that anyone cannot confirm or deny the hype ...
>
> >> > JS
>
> >> These images:http://assemblywizard.tekcities.com/images/bottomhelix.jpghttp://asse...
>
> >> Depict a "test fixture" I kludged together. It allows quick changing of
> >> coils, wire conductors between coils, top hats, tap points, etc.
>
> >> A 1/2 pipe flange is screwed onto the board. A 3/4 slip to 1/2 threaded
> >> pvc adapter is screwed into the flange and holds the 3/4 pvc pipe
> >> errect. All connectors which are clamping the wires are ground clamps
> >> purchased at home depot, they are made to clamp onto glavanized/copper
> >> pipe and provide a grounding point for a ground wire.
>
> >> 1) 1/2 pipe flange $2.09
> >> 2) (5) 3/4" and 1" ground clamps (clamps both sizes) $1.49 X 5 = $7.45
> >> 3) 10 ft. of 3/4" pvc pipe $3.19
> >> 4) Board dumped in my yard by some bum! $free
>
> >> materials $12.73
> >> tax $1.18
> >> ----------------
> >> total $13.75
>
> >> Now there is no reason for anyone not to experiment a bit ... the
> >> fixture is far from ideal, your improvements are welcome--it is quick
> >> and dirty to construct!
>
> >> Regards,
> >> JS
>
> >Thanks for sharing, please keep us informed

> >Regards
> >Art
>
> Truth is often stranger than fiction, but patents have the monopoly on
> the absurd.
>
funny

no one really reads these patnets do they? Not evne the author.

> Taken from top of Page 2 "Other publications"
>
> T. Simpson, "The Dick Loaded Monopole Antenna,"
> IEEE Transactions of Antennas and Propagation,
> vol. 52, No. 2, Feb. 2004, pp. 542-545.
>
> Hardly worth going any further into the mysteries of this invention.
> Dipole envy? :-0
>
> 73's
> Richard Clark, KB7QHC- Hide quoted text -
>
> - Show quoted text -

2240. what's difference between waveport and lumpport boundary conditions?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:41:21 UTC
From: lixiaoyao <liletian@gmail.com>
Message-ID: <1182537681.883160.297160@i38g2000prf.googlegroups.com>
Source record: 39648

Hi all
Can anyone explain the difference between waveport and lumpport
boundary?
Thanks

2241. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:56:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <IXUei.3302$Rw1.3070@newssvr25.news.prodigy.net>
Source record: 39649

Jim Kelley wrote:
> I can recall saying that I agreed with you on many occasions. I haven't
> known you to say that you agreed with anything I said.

Your selective memory failure is interesting. You have known
for 3+ years that I agree with you on 98% of things including
the apparently false concept of "power flow". Googling this
newsgroup will prove that fact and I have proof that you said
exactly that in a private email. Yet you continue to accuse
me of something you are fully aware is not true and then
plead memory loss. Jim, you're too young to be going senile.
Time to find another excuse for your harassment.
--
73, Cecil http://www.w5dxp.com

2242. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 18:57:33 UTC
From: Dave <noone@nowhere.com>
Message-ID: <xYUei.64$%w5.24@trndny04>
Source record: 39650

"art" <aunwin@insightbb.com> wrote in message
news:1182477190.861283.125760@z28g2000prd.googlegroups.com...
> On 21 Jun, 14:11, "Richard Fry" <r...@adams.net> wrote:
>> Art wrote about "Gaussian antenna in planar form"> Newsgroup members,
>> > Thought I would give you another example to laugh at.
>> > (etc)
>>
>> ___________
>>
>> ART: Probably some of your readers are hoping for your
>> posts in plainer form, so they might hope to understand
>> what you mean.
>>
>> RF
> I am sharing my findings that are not declared in any books.
> I did my best. I have answered all questions at least once.
> In the archives are the mathematical details, samples of antennas,
> independent computor program checking, independent mathematical
> explanations and every stage of the transition from Gaussian
> law of Statics,conservative field to a non concervative field.
> An explanation of the clustered elements being in equilibrium
> by virtue of all current directions change at the same time.
> That the Gaussian array is resonant in its entirety as well
> as each element alone. Yes, if you want to gamble you can follow
> the two Richards line and say it is a fake or if you are
> capable in basic science you can tackle it yourself and not have to
> resort to the postings of the two Richards, both of which
> state they don't understand it so what use are their comments.
> If you are of the opinion that you cannot add the same factor
> to both sides of a mathematical equation as in simple algebra
> as David has said time and time again then don't even try to
> understand the rest.
>
> Art KB9MZ...XG
>

the real problem is that art is using a software program that makes proper
use of coupling between elements that he doesn't understand. he has come up
with some odd parasitic array that doesn't look like a yagi for some reason,
and came up with some off the wall theory about why it works. he grabbed a
few buzzwords and put together a mantra and he is sticking with it. he has
admitted he doesn't have an ee background and yet he is trying to convince
those of us that do that we can't possibly understand what he has created,
even if he can't put together a coherent explanation of it in proper em

terms. its nothing magic, its just another form of a parasitic array that happens to do something that he thinks is interesting for some reason.

2243. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 19:15:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ydVei.3303$Rw1.2866@newssvr25.news.prodigy.net>
Source record: 39651

Jim Kelley wrote:
> Cecil Moore wrote:
>> Also for the record: 3+ years ago, Jim Kelley convinced
>> me that "power flow" was a misconception. I agreed with him
>> and revised my magazine article to reflect that concept. Yet,
>> many times since then, Jim Kelley has attempted to propagate
>> the Big Lie that I support the concept of "power flow" all the
>> while being fully aware that I agree with him on the subject.
>> I have never encountered anyone before who refuses to allow me
>> to agree with him/her.
>
> You've been more than welcome to agree with me as
> much as you like. As I said, I can't recall a single instance in which
> you said you did. I got nothing but grief from you on the subject - as
> anyone reading this group can bear witness.

Yes, anyone reading this newsgroup knows that in response to your
numerous false accusations of supporting the concept of "power flow",
I have been posting this quotation from my magazine article for
at least three years and telling you that I agree with you on
the subject.

"The author has endeavored to satisfy the purists in this series
of articles. The term 'power flow' has been avoided in favor of
'energy flow'. Power is a measure of that energy flow per unit
time through a plane. Likewise, the EM fields in the waves do
the interfering. Powers, treated as scalars, are incapable of
interference."

I put those words into my 3+ year old magazine article because
of your input while reviewing the original article. For about
the 10th time or more, I agree with you that "power flow" is
probably an invalid concept and that powers cannot interfere.

The only thing I haven't done is kiss your ass. If that is
what you are waiting for, haul your ass over here to East
Texas and pucker up. Harassing someone who agrees with you
is at least a severe character flaw and probably pathological.
--
73, Cecil http://www.w5dxp.com

2244. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 20:18:00 UTC
From: nm5k@wt.net
Message-ID: <1182543480.590280.229930@e9g2000prf.googlegroups.com>
Source record: 39652

On Jun 22, 6:54 am, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...
>
> > Hummm, I would use a slightly wider spacing with the
> > loading coil wires ...
>
> The coils used were used only as a visual aid. That part is left up to
> the individual experimenter ... no attempt was made to do the actual
> experiments for the reader ...

I've already done the experiments.. Going on nearly 20 years ago..
I'm just telling what I see in the pix..
>
> However, if you read Mr. Vincents data, this coil is "closely wound."

Well, if that is what he is doing, that is fine. I wouldn't though..
Just another glaring problem I see..

> And, I documented the construction of the jig itself, not the individual
> components to be used. The importance here is how quickly components
> can be swapped in and out ...

Yea, looks like you can do that quick enough..
>
> Low Q might be very desirable to someone valuing bandwidth over other
> aspects ... not only out of the box thinking is necessary,
> out-of-the-box-experimenting is accepted here ...

Low Q is not desirable with what should be a Hi-Q loading coil... :/
Well, unless you want to lose efficiency.. I don't worry about
bandwidth. I'll retune the coil, stinger, whatever if I need to QSY..

Like I say, I've already been through all of this in nearly 20 years
of building my own mobile antennas.. I really doubt you are going
to find anything that surprises me here. I've built nearly
every perversion of a short whip you can think of.
But I think it's good that you are testing the idea..
I wish some of the "inventers" would follow your lead..
MK

2245. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 20:19:47 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5hcourlt1@news.service.uci.edu>
Source record: 39654

Cecil Moore wrote:

> "The author has endeavored to satisfy the purists in this series
> of articles.

Apparently in response to something. Perhaps an inflammatory
discussion where the author took a contrary position on the subject?

> The term 'power flow' has been avoided in favor of
> 'energy flow'.

The term was avoided, with the one exception. I believe the term
'flux capacitor' was avoided entirely.

> Power is a measure of that energy flow per unit
> time through a plane.

Among other things.

> Likewise, the EM fields in the waves do
> the interfering.

Likewise??

> Powers, treated as scalars, are incapable of
> interference."

Should go without saying (irrespective of how you treat 'them').

> the 10th time or more, I agree with you that "power flow" is
> probably an invalid concept and that powers cannot interfere.

It's been my hope that you would agree that waves don't cause other
waves to change direction, and as such interference doesn't cause
energy to change direction. Such a brilliant person shouldn't hold
fanciful notions of nature in my opinion. Maybe someday you'll write
another paper deferring to purists on this point.

73, ac6xg

2246. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 20:35:54 UTC
From: nm5k@wt.net
Message-ID: <1182544554.584487.173850@g37g2000prf.googlegroups.com>
Source record: 39653

On Jun 22, 12:57 pm, "Dave" <n...@nowhere.com> wrote:

>
> the real problem is that art is using a software program that makes proper
> use of coupling between elements that he doesn't understand. he has come up
> with some odd parasitic array that doesn't look like a yagi for some reason,
> and came up with some off the wall theory about why it works. he grabbed a
> few buzzwords and put together a mantra and he is sticking with it. he has
> admitted he doesn't have an ee background and yet he is trying to convince
> those of us that do that we can't possibly understand what he has created,
> even if he can't put together a coherent explanation of it in proper em
> terms. its nothing magic, its just another form of a parasitic array that
> happens to do something that he thinks is interesting for some reason.

You've pretty much nailed it on the head...
Pretty much delusions of grandeur induced by a modeling program.
I can make a simple dipole have loads and loads of gain in a
modeling program.. Now getting power to it's very low Z in the
real world? Good luck in the contest is all I can say..
MK

2247. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 21:29:43 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <1m645flltk.fsf@persaunet.uninett.no>
Source record: 39655

herbert.don@gmail.com writes:

> On Jun 21, 10:26 pm, Richard Clark <kb7...@comcast.net> wrote:
> no one really reads these patnets do they? Not evne the author.
>
>> Taken from top of Page 2 "Other publications"
>>
>> T. Simpson, "The Dick Loaded Monopole Antenna,"
>> IEEE Transactions of Antennas and Propagation,
>> vol. 52, No. 2, Feb. 2004, pp. 542-545.
>>
>> Hardly worth going any further into the mysteries of this invention.
>> Dipole envy? :-0

Abstract:
http://ieeexplore.ieee.org/Xplore/login.jsp?url=/iel5/8/28638/01282130.pdf

It's "Disk loaded monopole"

73
LA4RT Jon

2248. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 22:07:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5hh7kuea1@nnrp.linuxfan.it>
Source record: 39656

nm5k@wt.net wrote:

> ...
> I've already done the experiments.. Going on nearly 20 years ago..
> I'm just telling what I see in the pix..

Yes, but then you didn't see what Mr. Vincent "seen", enough to get a physics dept. of a university to back him, and mentioned by arrl! And, gawd knows, arrl is a power to be recognised! <COUGH!>

But then, the naysayers have painted Mr. Vincent as a con man, indeed, not just a "con man" but a "SUPER CON MAN!" The type of con man where bankers lock their doors at his approach, men step before their wives in protection, wives shade the eyes of their children, massive and powerful men grasp their wallets tightly and expert con men run before him in fear, envy and loathing! :-(

> ...
> But I think it's good that you are testing the idea..
> I wish some of the "inventers" would follow your lead..
> MK
>

Yes, well, what I am hoping is to the the armchair-amateurs to do something constructive ... however, some are amusing ...

JS

2249. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 22:26:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4tio73pidrosqflbqnkm4a7d46menffjt9@4ax.com>
Source record: 39657

On Fri, 22 Jun 2007 23:29:43 +0200, Jon Kï¿½re Hellan <dev@null.com>
wrote:

>herbert.don@gmail.com writes:
>
>> On Jun 21, 10:26 pm, Richard Clark <kb7...@comcast.net> wrote:
>> no one really reads these patnets do they? Not evne the author.
>>
>>> Taken from top of Page 2 "Other publications"
>>>
>>> T. Simpson, "The Dick Loaded Monopole Antenna,"
>>> IEEE Transactions of Antennas and Propagation,
>>> vol. 52, No. 2, Feb. 2004, pp. 542-545.
>>>
>>> Hardly worth going any further into the mysteries of this invention.
>>> Dipole envy? :-0
>
>Abstract:
>http://ieeexplore.ieee.org/Xplore/login.jsp?url=/iel5/8/28638/01282130.pdf
>
>It's "Disk loaded monopole"

You didn't read the patent either, did you? ;-)

I don't blame you. It is like reading the telephone book (aside from
the obvious sloppiness).

73's
Richard Clark, KB7QHC

2250. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 23:32:02 UTC
From: nm5k@wt.net
Message-ID: <1182555122.974150.280070@e9g2000prf.googlegroups.com>
Source record: 39658

On Jun 22, 4:07 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...
>
> > I've already done the experiments.. Going on nearly 20 years ago..
> > I'm just telling what I see in the pix..
>
> Yes, but then you didn't see what Mr. Vincent "seen", enough to get a
> physics dept. of a university to back him, and mentioned by arrl! And,
> gawd knows, arrl is a power to be recognised! <COUGH!>

Doesn't matter to me. I don't build my antennas for the ARRL. I build
them for me... I'm not even a member of the ARRL.. Never have been.

>
> But then, the naysayers have painted Mr. Vincent as a con man, indeed,
> not just a "con man" but a "SUPER CON MAN!" The type of con man where
> bankers lock their doors at his approach, men step before their wives in
> protection, wives shade the eyes of their children, massive and powerful
> men grasp their wallets tightly and expert con men run before him in
> fear, envy and loathing! :-(

I don't think he's a con man at all. But I don't think the information
he
provides give anyone enough info to make an accurate comparison.
Or at least from what I've seen.
There is nothing really "wrong" with his antenna. I just think there
are better ways to get what he is after, which seems to be mainly
improved current distribution. People have known how to improve
the current distribution for years.. Nothing new..
And it sure does not require multiple loading coils to accomplish.
His disks? Nothing more than small capacitive hats.. Nothing new
there.
I just don't see the hype, and in fact, I think his design would end
up
being inferior to what I would cook up for the same height mast and
stinger. Cecil seems to agree with me, so if you don't believe me,
maybe his word will mean a little more to you.
The *best* way to load a short vertical is with a large enough
capacity
hat to load the antenna with *no* loading coil needed.
And that is what your's truly would build if I had to have a contest
against his using the same height whip.
And the current distribution in such a case is pretty linear

across the whole whip. You ain't gonna beat that with a
bunch of multiple coils, disks, linear loading, etc, ad nausium..
But if you want to try, be my guest..
MK

2251. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 23:40:42 UTC
From: nm5k@wt.net
Message-ID: <1182555642.203239.294750@e9g2000prf.googlegroups.com>
Source record: 39659

On Jun 22, 5:32 pm, n...@wt.net wrote:

> The *best* way to load a short vertical is with a large enough
> capacity
> hat to load the antenna with *no* loading coil needed.
> And that is what your's truly would build if I had to have a contest
> against his using the same height whip.

BTW, I realize if the antennas were for a low freq, I might
have to use a coil in order to avoid a hat that was just too
big to handle, but still, I would concentrate as much capacitive
loading at the top as I could, and use the minimum inductor
value to match the antenna. If we both have to use coil loading,
mine should win. The current distribution will be more linear
on mine. And in a case using a large hat, it really doesn't
matter where the coil is. The current distribution will still
be fairly linear as long as the hat is big enough.
That would be about the only case where I might consider
a base loading coil to reduce coil windings.
MK

2252. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-22 23:56:05 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5hnj2ilq1@nnrp.linuxfan.it>
Source record: 39660

nm5k@wt.net wrote:

> [stuff]

Yes, it is duly noted that you would repeat what has been done before ...

However, we ALL know where that gets one, don't we?

Regards,
JS

2253. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 00:15:01 UTC
From: nm5k@wt.net
Message-ID: <1182557701.380431.223320@m37g2000prh.googlegroups.com>
Source record: 39661

On Jun 22, 5:56 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > [stuff]
>
> Yes, it is duly noted that you would repeat what has been done before ...
>
> However, we ALL know where that gets one, don't we?
>
> Regards,
> JS

I think it would give me the better antenna in this case.
I doubt he would want me at one of his seminars..
I'd be one of those hecklers that he has nightmares
about late at night. But in my case, I would whip out
my antenna and whoop him right there on the spot if he
was brave enough to compare.
I repeat what is proven to be best.
I've already tried all his methods,
and proven them inferior by testing.
I'll back up my jibber jabber with real working antennas.
Would be simple to set up too.. All I need is a
standing mast like yours, and a few wires to
string out a large top hat.
I wonder what his alphabet soup would buy him if he
lost... :/
MK

2254. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 00:21:27 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5hp2kkbl1@nnrp.linuxfan.it>
Source record: 39662

nm5k@wt.net wrote:

> [stuff]

In countless physics labs, around the world, students complete
experiments done countless times before--and this is good ... it is
hoped, one day, they go on to complete experiments never done before, or
even ones not done properly, or those were important data was missed ...

That is simply all I point out ... an open mind never knows for certain.

Regards,
JS

2255. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 01:31:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ht6qrh1@nnrp.linuxfan.it>
Source record: 39663

John Smith I wrote:

> [stuff]

Actually, I don't think I explained that well--for want of a better explanation ...

Take the Michelsoni¿½Morley experiment. They were attempting to find the equivalent of how the doppler effect affects sound in air. However, if the way matter affects ether is similar to the way air affects sound, the earth and its' atmosphere would be a less than optimal test bed.

Indeed, if you take the horn from a train and place it in a long train, you would loose the effect, the skin of the train deflects/slows/distorts/whatever the air which causes the effect.

Now, if someone where to reconstruct the Michelsoni¿½Morley experiment from the nose of a space shuttle (no matter intervening or massive matter in close proximity), to mirrors traveling at the same speed and in the same trajectory of the shuttle, perhaps a quite different conclusion would be reached. Especially, if the matter of air and proximity to earth is masking anything enough to throw off the experiment.

I know unexpected results were obtained when a long tether was let out behind the shuttle, and never explained to my satisfaction.

Perhaps that is a somewhat better way to express what I attempted in the post this one responds too ...

Regards,
JS

2256. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 01:50:41 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5hu9u$39e$1@nnrp.linuxfan.it>
Source record: 39664

art wrote:

> [stuff]

Well, it is good to remember, the boys in R&D (the ones who come up with
the new stuff) get paid just as much to find out what doesn't work, as
the do to find the stuff which does ...

It is the ratio of the two which determines if they keep their jobs or
not ... well, unless they work for gov't ...

Regards,
JS

2257. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 02:00:15 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9957DFEB28FB0mcoslocomcastnet@216.196.97.136>
Source record: 39665

Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote in
news:AFILDVG0gseGFwSc@g3ohx.demon.co.uk:
> In the UK, amateur 'hamfests' and 'tailgate sales' used to be a fairly
> leisurely affair, starting at a round 11am, and go on until 5 or even
> 6pm, allowing lots of time to wander around, meet your long-lost friends
> etc (ie a 'good day out'). These days, opening time is often as early as
> 9am, with some dealers starting to pack up around noon. Ordinary
> tailgate sales sometimes do start at early as 7am. Things ain't what
> they used to be.

Yoiks! If they only started at 9 a.m. here...

Just possibly, there is a glimmer of hope. I have noticed that in the past year a lot of the computer junk has gone away - do we really need that Pentium 1 computer? (hint, the answer is no)

Perhaps this will return the hamfests to hams, and we can enjoy chatting and socializing again, as well as selling our own "junk"

- 73 de Mike KB3EIA -

2258. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 03:06:23 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182567983.124252.180290@q69g2000hsb.googlegroups.com>
Source record: 39666

On Jun 22, 3:19 pm, Jim Kelley <jwkel...@uci.edu> wrote:
> It's been my hope that you would agree that waves don't cause other
> waves to change direction, and as such interference doesn't cause
> energy to change direction. Such a brilliant person shouldn't hold
> fanciful notions of nature in my opinion. Maybe someday you'll write
> another paper deferring to purists on this point.

We do disagree on a couple of minor points but "power flow" has not
been one of them for over three years. Yet you keep setting up
strawmen and harassing me about it three+ years after I corrected the
error in my thinking.

As far as waves causing something, you say A causes B and C. I say A
causes B which causes C. We agree that A causes C and that C cannot
exist without B. Our disagreement is a small point of logic over which
you seem to be obsessed.
--
73, Cecil, w5dxp.com

2259. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 03:11:24 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <1182568284.122213.6580@k79g2000hse.googlegroups.com>
Source record: 39667

On Jun 22, 3:19 pm, Jim Kelley <jwkel...@uci.edu> wrote:
> Cecil Moore wrote:
> > "The author has endeavored to satisfy the purists in this series
> > of articles.
>
> Apparently in response to something. Perhaps an inflammatory
> discussion where the author took a contrary position on the subject?

Maybe, but after four years it is hard to remember exactly what
transpired. The glaring question is why are you still obsessing and
harrassing me about an error I corrected in your favor 3+ years ago?
When are you going to let that ancient history go and move on?
--
73, Cecil, w5dxp.com

2260. Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 03:22:11 UTC
From: George <gmwemail-dsp@yahoo.com>
Message-ID: <DI0fi.15557$2v1.4460@newssvr14.news.prodigy.net>
Source record: 39668

What's the easiest/fastest way to calculate received power out of a very short non-resonant antenna? Frequencies are in the HF and VHF ranges, TX powers in the kilowatt range, and distance from transmitting antenna a few miles. Thanks for any help.

George K6GW

2261. N- double female feed through connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 09:40:17 UTC
From: Edward Feustel <efeustel@hughes.net>
Message-ID: <wMqdnScZA4xbd-HbnZ2dnUVZ_vWtnZ2d@giganews.com>
Source record: 39669

I am looking for N connectors that I can use
to replace the female 259 connectors on my
MFJ feedthrough panel?

They need to be about 4 inches in length.
Any clues?

TIA,
Ed, N5EI

2262. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 12:22:48 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1182601368.201475.227760@g4g2000hsf.googlegroups.com>
Source record: 39670

On 23 jun, 05:22, "George" <gmwemail-...@yahoo.com> wrote:
> What's the easiest/fastest way to calculate received power out of a very
> short non-resonant antenna? Frequencies are in the HF and VHF ranges, TX
> powers in the kilowatt range, and distance from transmitting antenna a few
> miles. Thanks for any help.
>
> George K6GW

Hello George,

I think this question relates to a previous posting regarding power extraction?

First step is to find path attenuation.

Second step is to convert the Fieldstrength to EMF out of your antenna.

Third step, converting EMF into power.

You may use ITU propagation curves for frequency planning or use two-ray propagation formula as a ballpark.

EMF out of your antenna (optimal orientation) will be about 0.5*Efield*length.

The capacitance of your whip will be about some pF. This limits the available power (non resonant).

Example:

A broadcast transmitter (100 MHz) with ERP = 10kW produces about 30mV/m at 3 miles and h=5 ft.

This would produce about 4.5mV out of your whip.

When we assume that the capacitance with respect to the ground plane is about 5 pF (-j320 Ohm), you may extract about 32nW of AC power (without resonance).

When the antenna has no descent "counterpoise" and / or is not oriented optimal, the output will be significantly less. Terrain features will also affect output power.

Hope this will help you a bit,

Wim
PA3DJS
www.tetech.nl

2263. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 13:37:48 UTC
From: nm5k@wt.net
Message-ID: <1182605868.689609.24590@g4g2000hsf.googlegroups.com>
Source record: 39671

On Jun 22, 7:33 pm, art <aun...@insightbb.com> wrote:
> On 22 Jun, 17:21, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > n...@wt.net wrote:
>
> > > [stuff]
>
> > In countless physics labs, around the world, students complete
> > experiments done countless times before--and this is good ... it is
> > hoped, one day, they go on to complete experiments never done before, or
> > even ones not done properly, or those were important data was missed ...
>
> > That is simply all I point out ... an open mind never knows for certain.
>
> > Regards,
> > JS
>
> He has done everything to do with antennas.

Nope.. But I've tried nearly every perversion of a short vertical
you can conjer up.. I bet a lot more than you have.
I tried the methods that guy is using a long time ago.
Do you think I should ignore all results of the tests I do?
If his methods were best, don't you think I would have one
mobile?

>He has also read the WWW
> from beginning to the end,

Not yet, but I have road runner cable now.
I'm working on it at a bit faster clip now...

>nothing new he has done it all.

I haven't molested Paris Hilton yet...
But, actually, she's really not my type..
I don't really like whiny bitchettes...

>I would
> imagine that the antenna company that he designed antennas for
> gave up and went bankrupt when he said he was going to retire.

And what company might that be?

> I would imagine that is why the space ship landed today in
> California no point in taking risks now that he has left.

If that's what you imagine, then you are fairly clueless.

> IEEE is looking for an experienced antenna designer with
> extensive knoweledge of all types of antennas with extensive
> experience in determining worthwhile projects and be able to
> smell those that would fool others.

I already have a job.. But maybe I could consult for them
part time. I can usually smell male bovine droppings from a fairly
good distance.

> Must be able to provide
> evidence of achievements that have benefited the advance of science.

I'll show mine, if you show yours...

> Experience in winding coils accepted as well as evidence of
> climbing towers to replace light bulbs.

I can wind a coil, but I've never climbed a tower to change a
light bulb. I would like to try it, but access to the local antenna
farm is fairly restricted. Mainly due to liability, insurance
purposes. BTW, I'm not an aggie... Does that give me extra
light bulb changer status?

>Must be a EE with a
> Masters from an accredited college

I'll get mine when you get yours...

>with a history of writing
> papers on the science of antennas as well as able to judge
> antenna designs presented to the IEEE.

Sounds like a boring job.. I've decided I'll pass..
I'd rather fly a Southwest 737 than do something
as sleep inducing as that.

>Trench diggers for
> cable installations need not apply.

I've never worked for the cable company, but
like I say, I do have road runner cable now.
But our system is fiber optic, overhead lines,
etc.. No trenches around here.
But playing in the dirt does kind of appeal to me.

> Maybe he will not be around to long as he is evidently
> better than sliced bread in all the sciences.

If I'm not around *too* long, it's probably cuz I puff too
many cig's and drink about 22 cups of coffee a day..
You can see me hard at work here...
http://web.wt.net/~nm5k/nm5k.jpg

> I imagine that he made more money on the stock market
> than the average broker

You really wonder about stuff like that?
You must really be bored...
If I were your doktor, I would recommend two prozac,
and call me monday morning, at which time I'll consider
a lobotomy if you haven't improved by then.
MK

2264. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 13:44:33 UTC
From: Karl NVW <Karl.Beckman@sbcglobal.net>
Message-ID: <5t9fi.16908$RX.4154@newssvr11.news.prodigy.net>
Source record: 39672

eganders wrote:
> I am a consultant for an AVL (automatic vehicle location system)
> system used by the Southeastern counties of Michigan. The system is
> used on winter maintenance vehicles and works on 900 MHz. The
> vehicles are often stored overnight in metal buildings where it is
> difficult to obtain transceiver communication from the AVL system. Is
> there a low cost (possibly passive) way to port 900 MHz radio
> transmissions into these buildings?
>
> Thanks,
>
> Eric Anderson
>
One would expect a person who is acting professionally as an RF
consultant to already have significant knowledge in this area. I
realize this is a government job, but I wouldn't hire a day laborer
to act as a master carpenter or project manager. Please don't bill
the transit property for your time spent here trying to learn things
in a subject are which you're supposed to already have mastered.

2265. Re: N- double female feed through connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 14:04:49 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1182607551_40885@sp12lax.superfeed.net>
Source record: 39673

Edward Feustel wrote:
> I am looking for N connectors that I can use
> to replace the female 259 connectors on my
> MFJ feedthrough panel?
>
> They need to be about 4 inches in length.
> Any clues?
>
> TIA,
> Ed, N5EI
>
>
These are only 2" long. I'd be surprised
if they were made in 4" lengths.

http://cgi.ebay.com/N-Female-Bulkhead-Feedthrough-Connector-2-w-Nuts_W0QQitemZ200095201168
QQihZ010QQcategoryZ48704QQrdZ1QQssPageNameZWD1VQQcmdZViewItem
eBay: N Female Bulkhead Feedthrough
Connector - 2" w/Nuts (item 200095201168
end time Jun-28-07 13:46:38 PDT)

Unless you're seriously worried about
SWR, it might be more convenient to use
N female to UHF male adapters.

73,

Chuck

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

2266. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 14:44:40 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5jbl6$72j$1@nnrp.linuxfan.it>
Source record: 39674

nm5k@wt.net wrote:

> ...

Well, it appears to me, the shortened 10 meter 1/2 is superior to a 1/4 (both mounted mobile) and the shortened 1/2 is VERY close in performance to a full ~17 ft. (vs. ~5.3 ft. shortened--with the top hat and spacings optimized, the difference is less than the width of a meter needle.)

This silly combination of know "tricks" is certainly doing something which common place formulas/equations don't account for ...

However, if you already naysay on the navy data, I won't be able to present any proof which even comes close--my equipment budget doesn't even begin to match that of the navys' to begin with ...

Too bad a bunch of different people don't use a standard test jig, apply their own modifications and generate a ton of data/results ...

Regards,
JS

2267. Re: N- double female feed through connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 15:41:58 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <1ofq7312a016st3490ha80biom0dp16pb4@4ax.com>
Source record: 39675

On Sat, 23 Jun 2007 05:40:17 -0400, "Edward Feustel"
<efeustel@hughes.net> wrote:

>I am looking for N connectors that I can use
>to replace the female 259 connectors on my
>MFJ feedthrough panel?
>
>They need to be about 4 inches in length.
>Any clues?
>
>TIA,
>Ed, N5EI
>

The Wireman has a pretty wide selection of bulkhead feedthroughs in
any number of lengths.

bob
k5qwg

2268. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 15:54:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Lmbfi.3585$9b5.654@trndny05>
Source record: 39676

"art" <aunwin@insightbb.com> wrote in message
news:1182613439.011739.245090@u2g2000hsc.googlegroups.com...
> On 22 Jun, 11:57, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182477190.861283.125760@z28g2000prd.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 21 Jun, 14:11, "Richard Fry" <r...@adams.net> wrote:
>> >> Art wrote about "Gaussian antenna in planar form"> Newsgroup members,
>> >> > Thought I would give you another example to laugh at.
>> >> > (etc)
>>
>> >> __________
>>
>> >> ART: Probably some of your readers are hoping for your
>> >> posts in plainer form, so they might hope to understand
>> >> what you mean.
>>
>> >> RF
>> > I am sharing my findings that are not declared in any books.
>> > I did my best. I have answered all questions at least once.
>> > In the archives are the mathematical details, samples of antennas,
>> > independent computor program checking, independent mathematical
>> > explanations and every stage of the transition from Gaussian
>> > law of Statics,conservative field to a non concervative field.
>> > An explanation of the clustered elements being in equilibrium
>> > by virtue of all current directions change at the same time.
>> > That the Gaussian array is resonant in its entirety as well
>> > as each element alone. Yes, if you want to gamble you can follow
>> > the two Richards line and say it is a fake or if you are
>> > capable in basic science you can tackle it yourself and not have to
>> > resort to the postings of the two Richards, both of which
>> > state they don't understand it so what use are their comments.
>> > If you are of the opinion that you cannot add the same factor
>> > to both sides of a mathematical equation as in simple algebra
>> > as David has said time and time again then don't even try to
>> > understand the rest.
>>
>> > Art KB9MZ...XG
>>

>> the real problem is that art is using a software program that makes
>> proper
>> use of coupling between elements that he doesn't understand. he has come
>> up
>> with some odd parasitic array that doesn't look like a yagi for some
>> reason,
>> and came up with some off the wall theory about why it works. he grabbed
>> a
>> few buzzwords and put together a mantra and he is sticking with it. he
>> has
>> admitted he doesn't have an ee background and yet he is trying to
>> convince
>> those of us that do that we can't possibly understand what he has
>> created,
>> even if he can't put together a coherent explanation of it in proper em
>> terms. its nothing magic, its just another form of a parasitic array
>> that
>> happens to do something that he thinks is interesting for some reason.-
>> Hide quoted text -
>>
>> - Show quoted text -
>
> I volunteered not admitted that I am a mechanical, but even
> mechanical engineers are aware of what it takes to change
> a conservative field into a nonconservative field. You SAY
> you are a EE, well I don't believe you!
> Your comments so far deny the very possibility. You are not aware
> of electrical fields ala conservative fields as in a static field
> and a non conservative field as in a time variable electromagnetic
> fields, you cannot possibly be a EE. It would appear that only
> non EE's have ventured forward to deny the underpinnings where-
> as those that obviously have a E.E. have not denied the mathematics,
> or the program results e.t.c. .If one had a degree, any sort of
> a degree, he would have presented data that demonstrated the faults
> of my position. The E.E.,s on this group of which there are many
> have not done this or even mildly echoed your position.
> You sir are not now in a position to call yourself an electrical
> engineer and your postings thoroughly confirm that you are a fraud.
> Art KB9MZ.....XG
>
you have not presented any facts to rebut. start with one fact, define
'gaussian antenna'.

2269. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 18:37:22 UTC
From: Dave <noone@nowhere.com>
Message-ID: <CLdfi.655$t95.38@trndny01>
Source record: 39677

"art" <aunwin@insightbb.com> wrote in message
news:1182617096.354056.302960@k79g2000hse.googlegroups.com...
> On 23 Jun, 08:54, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182613439.011739.245090@u2g2000hsc.googlegroups.com...
>>
>>
>>
>> > On 22 Jun, 11:57, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
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>> >>news:1182477190.861283.125760@z28g2000prd.googlegroups.com...
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>> >> > On 21 Jun, 14:11, "Richard Fry" <r...@adams.net> wrote:
>> >> >> Art wrote about "Gaussian antenna in planar form"> Newsgroup
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>> >> >> __________
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>> >> >> ART: Probably some of your readers are hoping for your
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>> >> >> RF
>> >> > I am sharing my findings that are not declared in any books.
>> >> > I did my best. I have answered all questions at least once.
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>> >> > law of Statics,conservative field to a non concervative field.
>> >> > An explanation of the clustered elements being in equilibrium
>> >> > by virtue of all current directions change at the same time.
>> >> > That the Gaussian array is resonant in its entirety as well
>> >> > as each element alone. Yes, if you want to gamble you can follow
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>> >> > capable in basic science you can tackle it yourself and not have to
>> >> > resort to the postings of the two Richards, both of which
>> >> > state they don't understand it so what use are their comments.
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>> >> > to both sides of a mathematical equation as in simple algebra
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>> >> few buzzwords and put together a mantra and he is sticking with it.
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>> >> admitted he doesn't have an ee background and yet he is trying to
>> >> convince
>> >> those of us that do that we can't possibly understand what he has
>> >> created,
>> >> even if he can't put together a coherent explanation of it in proper
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>> >> terms. its nothing magic, its just another form of a parasitic array
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>> >> happens to do something that he thinks is interesting for some
>> >> reason.-
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>> >> - Show quoted text -
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>> > I volunteered not admitted that I am a mechanical, but even
>> > mechanical engineers are aware of what it takes to change
>> > a conservative field into a nonconservative field. You SAY
>> > you are a EE, well I don't believe you!
>> > Your comments so far deny the very possibility. You are not aware
>> > of electrical fields ala conservative fields as in a static field
>> > and a non conservative field as in a time variable electromagnetic
>> > fields, you cannot possibly be a EE. It would appear that only
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>> > as those that obviously have a E.E. have not denied the mathematics,
>> > or the program results e.t.c. .If one had a degree, any sort of
>> > a degree, he would have presented data that demonstrated the faults
>> > of my position. The E.E.,s on this group of which there are many
>> > have not done this or even mildly echoed your position.
>> > You sir are not now in a position to call yourself an electrical
>> > engineer and your postings thoroughly confirm that you are a fraud.
>> > Art KB9MZ.....XG
>>
>> you have not presented any facts to rebut. start with one fact, define

>> 'gaussian antenna'.- Hide quoted text -
>>
>> - Show quoted text -
>
> That has been done, It is not my problem that you are not an engineer
>
no it hasn't. you have waived your arms about it being in 'equilibrium',
you have mis-used an imaginary surface around it as some kind of magical
boundry where it suddenly starts radiating, you have made some kind of claim
about it being resonant, and you have given several vague descriptions of
examples that sound like various kinds of driven or parasitic elements
randomly arranged, but you have never defined it in terms that an ee would
understand, let alone enough for anyone else who might be interested in
creating their own version.

2270. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 20:01:07 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <c_efi.11$222.7@newsfe12.lga>
Source record: 39678

"Dave" <noone@nowhere.com> wrote in message
news:CLdfi.655$t95.38@trndny01...
>
>>
>> That has been done, It is not my problem that you are not an engineer
>>
> no it hasn't. you have waived your arms about it being in 'equilibrium',
> you have mis-used an imaginary surface around it as some kind of magical
> boundry where it suddenly starts radiating, you have made some kind of
> claim about it being resonant, and you have given several vague
> descriptions of examples that sound like various kinds of driven or
> parasitic elements randomly arranged, but you have never defined it in
> terms that an ee would understand, let alone enough for anyone else who
> might be interested in creating their own version.

You already defined it: Guessitian antenna. Guess anything you want, and you
gotit.
What you expect from the ARTist who has a patent on "reflector is shorter
than driven el." and "director is longer than driven". Either patent office
is dimm, or the "inventor".
Troll, troll,....
Yuri

2271. Re: N- double female feed through connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 20:23:38 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <467d8146$0$3138$4c368faf@roadrunner.com>
Source record: 39679

"Bob Miller" <NOSPAM@neosoft.com> wrote in message
news:1ofq7312a016st3490ha80biom0dp16pb4@4ax.com...
> On Sat, 23 Jun 2007 05:40:17 -0400, "Edward Feustel"
> <efeustel@hughes.net> wrote:
>
>>I am looking for N connectors that I can use
>>to replace the female 259 connectors on my
>>MFJ feedthrough panel?
>>
>>They need to be about 4 inches in length.
>>Any clues?
>>
>>TIA,
>>Ed, N5EI
>>
>
> The Wireman has a pretty wide selection of bulkhead feedthroughs in
> any number of lengths.
>
> bob
> k5qwg

Ditto on the wire man.

2272. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 20:34:11 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <467d83c1$0$4922$4c368faf@roadrunner.com>
Source record: 39680

<nm5k@wt.net> wrote in message
news:1182555642.203239.294750@e9g2000prf.googlegroups.com...
> On Jun 22, 5:32 pm, n...@wt.net wrote:
>
>> The *best* way to load a short vertical is with a large enough
>> capacity
>> hat to load the antenna with *no* loading coil needed.
>> And that is what your's truly would build if I had to have a contest
>> against his using the same height whip.
>
> BTW, I realize if the antennas were for a low freq, I might
> have to use a coil in order to avoid a hat that was just too
> big to handle, but still, I would concentrate as much capacitive
> loading at the top as I could, and use the minimum inductor
> value to match the antenna. If we both have to use coil loading,
> mine should win. The current distribution will be more linear
> on mine. And in a case using a large hat, it really doesn't
> matter where the coil is. The current distribution will still
> be fairly linear as long as the hat is big enough.
> That would be about the only case where I might consider
> a base loading coil to reduce coil windings.
> MK
>

I thought the base coil would be for impedance matching, maybe he is tapping
up on the coil to find a 50 ohm point.

2273. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 20:34:41 UTC
From: richardharrison@webtv.net
Message-ID: <375-467D83E1-323@storefull-3254.bay.webtv.net>
Source record: 39581

George, K6GW wrote:

"What is the esiest/fastest way to calculate received power out of a
very short non-resonant antenna?"

Field strengths are given in volts per meter. This is related to power by e squared / r.
The dissipationless resistance of free-space (a ratio between voltage and current) is 377 ohms. Attenuation due only to reduction of power per square meter as the radio wave envelope expands in space is 6 dB every time distance from the transmitter doubles. That means getting only 1/4 the previous power every time distance from the transmitter doubles.

Volts per meter decline linearly with distance from the transmitter. At 10x the distance, the signal strength or volts per meter is 1/10 the previous value. 1/10 the voltage is 1/100 of the power.

We have a participant in this newsgroup, Art Unwin, who disdains book contents, but the subject is not nearly exhausted and I don`t intend to exhaust it. Instead, I`ll recommend one of the best books:
"Radio-Electronic Transmission Fundamentals" by B. Whitfield Griffith, Jr. Its 2nd edition has just been released by Scitech Publishing, Inc. Whatever it costs it is well worth the price.

Best regards, Richard Harrison, KB5WZI

2274. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 21:28:51 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <sggfi.108$J94.42@newsfe12.lga>
Source record: 39582

"art" <aunwin@insightbb.com> wrote in message
news:1182629536.847628.183260@n60g2000hse.googlegroups.com...
> On 23 Jun, 13:01, "Yuri Blanarovich" <K...@optonline.net> wrote:
>> "Dave" <n...@nowhere.com> wrote in message
>>
>> news:CLdfi.655$t95.38@trndny01...
>>
>>
>> You already defined it: Guessitian antenna. Guess anything you want, and
>> you
>> gotit.
>> What you expect from the ARTist who has a patent on "reflector is shorter
>> than driven el." and "director is longer than driven". Either patent
>> office
>> is dimm, or the "inventor".
>> Troll, troll,....
>> Yuri
>
> Yuri, why do you perpetually embarrass yourself with silly postings.
> Eventually hams will realise that they are meeting the real you.
>

What's perpetually embarrassing: your patent and immortalizing in patent office document for whole world to see that you don't know difference between director and reflector, or me having some fun with your mumbo-jumbo???

bada goose BUm

2275. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-23 22:49:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5k81n$pk0$1@nnrp.linuxfan.it>
Source record: 39583

Jimmie D wrote:

> ...
> I thought the base coil would be for impedance matching, maybe he is tapping
> up on the coil to find a 50 ohm point.

That is exactly the way I interpreted his description/pics; and, it's exactly the way I implemented it (a modified gamma match--implemented in helix form?) The wire-length/inductance is a 1:1.4 ratio between bottom helix and upper loading coil--with the 1.4 of the length in the upper loading coil. An adjustable 20" length of conductor is used between lower and upper coils. Top whip is a 20" length also. (10 meter design)

From what I estimate, it ended up using, VERY CLOSE! TO, a computed half-wavelength of wire at 28.050! And, I mean within' 1-3 inches! I honestly did not expect that ...

Tap ended up almost dead center in the bottom helix turns for a 50 ohm match; a variable capacitor is in series with this tap point on the bottom helix and used to tune out the inductance of the tap wire.

I kludged a var/cap together using two small sheets of light aluminum. These sheets are rolled into tubes and made so one is a smaller dia and slips very loosely into the one of a larger dia. I then cut some clear plastic from a drink container, rolled it and use it as the dielectric (withstands the 1-100 watts test signal) between the inner/outer tubes. This makes a serviceable/usable var. concentric cap. Inner tube is roughly the dia of a bic pen (~1/4 inch.)

#8 copper is used, except for the upper loading coil which is #10 copper.

Try one; prove me wrong; I dare ya!

Regards,
JS

2276. hum in receiver from rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 01:27:51 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <rMjfi.266$Od7.111@newsread1.news.pas.earthlink.net>
Source record: 39584

While not strickly antennas, this is a rotator problem.

I have a Ham IV that when I turn on the brake the receive signal takes on a 60 or 120 hz hum . I though it might be the control box too close to my Icom 746 PRO. I have a switch box connecting two lowband wire antennas and a triband beam to the Icom. If I listen to a signal on the wire antennas I do not get the hum modulation on the incomming signal when I rotate the beam. Those coax wires are not near the rotator wires. This tends to eliminate the transfromer of the rotator box from getting into the Icom by magnetic coupling. If I switch to the beam , then turn the brake on the rotator box I will get hum modulation. The triband is fed with some Davis Bury flex (foil and braid shield coax) and the rotator wires are taped to the coax for a distnce of about 100 feet.

The antenna does not have to ratate, just mashing the brake release button will make the signal hum modulate on receive.

The Icom is being powered by an Astrom 50 amp supply and the rotator plugs into the 120 vac outlet.

Has anyone else ran across this problem ?

2277. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 02:15:26 UTC
From: richardharrison@webtv.net
Message-ID: <1529-467DD3BE-264@storefull-3255.bay.webtv.net>
Source record: 39585

I wrote;
'That means getting only 1/4 the previous power every time the distance from the transmitter doubles."

That`s true, but it`s only part of the story. A receiving antenna can only deliver 50% of the power it receives and that can happen only when it is perfectly matched to its receiver. Otherwise, it reradiates more than 50% of its received power.

There is another fly in the ointment. A former colleague of mine, Peter N. Saveskie compiled an interesting book, "Radio Propagation Handbook". On page 826 Pete writes:
"Most of the attenuation of "free-space" loss occurs close-in to the adiating antenna. The loss between two isotropic antennae separated by one wavelength is 22.0 dB, thereafter increasing by 6.0 dB for each doubling of the inter-antenna distance.'

This sort of loss in the first wavelength is one problem in trying to use antennas back to back as passive repeaters. Enormous receiver sensitivity makes the passive repeater practical sometimes in spite of the path loss.

Pete`s path loss formula has worked well for me.

Best regards, Richard Harrison, KB5WZI

2278. Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 02:31:34 UTC
From: NW_Pilot <usenet@aircraft-nospam-delivery.net>
Message-ID: <G4SdnVO50r99S-DbnZ2dnUVZ_sWdnZ2d@comcast.com>
Source record: 39586

What's the best wire for a wire and size antenna operating on 3413 8843 5574 13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.

2279. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 09:48:13 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1182678493.947250.30820@m36g2000hse.googlegroups.com>
Source record: 39587

On 23 jun, 22:34, richardharri...@webtv.net (Richard Harrison) wrote:
> George, K6GW wrote:
>
> "What is the esiest/fastest way to calculate received power out of a
> very short non-resonant antenna?"
>
> Field strengths are given in volts per meter. This is related to power
> by e squared / r.
> The dissipationless resistance of free-space (a ratio between voltage
> and current) is 377 ohms. Attenuation due only to reduction of power per
> square meter as the radio wave envelope expands in space is 6 dB every
> time distance from the transmitter doubles. That means getting only 1/4
> the previous power every time distance from the transmitter doubles.
>
> Volts per meter decline linearly with distance from the transmitter. At
> 10x the distance, the signal strength or volts per meter is 1/10 the
> previous value. 1/10 the voltage is 1/100 of the power.
>
> We have a participant in this newsgroup, Art Unwin, who disdains book
> contents, but the subject is not nearly exhausted and I don`t intend to
> exhaust it. Instead, I`ll recommend one of the best books:
> "Radio-Electronic Transmission Fundamentals" by B. Whitfield Griffith,
> Jr. Its 2nd edition has just been released by Scitech Publishing, Inc.
> Whatever it costs it is well worth the price.
>
> Best regards, Richard Harrison, KB5WZI

Hi Richard,

That E is proportional to 1/r is valid for free space propagation.
George's question relates to the frequency range where there is no
free space (obstacle free) propagation in most cases. For his case,
the most important obstacle is mother earth.

As in practical cases (distance about several miles, height of
receiving antenna about 5 ft), the earth reflected ray cancels most
part of the direct ray. Fast methods to get a result are the two-ray
formula and/or propagation curves for frequency planning. Add about
10dB loss for heavily populated areas (buildings).

Using one of the above methods, will result in E is proportional to 1/
r^3...to 1/r^4. This matches measurements I did myself. Therefore 1/r
gives a far from realistic result (too optimistic).

Best regards,

Wim
PA3DJS
www.tetech.nl

2280. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 11:09:39 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Thsfi.584$ss5.304@trndny03>
Source record: 39588

"art" <aunwin@insightbb.com> wrote in message
news:1182652358.436273.73550@m36g2000hse.googlegroups.com...
> On 22 Jun, 11:57, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182477190.861283.125760@z28g2000prd.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 21 Jun, 14:11, "Richard Fry" <r...@adams.net> wrote:
>> >> Art wrote about "Gaussian antenna in planar form"> Newsgroup members,
>> >> > Thought I would give you another example to laugh at.
>> >> > (etc)
>>
>> >> __________
>>
>> >> ART: Probably some of your readers are hoping for your
>> >> posts in plainer form, so they might hope to understand
>> >> what you mean.
>>
>> >> RF
>> > I am sharing my findings that are not declared in any books.
>> > I did my best. I have answered all questions at least once.
>> > In the archives are the mathematical details, samples of antennas,
>> > independent computor program checking, independent mathematical
>> > explanations and every stage of the transition from Gaussian
>> > law of Statics,conservative field to a non concervative field.
>> > An explanation of the clustered elements being in equilibrium
>> > by virtue of all current directions change at the same time.
>> > That the Gaussian array is resonant in its entirety as well
>> > as each element alone. Yes, if you want to gamble you can follow
>> > the two Richards line and say it is a fake or if you are
>> > capable in basic science you can tackle it yourself and not have to
>> > resort to the postings of the two Richards, both of which
>> > state they don't understand it so what use are their comments.
>> > If you are of the opinion that you cannot add the same factor
>> > to both sides of a mathematical equation as in simple algebra
>> > as David has said time and time again then don't even try to
>> > understand the rest.
>>
>> > Art KB9MZ...XG
>>

>> the real problem is that art is using a software program that makes
>> proper
>> use of coupling between elements that he doesn't understand. he has come
>> up
>> with some odd parasitic array that doesn't look like a yagi for some
>> reason,
>> and came up with some off the wall theory about why it works. he grabbed
>> a
>> few buzzwords and put together a mantra and he is sticking with it. he
>> has
>> admitted he doesn't have an ee background and yet he is trying to
>> convince
>> those of us that do that we can't possibly understand what he has
>> created,
>> even if he can't put together a coherent explanation of it in proper em
>> terms. its nothing magic, its just another form of a parasitic array
>> that
>> happens to do something that he thinks is interesting for some reason.-
>> Hide quoted text -
>>
>> - Show quoted text -
>
> It is not my problem that you can't understand it I suggest you
> consult
> an engineer for help.As I have said many times before the antenna
> array
> is resonant in its entirety as is the contributing radiating elements.

so is a yagi... have you ever measured the feed point impedance of a yagi?
do you not see a resonance in that? have you changed lengths or spacings of
elements in a yagi and seen the resonance move?

> That definition therefore is describing an array in equilibrium.
>>From that definition it is obvious that there is no coupling as with
> a Yagi design i.e. it is NOT a parassitic array and you are not an

if it's not parasitic then it is driven, meaning every element has power
applied to it from a feedline... but you have described it as driving one
element, do if the others are supplying power to contribute to the pattern
then it is a parasitic array and falls in the same class as yagis.

as for equilibrium, that still makes no sense in relation to antennas unless
you are trying to say that power in equals power out, which is a truism (if
you ignore resistive losses). nothing new there. but it sounds like you
have some other meaning for 'equilibrium' which you have not adequately
provided equations for.

2281. Re: Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 13:35:43 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <m7ss73lnbnjrqnfvr8q4d8m9n54a4aph69@4ax.com>
Source record: 39589

On Sat, 23 Jun 2007 19:31:34 -0700, "NW_Pilot"
<usenet@aircraft-nospam-delivery.net> wrote:

>What's the best wire for a wire and size antenna operating on 3413 8843 5574
>13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.
>
I like #14 house wire because of the price-availability-durability
features.

The SG 237 tuner at the antenna will probably tune anything past 9
feet with longer being better. Don't over look the ground quality will
have a significant.effect on the antenna's performance.

Of course my 'best" and your "best" may not be the same thing!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

2282. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 13:43:22 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f5lse4afa1@aioe.org>
Source record: 39590

"Richard Harrison" wrote
> George, K6GW wrote:
>
>> "What is the easiest/fastest way to calculate received power out
>> of a very short non-resonant antenna?"
>
>.. The dissipationless resistance of free-space (a ratio between voltage
> and current) is 377 ohms. Attenuation due only to reduction of power per
> square meter as the radio wave envelope expands in space is 6 dB every
> time distance from the transmitter doubles. That means getting only 1/4
> the previous power every time distance from the transmitter doubles.
(etc)

The answer to the way I read the original question does not involve knowing what the field strength is, or how it varies with distance or other factors, but knowing the power it will produce via the receive antenna system.

Here is a paste from a spreadsheet I set up to calculate the field needed to produce a defined power level at the input terminals of a receiver,using the equation

ï¿½V/m = 10^[(dBmW - G + 20*(log F) + L + 75)/20]

where

-66.89 dBmW = signal level at receiver input in dB with respect to 1 mW
-2.14 G = receiving antenna gain in dBd
0.1 L = line loss in decibels
98 F = frequency in MHz

Solution for the values shown at the left margin above:

322.65 ï¿½V/m field required.

The equation could be rewritten to solve for power, given a field strength.

RF http://rfry.org

2283. Re: Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 14:09:19 UTC
From: Ron <w7mrr@sbcglobal.net>
Message-ID: <EWufi.7713$c06.1907@newssvr22.news.prodigy.net>
Source record: 39591

Sounds like you want to chat with your buddies on the United company
channel, no?

"NW_Pilot" <usenet@aircraft-nospam-delivery.net> wrote in message
news:G4SdnVO50r99S-DbnZ2dnUVZ_sWdnZ2d@comcast.com...
> What's the best wire for a wire and size antenna operating on 3413 8843
> 5574 13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.
>

2284. Re: Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 14:11:07 UTC
From: Ron <w7mrr@sbcglobal.net>
Message-ID: <6Yufi.7714$c06.2959@newssvr22.news.prodigy.net>
Source record: 39592

Correction: ATA?

"NW_Pilot" <usenet@aircraft-nospam-delivery.net> wrote in message
news:G4SdnVO50r99S-DbnZ2dnUVZ_sWdnZ2d@comcast.com...
> What's the best wire for a wire and size antenna operating on 3413 8843
> 5574 13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.
>

2285. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 14:36:09 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f5lvh0luc1@aioe.org>
Source record: 39593

"Wimpie" wrote
> A broadcast transmitter (100 MHz) with ERP = 10kW produces
> about 30mV/m at 3 miles and h=5 ft.

Although you didn't define the height of the transmit antenna, just picking a height of 984 feet to be on the high side, and referring to the FCC's F(50,50) propagation curves shows that for 10 kW ERP a field of about 42 mV/m will be generated at a radius of 3 miles and an elevation of 9 meters (29.5 feet) above the earth, assuming flat terrain.

Field strength at lower elevations for these conditions varies about in an inverse relationship with height, so at 5 feet it would be 5/29.5, or 17% of 42 mV/m, which is about 7 mV/m.

This is quite a bit different than your number, so I was curious as to your method.

RF

2286. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 15:32:02 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f5m2pp$2pb$1@aioe.org>
Source record: 39594

Correcting myself...

> Field strength at lower elevations for these conditions IS REDUCED about
> in a DIRECT relationship with height, ...

2287. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 17:38:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <j_xfi.2488$bj5.323@trndny07>
Source record: 39595

"art" <aunwin@insightbb.com> wrote in message
news:1182702442.411082.215030@q75g2000hsh.googlegroups.com...
> On 24 Jun, 08:13, art <aun...@insightbb.com> wrote:
>> On 24 Jun, 04:09, "Dave" <n...@nowhere.com> wrote:
>>
>>
>>
>>
>>
>> > "art" <aun...@insightbb.com> wrote in message
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>> >news:1182652358.436273.73550@m36g2000hse.googlegroups.com...
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>> > > On 22 Jun, 11:57, "Dave" <n...@nowhere.com> wrote:
>> > >> "art" <aun...@insightbb.com> wrote in message
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>> > >>news:1182477190.861283.125760@z28g2000prd.googlegroups.com...
>>
>> > >> > On 21 Jun, 14:11, "Richard Fry" <r...@adams.net> wrote:
>> > >> >> Art wrote about "Gaussian antenna in planar form"> Newsgroup
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>> > >> >> > Thought I would give you another example to laugh at.
>> > >> >> > (etc)
>>
>> > >> >> __________
>>
>> > >> >> ART: Probably some of your readers are hoping for your
>> > >> >> posts in plainer form, so they might hope to understand
>> > >> >> what you mean.
>>
>> > >> >> RF
>> > >> > I am sharing my findings that are not declared in any books.
>> > >> > I did my best. I have answered all questions at least once.
>> > >> > In the archives are the mathematical details, samples of antennas,
>> > >> > independent computor program checking, independent mathematical
>> > >> > explanations and every stage of the transition from Gaussian
>> > >> > law of Statics,conservative field to a non concervative field.
>> > >> > An explanation of the clustered elements being in equilibrium
>> > >> > by virtue of all current directions change at the same time.
>> > >> > That the Gaussian array is resonant in its entirety as well
>> > >> > as each element alone. Yes, if you want to gamble you can follow
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>> > >> > capable in basic science you can tackle it yourself and not have
>> > >> > to

>> > >> > resort to the postings of the two Richards, both of which
>> > >> > state they don't understand it so what use are their comments.
>> > >> > If you are of the opinion that you cannot add the same factor
>> > >> > to both sides of a mathematical equation as in simple algebra
>> > >> > as David has said time and time again then don't even try to
>> > >> > understand the rest.
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>> > >> > Art KB9MZ...XG
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>> > >> the real problem is that art is using a software program that makes
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>> > >> with some odd parasitic array that doesn't look like a yagi for some
>> > >> reason,
>> > >> and came up with some off the wall theory about why it works. he
>> > >> grabbed
>> > >> a
>> > >> few buzzwords and put together a mantra and he is sticking with it.
>> > >> he
>> > >> has
>> > >> admitted he doesn't have an ee background and yet he is trying to
>> > >> convince
>> > >> those of us that do that we can't possibly understand what he has
>> > >> created,
>> > >> even if he can't put together a coherent explanation of it in proper
>> > >> em
>> > >> terms. its nothing magic, its just another form of a parasitic
>> > >> array
>> > >> that
>> > >> happens to do something that he thinks is interesting for some
>> > >> reason.-
>> > >> Hide quoted text -
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>> > >> - Show quoted text -
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>> > > It is not my problem that you can't understand it I suggest you
>> > > consult
>> > > an engineer for help.As I have said many times before the antenna
>> > > array
>> > > is resonant in its entirety as is the contributing radiating
>> > > elements.
>>
>> > so is a yagi... have you ever measured the feed point impedance of a
>> > yagi?
>> > do you not see a resonance in that?
>>
>> Wrong....With a yagi only the driven element is in equilibrium
>>

>> have you changed lengths or spacings of
>>
>> > elements in a yagi and seen the resonance move?
>>
>> If you change the proximetry of other elements then the
>> driven element nust also physically change to maintain
>> equilibrium
>>
>>
>>
>> > > That definition therefore is describing an array in equilibrium.
>> > >>From that definition it is obvious that there is no coupling as with
>> > > a Yagi design i.e. it is NOT a parassitic array and you are not an
>>
>> > if it's not parasitic then it is driven, meaning every element has
>> > power
>> > applied to it from a feedline... but you have described it as driving
>> > one
>> > element, do if the others are supplying power to contribute to the
>> > pattern
>> > then it is a parasitic array and falls in the same class as yagis.
>>
>> No it does not. Radiation comes in two forms each abiding by the laws
>> of maxwell
>> One is by coupling where one element is resonant at a particular
>> frequency
>> and where one is not. The other method of radiation is where both
>> elements
>> are resonant at the same frequency. These elements can be randomly
>> placed and
>> shaped as well as being resonant in situ, these elements can be seen
>> as
>> being in equilibrium or in concert with each other or by stretching
>> definitions
>> a homogenous mass where energy is applied to the mass as a whole.
>>
>>
>>
>> > as for equilibrium, that still makes no sense in relation to antennas
>> > unless
>> > you are trying to say that power in equals power out, which is a truism
>> > (if
>> > you ignore resistive losses).
>>
>> Go back to Gaussian law of statics, it is based around a mass in
>> equilibrium
>> (some equate mass with energy) held within the confines of a boundary
>> where the
>> gravitational pull on the contents equals the outward pull of exteria
>> gravitational

>> actions thus providing a frictionless surrounding area.
>> This can also be seen as the basis for Poyntings Vector diagram
>>
>> nothing new there. but it sounds like you> have some other meaning for
>> 'equilibrium' which you have not adequately
>> > provided equations for.- Hide quoted text -
>>
>> > - Show quoted text -
>>
>> The universe is in a state of equilibrium where all integral forces
>> cancel out to zero. Even a small piece of metal has it own
>> gravitational center that acts in concert with with all mass
>> or swarms of energy that surrounds it. If the gravitational pull
>> of energy exceeds tne surrounding energies you get what is
>> known as a "black hole:. If the opposite comes about then an
>> explosion occures, the opposite to an implosion and parts separate
>> and join other gravitational centers to reform as a different
>> swarm of particles drawn to a different center of gravity.
>> All the masters were not mathematicians but all formed
>> their conclusions based on their observations of the Universe
>> i.e equilibrium. It was Maxwell who drew all the observations
>> and placed them ina mathematical form taking care with the
>> use of the "equal" sign to ensure when used it simulated
>> a state of equilibrium.- Hide quoted text -
>>
>> - Show quoted text -
>
> Addition to the above
>
> Maxwell collected all the obsevations by others and put a
> three dimensional picture (Cartesian 3 dimensional) starting
> at a particular observation and then built upon it like a
> jigsaw puzzle progressively including observations of others
> until
> the full picture emerged from a mass of pieces.
> As assemblers of jig saw puzzles know the intricacy
> of placing the parts in the correct order depends on
> the starting point and since the majority of observations
> were of dynamic form it was a dynamic point that Maxwell
> started from. However if Maxwell had started his
> composition from a "static" point ala Gausses observations
> he still would have achieved the final picture but by a
> different route of clues given. On the other hand a yagi picture
> is a two dimensional Cartesian picture where only the
> equilibrium between two points come under consideration
> tho Yagi came across it the back way where equilibrium was broken
> and the radiation became bi directional and manipulated by coupling
> to a common direction with the coupling moving energy fro a resonant
> structure to a non resonant structure to a non resonant structure
> with a lesser gravitational pull. Computor programs emulate this

> procedure
> by viewing each element as being resonant but at a different frequency
> and where the energy transition is completed in serial form
> with respect to time where as the Gaussian transition is completed
> near instantaneously and as a whole.
> If one were to place several elements in a cluster form saqy in the
> shape
> of a reversed letter 'C' it can be seen that on the application of a
> time varying current the particles residing on the surface will be
> propelled
> to on end or the other depending on the direction of the current,
> thus the emmision of particles will take place from two or more areas
> of the misshapenned Poyntings circle in the shape of two swarms
> of particles at places where there are irregularities of the closed
> surface.
> Of course the border openning are constantly closing and current
> direction
> changes in the pursuit of constantly changinging equilibrium.Thus some
> particles
> that have been propelled away from the element surface finds that its
> exit
> is closed off such that the gravitational pull of the element pulls
> the
> particle back where it meets a surface that is occupied by other
> particles
> leaving it no other place to go but beyond the surface towards the
> center
> where it decays
> Thus we see the escaping partincles emminating from at least two
> points
> on the poyntings circles not as a continuous wave but as two or more
> swarms of particles in the form of an energy wave in what is known
> as the near field. So when are particles 'matter' or when are they
> 'energy'?
> Another day another dollar.
> Art KB9MZ.....XG
>

another day, more meaningless bafflegab of strung together buzzwords. a
random phrase generator would make as much sense as what you have written.

2288. Re: Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 17:45:39 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-B656EC.09452624062007@netnews.worldnet.att.net>
Source record: 39596

In article <G4SdnVO50r99S-DbnZ2dnUVZ_sWdnZ2d@comcast.com>,
"NW_Pilot" <usenet@aircraft-nospam-delivery.net> wrote:

> What's the best wire for a wire and size antenna operating on 3413 8843 5574
> 13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.
>
>

As far as RF is concerened, wire is wire.... From a mechanical viewpoint,
anything that doesn't stretch more than 5% is ok. From a corrosion
viewpoint, here in the North Pacific we use Phospher/Bronze wire on
all our Marine and Coastal Antenna Systems. The stuff is "PreCorroded",
lasts dang near forever, and doesn't stretch more than 2%, over time.

Bruce in alaska your mileage may vary.......
--
add a <2> before @

2289. Should I use a balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 17:51:30 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <KNCdnUd9uYuXMuPbnZ2dnUVZ_qOpnZ2d@insightbb.com>
Source record: 39597

I recently put up an Alpha Delta model DX-LB Plus (160,80,40,20,10M - coax fed dipole) in an inverted V configuration. The center is up about 60 feet.

This antenna did not come with a balun. Would a 1:1 balun provide any 'PRACTICAL' improvement? (It seems to be getting-out just fine without a balun.)

Should I:
1 - Don't worry, be happy.
2 - Run right out and install one right now.
3 - Wait until the thing falls down, then put one on.
--
Bob D. ND9B

2290. Re: Calculation of received power in the far field

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 18:45:13 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1182710713.603738.224190@k79g2000hse.googlegroups.com>
Source record: 39598

On 24 jun, 16:36, "Richard Fry" <r...@adams.net> wrote:
> "Wimpie" wrote> A broadcast transmitter (100 MHz) with ERP = 10kW produces
> > about 30mV/m at 3 miles and h=5 ft.
>
> ____________
>
> Although you didn't define the height of the transmit antenna, just picking
> a height of 984 feet to be on the high side, and referring to the FCC's
> F(50,50) propagation curves shows that for 10 kW ERP a field of about 42
> mV/m will be generated at a radius of 3 miles and an elevation of 9 meters
> (29.5 feet) above the earth, assuming flat terrain.
>
> Field strength at lower elevations for these conditions varies about in an
> inverse relationship with height, so at 5 feet it would be 5/29.5, or 17% of
> 42 mV/m, which is about 7 mV/m.
>
> This is quite a bit different than your number, so I was curious as to your
> method.
>
> RF

Hi Richard,

I was a little bit lazy to look into the propagation curves and do the correction for terrain roughness. I live in the middle part of the Netherlands where the country is really flat. Therefore I just took the two-ray formula (and checked that the result is below free space propagation). Normally spoken when I do not have reliable propagation curves at hand, I use the two ray formula and add about 10..20 dB to the loss.

The calculation example was just to show how (the procedure) someone can calculate the received power from a non-resonant whip (that was the original question). When using the FCC 50% curves, the output would be even less (as your example showed).

In my previous posting I said:
"Using one of the above methods, will result in E is proportional to 1/r^3...to 1/r^4. This matches measurements I did myself. Therefore 1/r gives a far from realistic result (too optimistic)."

That had to be be:
"Using one of the above methods, will result in Preceived is proportional to 1/r^3...to 1/r^4. This matches measurements I did myself. Therefore 1/r^2 gives a far from realistic result (too optimistic)."

Best regards,

Wim
PA3DJS.
www.tetech.nl

2291. Re: hum in receiver from rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 19:20:27 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <f5mg5d$uq4$1@news.netins.net>
Source record: 39599

Yes, many years ago. I think your rotor control box has a 3 wire plug. Use a
3 wire to 2 wire adapter for the plug and the problem will go away.

There may be a more "high tech" solution, but this one is quick, if dirty.

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:rMjfi.266$Od7.111@newsread1.news.pas.earthlink.net...
> While not strickly antennas, this is a rotator problem.
>
> I have a Ham IV that when I turn on the brake the receive signal takes on
> a 60 or 120 hz hum . I though it might be the control box too close to my
> Icom 746 PRO. I have a switch box connecting two lowband wire antennas
> and a triband beam to the Icom. If I listen to a signal on the wire
> antennas I do not get the hum modulation on the incomming signal when I
> rotate the beam. Those coax wires are not near the rotator wires. This
> tends to eliminate the transfromer of the rotator box from getting into
> the Icom by magnetic coupling. If I switch to the beam , then turn the
> brake on the rotator box I will get hum modulation. The triband is fed
> with some Davis Bury flex (foil and braid shield coax) and the rotator
> wires are taped to the coax for a distnce of about 100 feet.
>
> The antenna does not have to ratate, just mashing the brake release button
> will make the signal hum modulate on receive.
>
> The Icom is being powered by an Astrom 50 amp supply and the rotator plugs
> into the 120 vac outlet.
>
> Has anyone else ran across this problem ?
>

2292. Re: Should I use a balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 19:22:58 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <f5mga4$v21$1@news.netins.net>
Source record: 39600

#3, if you're a purist, #1 if you have no RFI or other obvious problems.

#2 if you're obsessive compulsive, and won't be able to sleep nights.

"Bob D." <bobmgtd@insightbb.com> wrote in message
news:KNCdnUd9uYuXMuPbnZ2dnUVZ_qOpnZ2d@insightbb.com...
>I recently put up an Alpha Delta model DX-LB Plus (160,80,40,20,10M - coax
>fed dipole) in an inverted V configuration. The center is up about 60 feet.
>
> This antenna did not come with a balun. Would a 1:1 balun provide any
> 'PRACTICAL' improvement? (It seems to be getting-out just fine without a
> balun.)
>
> Should I:
> 1 - Don't worry, be happy.
> 2 - Run right out and install one right now.
> 3 - Wait until the thing falls down, then put one on.
> --
> Bob D. ND9B
>

2293. Re: Should I use a balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 20:02:35 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5milbguk1@nnrp.linuxfan.it>
Source record: 39601

Bob D. wrote:

> ... Would a 1:1 balun provide any
> 'PRACTICAL' improvement? (It seems to be getting-out just fine without a
> balun.)

Why not decide yourself--this one is simple enough, just grab a toroid:
http://assemblywizard.tekcities.com/180px-balun.jpg

JS

2294. Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 22:01:10 UTC
From: stats@fm95.com.gt
Message-ID: <1182722470.187180.45430@g4g2000hsf.googlegroups.com>
Source record: 39602

is possible to do this? can some one tell me how I can do it

2295. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-24 22:54:24 UTC
From: richardharrison@webtv.net
Message-ID: <1625-467EF620-347@storefull-3253.bay.webtv.net>
Source record: 39603

Art, KB9MZ......XG wrote:
"Thus we see the escaping particles emminating from at least two points in poyntings circles not as a continuous wave but as two or more swarms of particles in the form of an energy wave in what is known as the near field."

Despite Art`s disdain of radio amateurs, competent authors, and parrots, perhaps a mechanical engineer might be advised to consult "Radio-Electronic Transmission Fundamentals" by B. Whitfield Griffith, Jr., an electrical engineer from M.I.T., and a radio amateur, N5SU. He clearly explains how directional antennas work.

Art should also study "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing. It was written for non-electrical engineers.

On page 86 it says:
"An effective abntenna is always an electric circuit that does not satisfy the conditions for the near zone."

Best regards, Richard Harrison, KB5WZI

2296. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 00:49:33 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <xiEfi.42140$5j1.16247@newssvr21.news.prodigy.net>
Source record: 39604

art wrote:
> On 24 Jun, 15:54, richardharri...@webtv.net (Richard Harrison) wrote:
>> Art, KB9MZ......XG wrote:
>>
>> "Thus we see the escaping particles emminating from at least two points
>> in poyntings circles not as a continuous wave but as two or more swarms
>> of particles in the form of an energy wave in what is known as the near
>> field."
>>
>> Despite Art`s disdain of radio amateurs, competent authors, and parrots,
>> perhaps a mechanical engineer might be advised to consult
>> "Radio-Electronic Transmission Fundamentals" by B. Whitfield Griffith,
>> Jr., an electrical engineer from M.I.T., and a radio amateur, N5SU. He
>> clearly explains how directional antennas work.
>>
>> Art should also study "Transmission Lines, Antennas, and Wave Guides" by
>> King, Mimno, and Wing. It was written for non-electrical engineers.
>>
>> On page 86 it says:
>> "An effective abntenna is always an electric circuit that does not
>> satisfy the conditions for the near zone."
>>
>> Best regards, Richard Harrison, KB5WZI
>
> None of the above go into detail about the conservative and non
> concervative
> field transitions with respect to Gaussian law of Statics.
> I don't think anybody has a problem with respect to planar or two
> dimension
> radiation forms but with three dimensional forms as with a sphere
> radio amateurs
> cannot seem to come to grips with it. As I have stated before it is
> one thing
> to learn things and it is another thing to understand it and it is
> this
> that separates engineers from amatuers .
>
> Show me one resident of this newsgroup
> which includes you that is able to discuss conservative and
> non conservative fields, not one has come forward with corrective
> analysis and that includes you.
>
> Not one has discussed how a cluster of resonant
> elements can actualy radiate when only one feed point is applied.

>
> Not one has delved into why the mathematics of a non concervative
> field
> when a time varying current is applied provide the same results that
> Maxwell
> determined without the use of the expanded Gaussian law.
>
> Maxwell had many observations to play with which he condenses to four
> laws,
> that did not mean that the others were invalid but none provided a
> transition from static to dynamic thus there was nothing at hand for
> Maxwell to use for transition or the meshing with other observations.
> When I added a varying time metric to Gaussian law that transition
> became available
> Some people have learned the equations by Maxwell but it appears
> that few or none truly understand what Maxwell did to condense all to
> four basic laws. Using Gaussian law to duplicate the process that
> Maxwell initiated has not been done prior to my findings. Thus
> nothing is in the books and niether were all the clues provided
> by Gaussian law as evidence to formulate a Gaussian array.
> If one was to use a optimisation computor program to find
> the best array is it not surprising that even tho the program
> is based on Maxwell laws it gyrates towards an three dimension
> Gaussian array which follows the same trail as partially
> provided by Gauss?
> Because amateur minds cannot follow the inticracies of the
> formation of Maxwells laws does not invalidate anything and
> nothing provided by the naysayers such as you, have provided
> one iota of intelligence to validate or invalidate what
> I have provided.
> Why? because it is not printed in the books yet,
> so parrots such as you cannot verbalise what has not been written.
>
> And finally on top of all that provided above, a Doctor John E
> Davis
> from MIT came out of nowhere and provided mathematical documentation
> that agreed with what I was saying that connected with existing
> Maxwellian law.
> Richard, time is on my side, there are many experts out there who
> understand physics as well as going thru just the learning process you
> have gone thru. All the bad things said by you and others
> will go by the wayside for historians to study the phenomina
> of resistance to change and where new students have another
> avenue to study to unlock the secrets of nature.
> Regardless of what amateurs say all is not known about radiation
> and I look forward to the next step made in the quest of knowekedge.
> Art KB9MZ.....XG
>

Carl Friedrich Gauss (1777-1855) would certainly be surprised to see
his ideas used in this way. Art, if none of us swine can digest the
pearls you've cast before us, why do you continue to cast? You're using
the wrong side of your brain, Art. Maybe you _are_ a misunderstood
genius, but if you are, it's because you've lost the ability to
present your ideas in logical form. Anger and name calling are no
substitute for clarity and logic. Maybe you should get someone to help
you present your ideas using the same language the rest of us
use.
73,
Tom Donaly, KA6RUH

2297. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 01:08:54 UTC
From: nm5k@wt.net
Message-ID: <1182733734.159629.323420@g4g2000hsf.googlegroups.com>
Source record: 39605

On Jun 24, 6:02 pm, art <aun...@insightbb.com> wrote:

>
> Not one has delved into why the mathematics of a non concervative
> field
> when a time varying current is applied provide the same results that
> Maxwell
> determined without the use of the expanded Gaussian law.

I thought an idea had to be proven before you could call it a "law"...
I would think this would also apply if you were to pervert an existing
law, and call it an "expanded" law..
What steps have to taken to prove this idea? Any at all?
Myself, I see this as a straw grasp of immense proportions..
As I remember, this Dr. Davis came along for a while, but it seems
to me once he got a grip on what you were proposing, he ran away
like a teenager "wahooing" beer from a 7-11 store..
MK

2298. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 02:01:06 UTC
From: nm5k@wt.net
Message-ID: <1182736866.567714.199420@w5g2000hsg.googlegroups.com>
Source record: 39606

On Jun 23, 8:44 am, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...
>
> Well, it appears to me, the shortened 10 meter 1/2 is superior to a 1/4
> (both mounted mobile) and the shortened 1/2 is VERY close in performance
> to a full ~17 ft. (vs. ~5.3 ft. shortened--with the top hat and spacings
> optimized, the difference is less than the width of a meter needle.)

I assume you mean winding a 1/2 wave winding on a short stick.
I could see that maybe beating a 1/4 wave if the ground system was
not the greatest..
But I don't really see it happening over a good ground, where
the 1/4 wave isn't really stunted.
It's quite possible for for a 1/4 wave whip on a bumper, to
lose to a loaded whip half it's size, if mounted on the roof.
So on a car/truck, the location can make a big difference..
CB'ers have run those things for years under various names.
I can see cases with lousy grounds where a 1/2 wave, even
short might be worth a try. But I once did a comparion with my
standard "1/4 wave tuned" mobile on 15m, vs using my 40 meter
setup on 15m as a "extended winding" psuedo 5/8 wound whip.
The normal 1/4 wave setup was the best.

>
> This silly combination of know "tricks" is certainly doing something
> which common place formulas/equations don't account for ...

Ground, or lack of it could account for it. Same mount location, etc?
Bumper, trunk, or roof?
A mobile is not the best place to test vertical antennas.
Too quirky...The car is half the antenna.
Sure, you can see which one works best, but it's not a
very good test platform in general. I'd rather test over a
specified quantity of radials, if ground mounted.
Ditto for elevated, the only difference being the number
required drops as you increase height.
>
> However, if you already naysay on the navy data, I won't be able to
> present any proof which even comes close--my equipment budget doesn't
> even begin to match that of the navys' to begin with ...

I don't know what navy data you are talkng about.
>

> Too bad a bunch of different people don't use a standard test jig, apply
> their own modifications and generate a ton of data/results ...

I don't know what you mean by "test jig".. What you have as far as
a "test" antenna, or having a location with a specified ground
quality?
MK

2299. Re: Minimum photons-per-second [amplitude] required for 150 KHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 02:10:47 UTC
From: mzenier@eskimo.com
Message-ID: <f5ordv$q2s$1@eskinews.eskimo.com>
Source record: 39628
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

In article <1182485384.824372.184280@i13g2000prf.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:
>On Jun 20, 1:01 pm, mzen...@eskimo.com (Mark Zenier) wrote:
>> In article <1182285843.270321.23...@x35g2000prf.googlegroups.com>,
>>
>> Radium <gluceg...@gmail.com> wrote:
>> >On Jun 18, 11:05 am, mzen...@eskimo.com (Mark Zenier) wrote:
>>
>> >> 1. What is the energy of a photon at 150 kHz?
>>
>> >6.2 X 10^-10 eV
>>
>> You didn't answer the other questions. How much power does a good radio
>> need to get a listenable signal?
>>
>> Here's some numbers
>>
>> input impedance 50 ohms
>> Noise Figure 5 db
>> Bandwidth 6 kHz
>> signal to noise ratio 40 dB
>>
>> (This would be what some of the newsgroups listeners here would want if
>> they had one of their pretty damn good radios listening to a broadcast
>> station. Really picky ones would probably want a 8-15 kHz bandwidth
>> with a 60 dB s/N ratio).
>>
>> There are equations out there that will give you how much power
>> you need for this signal...
>
>I guess the dynamic range needs to be at least 140 dB [to match human
>ear's loudness perception] and bandwidth at least 40 KHz [to match
>human's pitch perception].
>
>I am not sure about the input impedance or noise figure.

We're not talking about human perceptions, we're talking about a
radio.

Anyway, how much power does a radio signal to need to be picked up?

To start with, there is electronics noise. This comes from temperature
of the circuit, and how wide the frequency response. The equation is
kTB, where k is Boltzmann's Constant, T it the absolute temperature

in Kelvin, and B is the bandwidth in Hertz. This is called the thermal
noise power.

Next, there's a fudge factor, called either the Noise Factor or the
same thing stated in decibels, the Noise Figure. It's determined by
the quality of the transistors (or other active amplifying element)
and the topology of the circuit. It specifies how much more noise is
added in the circuit. The best way to get it is to measure it.
(5db, about a factor of 3, would be for a pretty good shortwave radio).

Multiply thermal noise power by the noise factor, and you find the
"noise floor", or "minimum detectable signal" for a circuit.

But that doesn't do you much good, because all you can do with that is,
maybe, tell if there is a signal there, or perhaps not. So you need
more power in the signal to overcome the noise. For reasonable audio,
a factor of 10,000 for power is in the ball park. (This is usually
expressed as decibels, ie. 40 dB).

So here's a cut and paste from a unix program that does calulations with
stated dimensions, along with some comments.

```
>[mzenier@localhost mzenier]$ units --verbose
>1948 units, 71 prefixes, 28 functions
>
>You have: boltzmann * 290 kelvin * 6 kilohertz * 3 * 10000
```

Boltzmann's constant * room temperature * bandwidth * Noise Factor * 40 dB

```
>You want: watts
> boltzmann * 290 kelvin * 6 kilohertz * 3 * 10000
= 7.2069944e-13 watts
```

This is how much power is needed to receive the signal with a signal
to noise ratio of 40 dB in a shortwave radio.

```
>You have: 150 kilohertz h
```

frequency * Planck's Constant

```
>You want: joules
> 150 kilohertz h = 9.9391031e-29 joules
```

Energy per photon at 150 kHz

```
>You have: (boltzmann * 290 kelvin * 6 kilohertz * 3 * 10000)/(150 kilohertz h)
>You want: hertz
> (boltzmann * 290 kelvin * 6 kilohertz * 3 * 10000)/(150 kilohertz h)
> = 7.2511517e+15 hertz
```

Divide the power needed by the energy in each photon, and you get the
number of Photons per second at 150 kHz to give a 40 dB signal to noise
ratio in a pretty good quality receiver with a 6 kilohertz bandwidth.

7.2511517e+15 is a lot more than 20,000.

(And a good demonstration why they don't use the math for quantum physics
for radio frequency calculations.)

Mark Zenier mzenier@eskimo.com
Googleproofaddress(account:mzenier provider:eskimo domain:com)

2300. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 02:47:24 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <467f2cab$0$21253$39cecf19@news.twtelecom.net>
Source record: 39607

Tom Donaly wrote:
>
> Carl Friedrich Gauss (1777-1855) would certainly be surprised to see
> his ideas used in this way. Art, if none of us swine can digest the
> pearls you've cast before us, why do you continue to cast? You're using
> the wrong side of your brain, Art. Maybe you _are_ a misunderstood
> genius, but if you are, it's because you've lost the ability to
> present your ideas in logical form. Anger and name calling are no
> substitute for clarity and logic. Maybe you should get someone to help
> you present your ideas using the same language the rest of us
> use.
> 73,
> Tom Donaly, KA6RUH

Tom

All I am asking of Art, and I've asked before, is that he give us the dimensions of one of his wonder antennas. If he gives us one of the simpler ones, he has given little away, but will allow us to confirm his claims. Since we, as a group of stupid EEs, can't possibly figure out how to duplicate his method of making another better one, he has nothing to lose.

Hopefully one of you will respond to his response to this as I plonked the idiot months ago. I love to see his nonsensical responses.

tom
K0TAR

2301. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 02:51:18 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5najmffm1@nnrp.linuxfan.it>
Source record: 39608

nm5k@wt.net wrote:

> ...

The damn thing is nothing short of amazing. The best I have done before this was a 1/2 wave electrical length, helical wound to a 1/4 physical length using a modified gamma feed of my own design--this beats it.

I am just disappointed that the patent system allows a rearrangement of already and quite commonly known/implemented designs/methods/practices to be patented; as far as I am concerned, all this should be considered to be in the public domain ... but, this will little affect amateurs, the antenna itself is just too easy to construct--I am working on a dual band 20/10m version now.

Also, I am now playing with an electrical 1/4 wave in a 2'+ physical implementation ...

I have already presented enough details of the 1/2 wave version that anyone can repeat my experiment(s) ... I do not wish to keep doing that ... I get nothing out of it, others need to make mistakes, have success, or just try their wildest imagination upon this project--this way we all learn.

Frankly, I think the high performance standard of mobile antennas has just changed when small size and stealth are of importance ...

Regards,
JS

2302. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 02:57:05 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5nauhffm2@nnrp.linuxfan.it>
Source record: 39609

John Smith I wrote:

> ...

Anyway, in a relatively short period of time I should have expended all
my energy and ideas and know this antenna inside out--probably just a
couple of months or so ...

This time I am chucking all "laws" and just experimenting, I will
especially be trying things which "don't work!, and run contrary to
"accepted practices."

Regards,
JS

2303. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 03:00:22 UTC
From: nm5k@wt.net
Message-ID: <1182740422.894770.43090@w5g2000hsg.googlegroups.com>
Source record: 39610

On Jun 24, 8:01 pm, art <aun...@insightbb.com> wrote:

>
> No that is not true. After trying several times to educate the group
> and getting responses such as yours he decided to move on as
> other experts have done in the past. They are trying to help with the
> amateur radio antenna group but realised quite quickly it was
> mainly composed of the non antenna type people. They don't need
> the sort of things that are stated they move on. He has a Doctorate
> and thus he is qualified for some respect

http://groups.google.com/group/rec.radio.amateur.antenna/browse_frm/thread/bc88f9b67cf0c88f/86fbdc00f7e7cbcd?lnk=gst&q=John+E+davis&rnum=2#86fbdc00f7e7cbcd

I had to refresh myself on the reasons of his departure..He never
really proved anything.. In fact, at
the end, Richard Clark seemed to be making a pretty good case that he
was misreading, or
misinterpreting the data.. But he never came back to respond to the
last posts.
The way I see it, it never really was agreed on one way or the other.
I'm fairly sure he
failed to convince a few on here. Seems to me, with his vast storages
of knowledge,
having a doctorate, papers on wall, etc, that he should have been
able to settle things
real quick just by shear brute force of reasoning. Didn't seem to work
that way.
But all this is really moot. It doesn't matter. Even if he was
correct, I'm still
fairly certain that the antennas you are cooking up don't rely on such
exotic
"gaussian" methods to function. Thats assuming you believe in such a
thing..
MK

2304. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 03:07:17 UTC
From: nm5k@wt.net
Message-ID: <1182740837.757714.266230@q69g2000hsb.googlegroups.com>
Source record: 39611

On Jun 24, 8:51 pm, John Smith I <assemblywiz...@gmail.com> wrote:

>
> Frankly, I think the high performance standard of mobile antennas has
> just changed when small size and stealth are of importance ...

Sorry if I don't hold my breath waiting for this miracle to
happen.. :/

MK

2305. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 03:53:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ne8o$p17$1@nnrp.linuxfan.it>
Source record: 39612

art wrote:

> ...
> I don't see it that way. He tried something that all denied would
> work.
> ...

Art:

Your view is certainly arguable ... it is difficult to take up a
defense-able stand on either side of the worth of this patent--in my
humble opinion ... however, I have no horse in the race.

Regards,
JS

2306. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 03:57:32 UTC
From: richardharrison@webtv.net
Message-ID: <14245-467F3D2C-376@storefull-3251.bay.webtv.net>
Source record: 39613

Stats wrote:
"Is it possible to do this?"
Yes. Emitter, source, or cathode followers may be used, one for each tuner to isolate the tuners from each other.

All the the bases, gates or grids can be fed from the same antennna signal. Individual isolated signals are available at the emitters, sources, or cathodes for the tuners.

Radio Shack or some similar supplier likely has a device such as this with one input and multiple outputs available off the shelf that works in the VHF TV and FM broadcast bands. Unlike the followers, it may give you 10 dB or 20 dB gain on each output.

Best regards, Richard Harrison, KB5WZI

2307. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 05:20:46 UTC
From: nm5k@wt.net
Message-ID: <1182748846.509254.17760@g4g2000hsf.googlegroups.com>
Source record: 39614

On Jun 24, 9:51 pm, art <aun...@insightbb.com> wrote:
Majority of whiny "woe is the U.S." drivel deleted...

> I suppose the question has to be asked, is this group representitive
> of an America that we want to see in our grandchildrens future or
> does arrogance have a down side of a World wide nature?
> Art

If you spent 2 percent of the time actually providing facts about your
antennas, as you do all this whiny "woe is Art drivel", you would
not have near the problem you do.

As an example, Tom Ring said:

****Tom

All I am asking of Art, and I've asked before, is that he give us the
dimensions of one of his wonder antennas. If he gives us one of the
simpler ones, he has given little away, but will allow us to confirm
his
claims. Since we, as a group of stupid EEs, can't possibly figure out
how to duplicate his method of making another better one, he has
nothing
to lose. *****

Do you try to provide any of this info, which would be required to
make any kind of decent analysis of the antenna?
No, You are sitting here wasting your time with me, acting basically
like a whiner. It's kinda of sickening to me... I'm a redneck.
Rednecks generally find whiners to be kind of disgusting...
I think what it boils down to, is you want patent "Validation" via
usenet.. LOL... Kind reminds me of that Edwards guy that says
he talks to dead people... He's just a slick cold reader..
I also hear he probably bugs the waiting rooms, etc.
Maybe you should try his show for better results..
I know for myself, I still don't have any clue what this antenna
really
looks like, how it's fed, etc.. One day you say all the elements
are fed in "equilibrium", which most rational people would probably
assume all are fed in phase as a driven array. But then you change
your mind and say only one element is actually fed.
So being no one can tell how it's fed, we can only assume it's a
close spaced yagi with unoptimum element lengths, or a driven
array. Most of us don't buy all the voodoo science mumbo jumbo..
But you can't even enlighten anyone to how it's actually fed.
You would rather waste time writing line, after line, after line,

after line, after line, after line, of whiny "woe is Art" drivel.
Yuri had it right. You should call it the "Geussian" antenna.
I've only said this about 29 times, but why don't you just
ignore everyone and build the freaking thing and see if it
works for yourself. It's obvious not many others seem to care
one way or the other. But I don't think you can even get around to
that because you are too busy whining all the time. Unbelievable...
I'm not going to bother you anymore about it. I think it's hopeless.
I'll just continue to chuckle along in the background. You are
better than the comedy channel any day of the week.
MK

2308. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 07:15:01 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <COp7RpC1t2fGFwbV@g3ohx.demon.co.uk>
Source record: 39615

In message <14245-467F3D2C-376@storefull-3251.bay.webtv.net>, Richard Harrison <richardharrison@webtv.net> writes
>Stats wrote:
>"Is it possible to do this?"
>Yes. Emitter, source, or cathode followers may be used, one for each
>tuner to isolate the tuners from each other.
>
>All the the bases, gates or grids can be fed from the same antennna
>signal. Individual isolated signals are available at the emitters,
>sources, or cathodes for the tuners.
Surely a bit too complicated? The simplest way is to use a passive multi-way CATV splitter. With a 2-way you lose 3.5dB, 4-way 7dB, 8-way 10.5dB. If necessary, precede with a preamp. The isolation performance will be more than adequate for your purpose.

>Radio Shack or some similar supplier likely has a device such as this
>with one input and multiple outputs available off the shelf that works
>in the VHF TV and FM broadcast bands. Unlike the followers, it may give
>you 10 dB or 20 dB gain on each output.
As I describe, a preamp plus splitter. I don't know what Radio Shack stock, but in the UK, you can buy 40 to 860 MHz wideband units at several DIY stores. Gains per output range from 0 to around 10dB. Outputs 2 to 6. The internal splitting may simply use resistors (and not use the low-loss ferrites used in CATV splitters), but they work fine. Some have separate diplexed inputs for TV and FM. Cost $30 to $50.

Ian.
--

2309. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 08:24:03 UTC
From: gsm@mendelson.com
Message-ID: <slrnf7uurs.32n.gsm@cable.mendelson.com>
Source record: 39616

Ian Jackson wrote:
> As I describe, a preamp plus splitter. I don't know what Radio Shack
> stock, but in the UK, you can buy 40 to 860 MHz wideband units at
> several DIY stores. Gains per output range from 0 to around 10dB.
> Outputs 2 to 6. The internal splitting may simply use resistors (and not
> use the low-loss ferrites used in CATV splitters), but they work fine.
> Some have separate diplexed inputs for TV and FM. Cost $30 to $50.

It may be more difficult than you think. The U.K. TV system went to
UHF only a long time ago. Amplifiers for TV antennas may be designed
to filter out VHF signals to prevent interference. Ones designed
for splitting cable TV would be wideband. It pays to ask.

I tried to look up Radio Shack's web site in the U.K. (or Tandy's),
but could not find it.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

2310. Pictures of your antennas in the Antennas in the World directory

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 09:01:42 UTC
From: oli <oli004@wanadoo.fr>
Message-ID: <467f8479$0$5095$ba4acef3@news.orange.fr>
Source record: 39617

Good morning to all,

If you have pictures of your antennas, I suggest to subscibe your web pages

in the "Antennas in the Wolrd" directory at the following adress :

http://www.antenna-street.com/antennas/

This is a free database where you could find some links about antennas.

From customers or simple person who use or build antennas on different frequencies.

This directory is absolutly open to all people who would like to share his experience.

Thanks

Oli

2311. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 10:38:06 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <swHQ+WEOs5fGFwMV@g3ohx.demon.co.uk>
Source record: 39618

In message <slrnf7uurs.32n.gsm@cable.mendelson.com>, Geoffrey S.
Mendelson <gsm@mendelson.com> writes
>Ian Jackson wrote:
>> As I describe, a preamp plus splitter. I don't know what Radio Shack
>> stock, but in the UK, you can buy 40 to 860 MHz wideband units at
>> several DIY stores. Gains per output range from 0 to around 10dB.
>> Outputs 2 to 6. The internal splitting may simply use resistors (and not
>> use the low-loss ferrites used in CATV splitters), but they work fine.
>> Some have separate diplexed inputs for TV and FM. Cost $30 to $50.
>
>It may be more difficult than you think. The U.K. TV system went to
>UHF only a long time ago. Amplifiers for TV antennas may be designed
>to filter out VHF signals to prevent interference. Ones designed
>for splitting cable TV would be wideband. It pays to ask.
>
>I tried to look up Radio Shack's web site in the U.K. (or Tandy's),
>but could not find it.
>
The OP appears to be in Guatemala, so I don't know what will be readily
available from local DIY and electrical stores. However, a search on
"radio shack"+FM+TV+amplifier
brings up lots of websites. These show examples of the type of equipment
which should be suitable.

The following site shows amplifiers and splitters which should be
suitable:
http://www.dennysantennaservice.com/1237607.html

Something like Radio Shack Catalog # 15-2506 should be OK. It does not
say it covers the FM band, but I expect that it does.
http://www.radioshack.com/product/index.jsp?productId=2103093&cp=&pg=2&sr=1&origkw=distrib
ution&kw=distribution&parentPage=search

Or there are these:
http://www.radioshack.com/search/index.jsp?kwCatId=&kw=fm%20splitter&origkw=FM%20splitter&
sr=1

Here is a list of RS model numbers (you may have to re-flow this link):
http://72.30.186.56/search/cache?p=%22radio+shack%22%2BFM%2BTV%2B%22distribution+amplifier
%22&prssweb=Search&ei=UTF-8&fr=yfp-t-
501&x=wrt&meta=vc%3D&u=support.radioshack.com/productinfo/productresults.asp%3Fname%3Dvide
o_accessories%26id%3D006001002&w=%
22radio+shack%22+fm+tv+%22distribution+amplifier%22&d=HymMAurnO7JO&icp=1&.intl=uk

Ian.
--

2312. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 11:24:08 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <467fa5e8$0$8948$4c368faf@roadrunner.com>
Source record: 39619

<nm5k@wt.net> wrote in message > I think what it boils down to, is you want patent "Validation" via
> usenet.. LOL...

Worse than that, he wants SELF validation via usenet.

Jimmie

2313. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 11:25:40 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <467fa632$0$4699$4c368faf@roadrunner.com>
Source record: 39620

<stats@fm95.com.gt> wrote in message
news:1182722470.187180.45430@g4g2000hsf.googlegroups.com...
> is possible to do this? can some one tell me how I can do it
>

TV distribution amp

2314. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 11:41:59 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182771719.966410.277520@k79g2000hse.googlegroups.com>
Source record: 39621

>
> Try one; prove me wrong; I dare ya!
>
> Regards,
> JS

I don't see where the "inventor" of the DLM style antenna has violated any laws of physics... He has simply found the sweet spot of mixed C & L and short straight radiating sections along a shortened antenna to pull it into resonance while maintaining a a flatter SWR curve... With the helical lower section <if that is how it is actually functioning> also acting as an auto transformer he simplifies the matching of the feed point to coax...
Sevick proved that shortened antennas can work well...
If you look at the Fisher Island data for the DLM it shows that the gain of the antenna improves considerably with top loading - a finding we would definitely expect in a shortened monopole... Authors from Sevick, to Cebik, to W8JK, to W8JI, have championed the benefits of top hats for short antennas...

BTW, we have the oposite end of the spectrum in the distributed capacity antenna with multiple caps along the length to redistribute current peaks... So using capacitive reactance to redistribute current along the antenna is well known and documented...

All in all, it sounds like a fun antenna, John... The guys really ought to be looking at this as a method of trimming 160 and 80 verticals to a more manageable size while retaining some bandwidth and having easy matching... If I didn't already have full size antenna arrays for these bands I would be out there building one to see how it performs...

I would hope that all those posting on the topic have read all the URL's provided - and also noted the point that the antenna benefits from being elevated and having elevated radials to work against , even whilst mounted over the excellent ground plane of the Navy's test range - a major piece of information......

denny / k8do

2315. Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 12:14:25 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <8ZednfVW9IOvLOLbnZ2dnUVZ_tOmnZ2d@comcast.com>
Source record: 39622

Hi,

Real newbie regarding antenna theory, but am trying to learn.
Have ordered the ARRL antenna book.

a. In my attic, right next to each other, I have a Scantenna and a Discone antenna.
Both have the same coax run to my study downstairs. Don't remember the type of coax, but it's the large diameter, "low loss" type for both.

The Scantenna feeds a new Uniden BCD996 Scanner.
The Discone feeds my JRC NRD 545 (with the VHF converter board).

When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away (way beyond my line of sight, but they probably have a high tower) the 545 with the Disconne is vastly superior.

Of course the 545 is a much, much better radio than the the Uniden, but I assumed that for this type of listening configuration, reception would be mainly limited by the antenna ?

I also thought that the Discone would be most effective for aero., and very minimally effective for more or less horizontal signal paths like from the Coast Guard Tower to me.

Any thoughts on this, and on Discones (for "horiz." propagated signals) in general ?

b. Never thought about this before, but have started wondering.
Might be a good question for all you experts out there.

Live in a typical New England Colonial with a plastic Louvre in the attic on each gable end that are screened to keep the bugs out.
Screens are metal.

As mentioned, in the attic I have two VHF antennas, the Scantenna and a Discone.
(do listening only)

Was wondering if the metal screens might have any effect on what I can pick up in the more or less horizontal directions ?
e.g., P.D.'s from our or a neighboring town, and the Coast Guard station.

Probably have no effect for aero comm listening as these received signals are pretty much from a vertical, or near vertical direction.

Should I go to the trouble of replacing them with plastic screens ?

Distance from antennas to the screens is probably about 20 feet or so. This subtends a relatively small angle, but not that small. Haven't measured the screen, but assume about the size of a typical house bedroom window.

Any thoughts on this ?

As always, thanks,
Bob

2316. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 13:11:28 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5oeuggah1@nnrp.linuxfan.it>
Source record: 39623

Denny wrote:

> ...
> All in all, it sounds like a fun antenna, John... The guys really
> ought to be looking at this as a method of trimming 160 and 80
> ...
> denny / k8do
>

Denny:

I already like 'ya more than I did yesterday; This is why we got into amateur radio, isn't it?; How come so many seem to have forgotten?

Warm regards,
JS

2317. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 13:50:14 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <uPmdnXHwG_-NVeLbnZ2dnUVZ_gSdnZ2d@comcast.com>
Source record: 39624

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:467fa632$0$4699$4c368faf@roadrunner.com...
>
> <stats@fm95.com.gt> wrote in message
> news:1182722470.187180.45430@g4g2000hsf.googlegroups.com...
>> is possible to do this? can some one tell me how I can do it
>>
>
> TV distribution amp
>
Just be sure it does not have an FM rejection filter. Also DO NOT use a CATV
amplifier. They are not meant to be used with microvolt level signals like
you get off an antenna. I tried it with a TV antenna, and it made it worse.

Tam

2318. Re: Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 14:38:49 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <VYCdnUmcibrxTuLbnZ2dnUVZ8q-rnZ2d@bt.com>
Source record: 39625

"Robert11" <rgsros@notme.com> wrote in message
news:8ZednfVW9IOvLOLbnZ2dnUVZ_tOmnZ2d@comcast.com...
> Hi,
>
> Real newbie regarding antenna theory, but am trying to learn.
> Have ordered the ARRL antenna book.
>
> a. In my attic, right next to each other, I have a Scantenna and a
Discone
> antenna.
> Both have the same coax run to my study downstairs. Don't remember the
type
> of coax, but it's the large diameter, "low loss" type for both.
>
> The Scantenna feeds a new Uniden BCD996 Scanner.
> The Discone feeds my JRC NRD 545 (with the VHF converter board).
>
> When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away
> (way beyond my line of sight, but they probably have a high tower) the 545
> with the Disconne is vastly superior.
>
> Of course the 545 is a much, much better radio than the the Uniden, but I
> assumed that for this type of listening configuration, reception would be
> mainly limited by the antenna ?
>
> I also thought that the Discone would be most effective for aero., and
very
> minimally effective for more or less horizontal signal paths like from the
> Coast Guard Tower to me.
>
> Any thoughts on this, and on Discones (for "horiz." propagated signals) in
> general ?
>
> b. Never thought about this before, but have started wondering.
> Might be a good question for all you experts out there.
>
> Live in a typical New England Colonial with a plastic Louvre in the attic
on
> each gable end that are screened to keep the bugs out.
> Screens are metal.
>
> As mentioned, in the attic I have two VHF antennas, the Scantenna and a
> Discone.
> (do listening only)

>
> Was wondering if the metal screens might have any effect on what I can
pick
> up in the more or less horizontal directions ?
> e.g., P.D.'s from our or a neighboring town, and the Coast Guard station.
>
> Probably have no effect for aero comm listening as these received signals
> are pretty much from a vertical, or near vertical direction.
>
> Should I go to the trouble of replacing them with plastic screens ?
>
> Distance from antennas to the screens is probably about 20 feet or so.
> This subtends a relatively small angle, but not that small. Haven't
> measured the screen, but assume about the size of a typical house bedroom
> window.
>
> Any thoughts on this ?
>
> As always, thanks,
> Bob

Bob

I have always found the discone to be a very useful performer in horizontal directions, limited only by the fact that it also picks up interference equally well in all directions. In my experience, pickup from signals in a vertical or near vertical direction is not as good as the horizontal performance, but this is overcome to some extent by the source of these transmissions being generally closer (unless you are trying to listen to the ISS or Amsats).

Roofing material over the attic is probably attenuating signals just as much as the mesh screens at the gable ends. Unless the mesh is connected to an earth point in some way, it is not likely to cause too much reduction in signal strength. The signal can be considered as being absorbed and reradiated at a slightly lower level if there is no low impedence path to earth.

Moving the discone antenna out of the attic and on top of the roof will raise the height of the antenna and improve performance generally. Alternatively, move the Scantenna outside and it will probably then match the performance of the discone in the attic.

Too much gain in the antenna system will probably result in degrading the performance of the Uniden. Strong relatively nearby signals will overload the filtering and cause intermodulation interference blocking out the signals you are trying to receive. Paging transmitters are notorious for causing this type of problem in the UK when listening around aviation frequencies and 2m amateur bands.

Directional antennas such as yagis and log periodic antennas are the most frequently used solution when high gain and directivity are required but

have the added complication of requiring rotators to aim the antennas.

Regards

Mike G0ULI

2319. Re: Multiple FM tuners to only one antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 16:06:54 UTC
From: stats@fm95.com.gt
Message-ID: <1182787614.840970.113760@w5g2000hsg.googlegroups.com>
Source record: 39626

On Jun 24, 3:01 pm, s...@fm95.com.gt wrote:
> is possible to do this? can some one tell me how I can do it

TKS a lot to everyone ill choose the splitter solution and it works
really great... TKS again and have a lot of Fun

2320. Re: Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 16:36:14 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <2aSfi.62502$xq1.58156@pd7urf1no>
Source record: 39627

Robert11 wrote:
> Hi,
>
> Real newbie regarding antenna theory, but am trying to learn.
> Have ordered the ARRL antenna book.
>
> a. In my attic, right next to each other, I have a Scantenna and a Discone
> antenna.
> Both have the same coax run to my study downstairs. Don't remember the type
> of coax, but it's the large diameter, "low loss" type for both.
>
> The Scantenna feeds a new Uniden BCD996 Scanner.
> The Discone feeds my JRC NRD 545 (with the VHF converter board).
>
> When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away
> (way beyond my line of sight, but they probably have a high tower) the 545
> with the Disconne is vastly superior.

>
What happens when you connect the 996 to the Discone and vice
versa?

Irv VE6BP

2321. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:12:46 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ot2vkgt1@nnrp.linuxfan.it>
Source record: 39629

John Smith I wrote:

> ...

A DLM by unknown builder: http://assemblywizard.tekcities.com/dlm.jpg

JS

2322. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:30:52 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <467ffbcd$0$30608$4c368faf@roadrunner.com>
Source record: 39630

"Denny" <k8do@mailblocks.com> wrote in message
news:1182771719.966410.277520@k79g2000hse.googlegroups.com...
>
>>
>> Try one; prove me wrong; I dare ya!
>>
>> Regards,
>> JS
>
>
>
> I don't see where the "inventor" of the DLM style antenna has violated
> any laws of physics... He has simply found the sweet spot of mixed C &
> L and short straight radiating sections along a shortened antenna to
> pull it into resonance while maintaining a a flatter SWR curve...
> With the helical lower section <if that is how it is actually
> functioning> also acting as an auto transformer he simplifies the
> matching of the feed point to coax...
> Sevick proved that shortened antennas can work well...
> If you look at the Fisher Island data for the DLM it shows that the
> gain of the antenna improves considerably with top loading - a finding
> we would definitely expect in a shortened monopole... Authors from
> Sevick, to Cebik, to W8JK, to W8JI, have championed the benefits of
> top hats for short antennas...
>
> BTW, we have the oposite end of the spectrum in the distributed
> capacity antenna with multiple caps along the length to redistribute
> current peaks... So using capacitive reactance to redistribute
> current along the antenna is well known and documented...
>
> All in all, it sounds like a fun antenna, John... The guys really
> ought to be looking at this as a method of trimming 160 and 80
> verticals to a more manageable size while retaining some bandwidth and
> having easy matching... If I didn't already have full size antenna
> arrays for these bands I would be out there building one to see how it
> performs...
>
> I would hope that all those posting on the topic have read all the
> URL's provided - and also noted the point that the antenna benefits
> from being elevated and having elevated radials to work against , even
> whilst mounted over the excellent ground plane of the Navy's test
> range - a major piece of information......
>
> denny / k8do

>

I agree, this is just nothing new. As you say Jerry Sevick has already been thier and done that. Jery already has established that making a short antenna is no big deal as long as you have a good ground system and a low loss matching network How well Vincents antenna performed has more to do the the excellent ground system used in the test than anything special about the antenna..

Jimie

2323. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:32:24 UTC
From: nm5k@wt.net
Message-ID: <1182792744.606773.249530@c77g2000hse.googlegroups.com>
Source record: 39531

On Jun 25, 11:12 am, John Smith I <assemblywiz...@gmail.com> wrote:
> John Smith I wrote:
>
> > ...
>
> A DLM by unknown builder:http://assemblywizard.tekcities.com/dlm.jpg
>
> JS

Exactly like the mobile antennas I use to run.. In fact, still have
one
of them in that basic config..
I didn't use the "metal mast" that runs along the glass part above the
coil.
I used the wire from the glass whip itself. The original antenna was a
5 ft
glass CB antenna. In it's reworked condition, it's 10 ft long, if I
use the
5 ft stinger. But on the higher bands, the coil is totally bypassed,
and the tuning is done by changing stinger length.
It works all bands 80-10.
But my new improved version does not use any helical windings on
the glass whip. I stripped them all off, and only use a large lumped
coil at the top of the glass whip. My present version was built from a
6 ft 20m hamstick which I butchered up. It's total height is 11 ft,
and
it also works all bands. It's the better antenna of the two.
BTW, I also have a 3 ft hustler mast which I can add to the base
of either one of those. Lengthens the mast 3 more feet under
the coil, and makes a large increase in efficiency. I use it when
parked.
MK

2324. Re: Guy from university physics ... Eureka! A picture!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:33:20 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ou9g$n56$1@nnrp.linuxfan.it>
Source record: 39532

Jimmie D wrote:

> ...
> I agree, this is just nothing new. As you say Jerry Sevick has already been
> thier and done that. Jery already has established that making a short
> antenna is no big deal as long as you have a good ground system and a low
> loss matching network How well Vincents antenna performed has more to do the
> the excellent ground system used in the test than anything special about the
> antenna..
> Jimie

You must realize that you are either severely mentally disabled, of a
liar of monumental effort!

If not, don't worry, the rest of us do ...

JS

2325. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:48:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1182793695.968784.80980@a26g2000pre.googlegroups.com>
Source record: 39533

Cecil Moore wrote:

> Maybe, but after four years it is hard to remember exactly what
> transpired. The glaring question is why are you still obsessing and
> harrassing me about an error I corrected in your favor 3+ years ago?
> When are you going to let that ancient history go and move on?

Ancient history seems to be something you like to revisit with
regularity. Problem is Cecil, you feel you can rewrite it in any way
that best suits your purpose.

Try as you might to play the part of a victim, Cecil, it just doesn't
suit you.

73, ac6xg

2326. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 17:51:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <louv73tnnph238q5tteal22hgrqkcdqfm2@4ax.com>
Source record: 39534

On Sun, 24 Jun 2007 20:00:22 -0700, nm5k@wt.net wrote:
>On Jun 24, 8:01 pm, art <aun...@insightbb.com> wrote:
>>He has a Doctorate
>> and thus he is qualified for some respect
>I had to refresh myself on the reasons of his departure..He never
>really proved anything.. In fact, at
>the end, Richard Clark seemed to be making a pretty good case that he
>was misreading, or
>misinterpreting the data.. But he never came back to respond to the
>last posts.

Hi Mark,

This appeal to the missing authority is a common one used to prop up lame arguments. However, what is/was in dispute was simply the terminology of "Gauss' Law" as distinct from what Gauss himself originated in his own math. The "Law" being used to prove a concept was, in fact, Maxwell's extension of the statics to the time domain.

Now, this is something that Arthur has crowed as being his own mental turf as his newly discovered concept from what was written in the dust on the bookshelf holding Gauss' original work. Arthur has cobbled up a theory of static energy transmission by his "original" patchwork of Xeroxed sources.

Of course, we all recognize the outlines of this "theory" as being Maxwell's contribution, but Arthur says no, it is original to Arthur alone and all the text books through the centuries have missed this key concept he has derived to educate us all to usher in a new era of antennas. Unfortunately Arthur is condemned to tools using Maxwell's equations (not Gauss) to prove this by producing inferior examples.

Dr. Davis waded into this morass to support Arthur with this "Gauss' Law" and even went so far as to quote Feynman who also used the term. However, Feynman (from the same source quoted by Dr. D) fully acknowledges Maxwell's extension of Gauss while maintaining the term "Gauss' Law."

This is quite common in science. In the field of Nanotechnology, resistance is non-linear. With an increasing potential, current flows in increasing discrete step-like increments (think quanta). Researchers describe this with their own math and call their extension "Ohm's Law," but rest assured, Georg Simon Ohm never EVER considered this possibility in a linear media.

As with the relation between Newton and Einstein, Newtonian mechanics is now considered to be a first approximation with recent science being more complete. Such is the correlation between Ohm then and now. Neither Newton nor Ohm has been disproven, nor are they incorrect,

What is called "Gauss' Law" or "Ohm's Law" is neither in the late era. They are merely acknowledgements of concepts that have been extended and amplified through refinement. As such, nothing has supplanted the earlier efforts, merely embroidered them for those who get close to the edges. Unfortunately, this does not describe Arthur's reactionary and very conservative embrace of dogma. Changing labels on the bottles does not improve their vintage.

73's
Richard Clark, KB7QHC

2327. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 18:16:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <iETfi.35545$Um6.15409@newssvr12.news.prodigy.net>
Source record: 39535

Jim Kelley wrote:
> Try as you might to play the part of a victim, Cecil, it just doesn't
> suit you.

Two months from now when you yet once again accuse me of
supporting the concept of "power flow", what do you suggest
I call you instead of a "liar"?
--
73, Cecil http://www.w5dxp.com

2328. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 18:36:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5p20b$o09$1@nnrp.linuxfan.it>
Source record: 39536

nm5k@wt.net wrote:

> ...

Huh!

And, you didn't even realize the rest of us were only getting about 50% efficiency of a full size antenna, out of our shortened? (vs. the 98% Vincents seems to be!)

Too bad, you could have shared back with us then and looked like a superstar--instead of a fibber!

Oh well, I am sure you will be "right on it" next time ...

JS

2329. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 19:07:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5p3q6$f9c$1@news.service.uci.edu>
Source record: 39537

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> Try as you might to play the part of a victim, Cecil, it just doesn't
>> suit you.
>
>
> Two months from now when you yet once again accuse me of
> supporting the concept of "power flow", what do you suggest
> I call you instead of a "liar"?

You may recall Cecil, that you started this when you accused me of saying something that I never said. My suggestion to you still remains that in order to avoid these kinds of disputes in the future, please provide direct quotes. That way neither of us will be calling the other a liar. Fair enough Mr. Victim?

73, ac6xg

2330. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 19:24:37 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f5p4pl$7hb$2@nntp1.jpl.nasa.gov>
Source record: 39539

Karl NVW wrote:
> eganders wrote:
>
>> I am a consultant for an AVL (automatic vehicle location system)
>> system used by the Southeastern counties of Michigan. The system is
>> used on winter maintenance vehicles and works on 900 MHz. The
>> vehicles are often stored overnight in metal buildings where it is
>> difficult to obtain transceiver communication from the AVL system. Is
>> there a low cost (possibly passive) way to port 900 MHz radio
>> transmissions into these buildings?
>>
>> Thanks,
>>
>> Eric Anderson
>>
> One would expect a person who is acting professionally as an RF
> consultant to already have significant knowledge in this area. I
> realize this is a government job, but I wouldn't hire a day laborer to
> act as a master carpenter or project manager. Please don't bill the
> transit property for your time spent here trying to learn things in a
> subject are which you're supposed to already have mastered.

Our man Eric might not be a RF consultant, eh? Perhaps he's a software guy, or a system integrator, or looking for general ideas before leaping out and hiring an RF consultant?

2331. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 19:36:56 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5p5h8$4as$1@nnrp.linuxfan.it>
Source record: 39538

Cecil Moore wrote:
> ...

Is the following post "near" to what you seek? And, if so, this URL
will get you close:
http://www.radiobanter.com/showthread.php?t=73853&page=11

July 20th 05, 07:22 PM
Jim Kelley

Posts: n/a
Default

Cecil Moore wrote:

For engineers, the direction of the arrow for the Power
Flow Vector in joules/sec is generally accepted to be the
same as the direction of the joules.

I am an engineer, Cecil. I just happen to work in the field of physics.
I could be wrong, but I don't think a Bird wattmeter measures or
displays Power Flow Vector.

From the IEEE Dictionary: "power-flow vector - Vector-
characterizing energy propagation caused by a wave and
giving magnitude and direction of power per unit-area
propagating in the wave."

Please note the "*DIRECTION OF POWER* ... *PROPAGATING*
in the wave", a direct contradiction to your above assertion.

The power measured at the source somehow finds its way to the
load in spite of not having any direction (according to you. :-)

Well, it's true for me and probably for most other people who have a
grasp of the subject. It's actually energy which does the moving.
Power is just the rate at which energy finds its way there.

It's like this. Let's say you're riding your Harley through town at 50
MPH and somebody pulls out of a side street right in front of you. Does
the speed of your motorcycle collide with the car, or does your
motorcycle collide with it?

73, ac6xg

JS

2332. 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 20:10:50 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ejVfi.3254$bj5.1297@trndny07>
Source record: 39540

Ok, lets try it this way... step by step, inch by inch, we may yet figure
out what this antenna is.

First question:
What is the least number of wires needed to build a gaussian antenna?

2333. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 20:37:44 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f5p92o$1elo$2@f04n12.cac.psu.edu>
Source record: 39541

Jim Kelley wrote:
>
>
> Cecil Moore wrote:
>> Jim Kelley wrote:
>>
>>> Try as you might to play the part of a victim, Cecil, it just doesn't
>>> suit you.
>>
>>
>> Two months from now when you yet once again accuse me of
>> supporting the concept of "power flow", what do you suggest
>> I call you instead of a "liar"?
>
> You may recall Cecil, that you started this when you accused me of
> saying something that I never said. My suggestion to you still remains
> that in order to avoid these kinds of disputes in the future, please
> provide direct quotes. That way neither of us will be calling the other
> a liar. Fair enough Mr. Victim?

Wow, we really do need the sunspots again, eh guys?

Time for a group hug......

- 73 de Mike KB3EIA -

2334. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 20:54:49 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5pa3e$k88$1@news.service.uci.edu>
Source record: 39542

```
Michael Coslo wrote:
> Jim Kelley wrote:
>
>>
>>
>> Cecil Moore wrote:
>>
>>> Jim Kelley wrote:
>>>
>>>> Try as you might to play the part of a victim, Cecil, it just doesn't
>>>> suit you.
>>>
>>>
>>>
>>> Two months from now when you yet once again accuse me of
>>> supporting the concept of "power flow", what do you suggest
>>> I call you instead of a "liar"?
>>
>>
>> You may recall Cecil, that you started this when you accused me of
>> saying something that I never said. My suggestion to you still
>> remains that in order to avoid these kinds of disputes in the future,
>> please provide direct quotes. That way neither of us will be calling
>> the other a liar. Fair enough Mr. Victim?
>
>
>
>
> Wow, we really do need the sunspots again, eh guys?
>
>
> Time for a group hug......
>
>
> - 73 de Mike KB3EIA -

Hi Mike -

Time for group therapy. :-)

73, ac6xg
```

2335. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 21:17:19 UTC
From: nm5k@wt.net
Message-ID: <1182806239.394105.21860@n60g2000hse.googlegroups.com>
Source record: 39543

On Jun 25, 12:36 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...
>
> Huh!
>
> And, you didn't even realize the rest of us were only getting about 50%
> efficiency of a full size antenna, out of our shortened? (vs. the 98%
> Vincents seems to be!)
>
> Too bad, you could have shared back with us then and looked like a
> superstar--instead of a fibber!
>
> Oh well, I am sure you will be "right on it" next time ...
>
> JS

Fibber? Where do you come up with this BS..Do you want me to
take a picture of it? Crap, you better get your head out of your
kazoo if you want me to talk to you.
I give you the benefit of the doubt by even discussing
it with you, but you start your usual smart ass remarks,
and basically pull a "Telemon".. I don't need to prove
anything to you. I could care less really. My mobile antenna is
as good as it can be, for the physical restraints, and
it got to that point at least 3-4-5 years ago..
I'm not going to run a hat on my mobile, and I accept
that loss in performance. That why I run a long 5 ft stinger
whip.
I don't feel the need to "reinvent" stuff and be a radio superstar.
I have better things to do with my time. 98% efficient? Over
what ground? Have they compared to a fully top loaded
vertical? A coax fed dipole is about 98% efficient.. :/
Must be one heck of a radial system is all I can say..
What does this look like on the back of that truck?
http://web.wt.net/~nm5k/fd3.jpg
I got your fibber hanging..
That antenna started out as a 6 ft 20m hamstick
I got for free.
But I used it on 40m, by adding a 5 ft stinger.
Worked very well overall.
Then I stripped all the windings off and installed the

larger coil you see in the picture.
The other 5 ft version I have is the same , except it's coil
is mounted about 2.5 feet above the base, instead of 5,
and the helical windings at the base, and even some above
the large coil are still intact. The antenna works quite well.
But my antenna with no helical windings is more
efficient. But thats more due to coil location,
than less efficient coil loading.
I don't know who you think you are, but I was doing
what you are doing now, in 1988. That's when I
built that partly helical "plastic bugcatcher".
Many others were doing the same in 1958 I'm
sure...
If I had a digital camera handy, I'd already have a
picture waiting for you. You can tell by looking at
it, I've used it for years on end. It's about 19 years
old, and has thrashed many a tree branch.
I play mainly on 80 and 40 meters mobile.
Go do some testing there, and get back to me.
This 10m testing on a mobile doesn't mean too
much to me.. It's easy to get high efficiency on
that band. Most any "wonderstick" will do.
Lets see this thing kill on 80m where the likelyhood
of ground loss overiding the coil loss kicks into play.
The low bands are the real test of a short vertical.
I saw one mention that elevating this antenna will
improve the performance. Heck, elevating most
any kind of vertical or GP will improve performance..
That antenna is not special in that regard..
It really surprises me that you seem to think this
is some kind of new technology.. What, you
live in a cave?
MK

2336. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 21:38:30 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <rBWfi.22196$C96.16590@newssvr23.news.prodigy.net>
Source record: 39544

Jim Kelley wrote:
> You may recall Cecil, that you started this when you accused me of
> saying something that I never said. My suggestion to you still remains
> that in order to avoid these kinds of disputes in the future, please
> provide direct quotes.

Jim, do you see anything hypocritical about:

1. You assert that I falsely accused you of saying
something that you never said.

2. You did not provide a direct quote to prove that
I ever posted any such thing.

When are you going to live up to your own advice?
Never mind. That's a rhetorical question.
--
73, Cecil http://www.w5dxp.com

2337. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 21:58:09 UTC
From: richardharrison@webtv.net
Message-ID: <22285-46803A71-509@storefull-3258.bay.webtv.net>
Source record: 39545

Art wrote:
"This surely will put my submission back to the dark ages."
That`s where it belongs. Coulomb`s Law is a producct of the 1780`s, and Gauss was a conteporary. Unification of all known electrical laws by James Clerk Maxwell and their formulation by Oliver Heaviside was the proudest accomplishment of the 19th cenury physics according to Wikipedia.

Best regards, Richard Harrison, KB5WZI

2338. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 22:14:09 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5peo2$t21$1@nnrp.linuxfan.it>
Source record: 39546

nm5k@wt.net wrote:

> ...

OK. Nope, we don't need to chat anymore, that certainly put things into
proper perspective ...

JS

2339. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 22:22:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zeXfi.27048$YL5.26076@newssvr29.news.prodigy.net>
Source record: 39547

John Smith I wrote:
> Is the following post "near" to what you seek? And, if so, this URL
> will get you close:
> http://www.radiobanter.com/showthread.php?t=73853&page=11

That was a discussion of how the field of engineering
treats the concept of "power" differently than the field
of physics. Power engineers have no problem with the concept
of "power transmission". Most RF engineers have no problem
with the concept of RF "power transmission" down a transmission
line or from one antenna to another. Even the IEEE Dictionary
alludes to power being propagated in the direction of the
power flow vector. Of course, when the IEEE does it, they have
simply used a "poor choice of words". If you or I did it, it
would be a capital offense. :-)
--
73, Cecil http://www.w5dxp.com

2340. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 22:43:56 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1182811436.011202.273220@e9g2000prf.googlegroups.com>
Source record: 39548

Cecil Moore wrote:
> Jim Kelley wrote:
> > You may recall Cecil, that you started this when you accused me of
> > saying something that I never said. My suggestion to you still remains
> > that in order to avoid these kinds of disputes in the future, please
> > provide direct quotes.
>
> Jim, do you see anything hypocritical about:
>
> 1. You assert that I falsely accused you of saying
> something that you never said.
>
> 2. You did not provide a direct quote to prove that
> I ever posted any such thing.
>
> When are you going to live up to your own advice?
> Never mind. That's a rhetorical question.

Cecil Moore wrote:
> On Jun 17, 11:47 am, Jim Kelley <jwkel...@uci.edu> wrote:

>>From my perspective, these definitions are uniformly
>>consistent with those used in engineering.

> Jim, you and others have disagreed with definitions in the IEEE
> Dictionary and implied it is not worth the paper upon which it is
> printed. One need only to access Google to verify that fact.

2341. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-25 23:21:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hoi083hashae6e4d0e0adopusvn6cvb4ud@4ax.com>
Source record: 39549

On Mon, 25 Jun 2007 12:57:32 -0700, art <aunwin@insightbb.com> wrote:

> 'The "law" used to prove a concept, was in fact,
>Maxwells extension of statics to the time domain'

Arthur,

> I have no problem with that statement so it
>provides an ideal starting point.
There are accepted convention in faithfully quoting a document you are immediately responding to. To take my words and re-arrange them to suit your own way of understanding is NOT a quote from me.

>My understanding is that Maxwell had a host
>of theorems by many scientists from which
>to draw information from, many of which
>gave the connection of the statics to
>time domain aproach.
>
> I am not aware of any evidence that he drew on Gauss
> for this since Gauss had not provided this extension.
> Can you supply me a source that verifies this fact?

You mean like he NAMED one of his laws after Gauss? Doesn't that give you a clue? Dr. D. already supplied the source, I responded to it and corrected Dr. D's error of attribution.

Read the source we BOTH refer to. It has been offered to you by us BOTH.

>We then come to a very important question with regard
>to my patent request.
> Since you say it has already been invented

Show my statement, in my own words, quoted in the accepted convention from the exact source (in other words, highlight the statement in the original posting I made, and post that here).

If you cannot perform the minimum practices of quoting, then there's nothing more to be said.

73's
Richard Clark, KB7QHC

2342. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 00:31:44 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46805e6e$0$24742$4c368faf@roadrunner.com>
Source record: 39550

<nm5k@wt.net> wrote in message
news:1182806239.394105.21860@n60g2000hse.googlegroups.com...
> On Jun 25, 12:36 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>> n...@wt.net wrote:
>>
>> > ...
>>
>> Huh!
>>
>> And, you didn't even realize the rest of us were only getting about 50%
>> efficiency of a full size antenna, out of our shortened? (vs. the 98%
>> Vincents seems to be!)
>>
>> Too bad, you could have shared back with us then and looked like a
>> superstar--instead of a fibber!
>>
>> Oh well, I am sure you will be "right on it" next time ...
>>
>> JS
>
>
> Fibber? Where do you come up with this BS..Do you want me to
> take a picture of it? Crap, you better get your head out of your
> kazoo if you want me to talk to you.
> I give you the benefit of the doubt by even discussing
> it with you, but you start your usual smart ass remarks,
> and basically pull a "Telemon".. I don't need to prove
> anything to you. I could care less really. My mobile antenna is
> as good as it can be, for the physical restraints, and
> it got to that point at least 3-4-5 years ago..
> I'm not going to run a hat on my mobile, and I accept
> that loss in performance. That why I run a long 5 ft stinger
> whip.
> I don't feel the need to "reinvent" stuff and be a radio superstar.
> I have better things to do with my time. 98% efficient? Over
> what ground? Have they compared to a fully top loaded
> vertical? A coax fed dipole is about 98% efficient.. :/
> Must be one heck of a radial system is all I can say..
> What does this look like on the back of that truck?
> http://web.wt.net/~nm5k/fd3.jpg
> I got your fibber hanging..
> That antenna started out as a 6 ft 20m hamstick
> I got for free.

> But I used it on 40m, by adding a 5 ft stinger.
> Worked very well overall.
> Then I stripped all the windings off and installed the
> larger coil you see in the picture.
> The other 5 ft version I have is the same , except it's coil
> is mounted about 2.5 feet above the base, instead of 5,
> and the helical windings at the base, and even some above
> the large coil are still intact. The antenna works quite well.
> But my antenna with no helical windings is more
> efficient. But thats more due to coil location,
> than less efficient coil loading.
> I don't know who you think you are, but I was doing
> what you are doing now, in 1988. That's when I
> built that partly helical "plastic bugcatcher".
> Many others were doing the same in 1958 I'm
> sure...
> If I had a digital camera handy, I'd already have a
> picture waiting for you. You can tell by looking at
> it, I've used it for years on end. It's about 19 years
> old, and has thrashed many a tree branch.
> I play mainly on 80 and 40 meters mobile.
> Go do some testing there, and get back to me.
> This 10m testing on a mobile doesn't mean too
> much to me.. It's easy to get high efficiency on
> that band. Most any "wonderstick" will do.
> Lets see this thing kill on 80m where the likelyhood
> of ground loss overiding the coil loss kicks into play.
> The low bands are the real test of a short vertical.
> I saw one mention that elevating this antenna will
> improve the performance. Heck, elevating most
> any kind of vertical or GP will improve performance..
> That antenna is not special in that regard..
> It really surprises me that you seem to think this
> is some kind of new technology.. What, you
> live in a cave?
> MK
>

Seems like I have seen a lot of Ham STIKS lately that were use to construct homebrew antennas.

Jimmie

2343. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 00:46:18 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <SbGdnTLJZ5tT_B3bRVnytQA@bt.com>
Source record: 39551

"art" <aunwin@insightbb.com> wrote in message
news:1182817124.199282.279930@o61g2000hsh.googlegroups.com...
> On 25 Jun, 16:21, Richard Clark <kb7...@comcast.net> wrote:
> > On Mon, 25 Jun 2007 12:57:32 -0700, art <aun...@insightbb.com> wrote:
> > > 'The "law" used to prove a concept, was in fact,
> > >Maxwells extension of statics to the time domain'
> > >
> > Arthur,
> > >
> > > I have no problem with that statement so it
> > >provides an ideal starting point.
> > >
> > There are accepted convention in faithfully quoting a document you are
> > immediately responding to. To take my words and re-arrange them to
> > suit your own way of understanding is NOT a quote from me.
>
> If you will be specific I will gladly change to your satisfaction
> and apologise if required. I don't remember using double quotes("..")
> but I am not going to quibble.
>
>
> >
> > >My understanding is that Maxwell had a host
> > >of theorems by many scientists from which
> > >to draw information from, many of which
> > >gave the connection of the statics to
> > >time domain aproach.
> > >
> > > I am not aware of any evidence that he drew on Gauss
> > > for this since Gauss had not provided this extension.
> > > Can you supply me a source that verifies this fact?
> > >
> > You mean like he NAMED one of his laws after Gauss? Doesn't that give
> > you a clue? Dr. D. already supplied the source, I responded to it and
> > corrected Dr. D's error of attribution.
>
>
>
> I would be more than happy to read that
> source if you state without qualification that Gauss's law of Statics
> was modified by Maxwell to form a basis of a radiating antenna
> is illustrated in that book.
> I know of no reference anywhere that refers to a radiator or cluster
> of

> radiators loaded with static particles in a closed loop or "pill box"
> as defined by Gaussian law. Certainly the good Doctor did not intimate
> that such a reference was in that book but I welcome a snippit of
> that conversation that tells me otherwise.
> If you can state what page where it can be seen I would be most
> gratefull and certainly would provide it to the PTO as required
> by law . If Feynman supplied that history that would be fine by me.
> Such a reference is not only required by law but it would
> also provide a reference of prior use of that "law" against which
> my request can be referred to for similarities, together with
> a description of that antenna that the public can also see
> for there own education. Providing this reference would be
> seen as a courtesy by me and supplied without rancour and
> certainly would provide what the group has been asking for
> i.e. something that everybody can understand and be grateful
> for.
>
> Art Unwin KB9MZ......XG
>
> ....
> The rest to be responded to later if necessary or required
>
> > Read the source we BOTH refer to. It has been offered to you by us
> > BOTH.
> > >We then come to a very important question with regard
> > >to my patent request.
> > > Since you say it has already been invented
>
>
> >
> > Show my statement, in my own words, quoted in the accepted convention
> > from the exact source (in other words, highlight the statement in the
> > original posting I made, and post that here).
> >
> > If you cannot perform the minimum practices of quoting, then there's
> > nothing more to be said.
>
> I will deal with this after question 1 is responded to in a proper
> manner
> Question 1 is the very description that the naysayers are asking for
> so they can understand the antenna but Q1 comes before Q2.
> In fact if question 1 is satified it also satisfies Question 2
> > 73's
> > Richard Clark, KB7QHC
>
>

Art et al.

I am not aware if this reference has been posted to this newsgroup.

http://n-t.ru/tpe/ng/gvg.htm

It seems to concern research conducted in Russia and to be relevant to what Art is trying to explain.

The article and references appear genuine as far as I can ascertain, but the English translation leaves a bit to be desired.

Strictly a neutral bystander in this discussion

Regards

Mike G0ULI

2344. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 01:11:47 UTC
From: richardharrison@webtv.net
Message-ID: <14246-468067D3-73@storefull-3251.bay.webtv.net>
Source record: 39552

Richard Clark, KB7QHC wrote:
"You mean he named one of his laws after Gauss?"

I suggested Art read Griffith`s "Radio-Electronic Transmission Fundamentals". It opens with a brief history of electrical knowledge. It says that Michael Faraday discovered electromagnetic induction in 1831 and that simultaneously, far away in America, a professor named Joseph Henry independently made the same discovery.
By this time we already had Colounb`s Law, Ampere`s rule, Gauss` Law, concerning the relationship between the magnetic field and induced voltage. Nothing seemed to tie these miscellaneous relationships together until James Clerk Maxwell, a child prodigy, who entered the University of Edinburg at age 13 years and was a brilliant student, put it all together in his unifying equations and published a book, Electromagnetic Theory. Oliver Heaviside read the book and simplified for the less erudite, teaching himself the mathematics necessary to understand Maxwell as he went.

Unless Art has something that Maxwell and Heaviside didn`t cover, it`s no time to shout eureka! We`ve taken Gauss from the static and made him dynamic.

Best regards, Richard Harrison, KB5WZI

2345. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 02:05:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yv_fi.6866$Rw1.2996@newssvr25.news.prodigy.net>
Source record: 39553

Jim Kelley wrote:
> Cecil Moore wrote:
>> Jim, you and others have disagreed with definitions in the IEEE
>> Dictionary and implied it is not worth the paper upon which it is
>> printed. One need only to access Google to verify that fact.

Accessing Google, the first thing I found was:

Jim Kelley wrote:
> ... nowhere will
> you see the IEEE refer to watts traveling through a wire.

Yet the IEEE says:
"power-flow vector ... giving magnitude and direction of *power*
per unit-area *propagating* in the wave."

The unit of power is the watt. Waves travel through wires. The
IEEE Dictionary says, in so many words, that watts per unit
area are propagating in the wave along the wire. "Propagating"
and "flowing" are close enough to be considered synonyms.

I'm sure I could find many other examples if I wasted more
time searching.
--
73, Cecil http://www.w5dxp.com

2346. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 03:23:40 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <468086ce$0$17200$39cecf19@news.twtelecom.net>
Source record: 39554

Michael Coslo wrote:
> Jim Kelley wrote:
>>
>>
>> Cecil Moore wrote:
>>> Jim Kelley wrote:
>>>
>>>> Try as you might to play the part of a victim, Cecil, it just doesn't
>>>> suit you.
>>>
>>>
>>> Two months from now when you yet once again accuse me of
>>> supporting the concept of "power flow", what do you suggest
>>> I call you instead of a "liar"?
>>
>> You may recall Cecil, that you started this when you accused me of
>> saying something that I never said. My suggestion to you still
>> remains that in order to avoid these kinds of disputes in the future,
>> please provide direct quotes. That way neither of us will be calling
>> the other a liar. Fair enough Mr. Victim?
>
>
>
> Wow, we really do need the sunspots again, eh guys?
>
>
> Time for a group hug......
>
>
> - 73 de Mike KB3EIA -

More like a group admission of what they have stated. Hugs are west
coast BS.

tom
K0TAR

2347. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 04:30:14 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5q4p8$ka4$1@nnrp.linuxfan.it>
Source record: 39555

Cecil Moore wrote:
> ...

Cecil:

We are too old!

Leave the BS to the younger crowd. Make it important ...

Regards,
JS

2348. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 04:35:21 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <ql0gi.7420$bP5.3763@newssvr19.news.prodigy.net>
Source record: 39556

art wrote:
> On 25 Jun, 17:46, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182817124.199282.279930@o61g2000hsh.googlegroups.com...
>>
>>
>>
>>
>>
>>> On 25 Jun, 16:21, Richard Clark <kb7...@comcast.net> wrote:
>>>> On Mon, 25 Jun 2007 12:57:32 -0700, art <aun...@insightbb.com> wrote:
>>>>> 'The "law" used to prove a concept, was in fact,
>>>>> Maxwells extension of statics to the time domain'
>>>> Arthur,
>>>>> I have no problem with that statement so it
>>>>> provides an ideal starting point.
>>>> There are accepted convention in faithfully quoting a document you are
>>>> immediately responding to. To take my words and re-arrange them to
>>>> suit your own way of understanding is NOT a quote from me.
>>> If you will be specific I will gladly change to your satisfaction
>>> and apologise if required. I don't remember using double quotes("..")
>>> but I am not going to quibble.
>>>>> My understanding is that Maxwell had a host
>>>>> of theorems by many scientists from which
>>>>> to draw information from, many of which
>>>>> gave the connection of the statics to
>>>>> time domain aproach.
>>>>> I am not aware of any evidence that he drew on Gauss
>>>>> for this since Gauss had not provided this extension.
>>>>> Can you supply me a source that verifies this fact?
>>>> You mean like he NAMED one of his laws after Gauss? Doesn't that give
>>>> you a clue? Dr. D. already supplied the source, I responded to it and
>>>> corrected Dr. D's error of attribution.
>>> I would be more than happy to read that
>>> source if you state without qualification that Gauss's law of Statics
>>> was modified by Maxwell to form a basis of a radiating antenna
>>> is illustrated in that book.
>>> I know of no reference anywhere that refers to a radiator or cluster
>>> of
>>> radiators loaded with static particles in a closed loop or "pill box"
>>> as defined by Gaussian law. Certainly the good Doctor did not intimate
>>> that such a reference was in that book but I welcome a snippit of
>>> that conversation that tells me otherwise.

>>> If you can state what page where it can be seen I would be most
>>> gratefull and certainly would provide it to the PTO as required
>>> by law . If Feynman supplied that history that would be fine by me.
>>> Such a reference is not only required by law but it would
>>> also provide a reference of prior use of that "law" against which
>>> my request can be referred to for similarities, together with
>>> a description of that antenna that the public can also see
>>> for there own education. Providing this reference would be
>>> seen as a courtesy by me and supplied without rancour and
>>> certainly would provide what the group has been asking for
>>> i.e. something that everybody can understand and be grateful
>>> for.
>>> Art Unwin KB9MZ......XG
>>> ....
>>> The rest to be responded to later if necessary or required
>>>> Read the source we BOTH refer to. It has been offered to you by us
>>>> BOTH.
>>>>> We then come to a very important question with regard
>>>>> to my patent request.
>>>>> Since you say it has already been invented
>>>> Show my statement, in my own words, quoted in the accepted convention
>>>> from the exact source (in other words, highlight the statement in the
>>>> original posting I made, and post that here).
>>>> If you cannot perform the minimum practices of quoting, then there's
>>>> nothing more to be said.
>>> I will deal with this after question 1 is responded to in a proper
>>> manner
>>> Question 1 is the very description that the naysayers are asking for
>>> so they can understand the antenna but Q1 comes before Q2.
>>> In fact if question 1 is satified it also satisfies Question 2
>>>> 73's
>>>> Richard Clark, KB7QHC
>> Art et al.
>>
>> I am not aware if this reference has been posted to this newsgroup.
>>
>> http://n-t.ru/tpe/ng/gvg.htm
>>
>> It seems to concern research conducted in Russia and to be relevant to what
>> Art is trying to explain.
>>
>> The article and references appear genuine as far as I can ascertain, but the
>> English translation leaves a bit to be desired.
>>
>> Strictly a neutral bystander in this discussion
>>
>> Regards
>>
>> Mike G0ULI- Hide quoted text -
>>

>> - Show quoted text -
>
> Mike, How you came across this and why is something
> I could not possibly have done myself. I find it unbelievable
> that somebody in Russia would collect all this information
> and place things in their correct order and where the
> information came from and it arrives in some wierd way
> at this newsgroup at this specific time.
> Much of what he is stating is relavent to Gauss and
> his input to science and what use was made of his input.
> He has explained things so much better than I ever could
> but then he is a scientist with authority where as I am
> just a retired engineer blindly finding a way thru science and
> radiation. This paper is a keeper for me and will be valuable
> to me in so many ways. I note that you are neutral but
> you have obviously have been reading my posts for you to
> make the connection and sharing it with the group.
> I can't thank you enough for doing what you have done
> and it is certainly no problem to me that you are neutral.
> What is important that views that I hold have now been published
> on the other side of the pond that gives a modicom of credability
> to what I have been sharing. Thanks again
> Regards
> Art Unwin....KB9MZ.....XG
>

Nikolai Noskov. He thinks Einstein's ideas on relativity are
total bunk. He does have a nice paper on the propulsion
mechanism of flying saucers, though. That seems to fit with
much of the material on this newsgroup, lately. I guess it was
inevitable that the twisted logic of insanity would eventually prevail
here. It's much easier to just be nuts than to make an honest attempt to
understand the physical universe.
73,
Tom Donaly, KA6RUH

2349. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 04:41:34 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5q5ef$ka4$3@nnrp.linuxfan.it>
Source record: 39557

Tom Donaly wrote:

> [stuff]

Now let me see ...

We came from a lightning strike of a primordial fluid ... and nature
makes life? And, that explains "us."

However, if you think the same thing happened on one of the hundreds of
billions of planets out there, and life exists like us, and they may be
studying us ... you are a kook?

Well, I kinda agree, but awaiting further data ... but then with so many
kooks, kinda hard to tell one kook from another!

Regards,
JS

2350. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 05:31:17 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <ew1gi.6804$c_4.3466@bignews2.bellsouth.net>
Source record: 39558

"Dave" <noone@nowhere.com> wrote in message
news:ejVfi.3254$bj5.1297@trndny07...
> Ok, lets try it this way... step by step, inch by inch, we may yet figure
> out what this antenna is.
>
> First question:
> What is the least number of wires needed to build a gaussian antenna?
>
This may help
http://images.google.com/images?hl=en&q=gaussian+antenna&btnG=Search+Images&gbv=2
and
http://www.frc.utexas.edu/meetings/HTPD04/austin.pdf

2351. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 05:38:30 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5q8p7php4@nnrp.linuxfan.it>
Source record: 39559

Hal Rosser wrote:

> [stuff]

Huh?

And, I keep thinking he is into H & E fields!

JS

2352. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 07:14:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7hb1839lgacn23sfs8n13hfi5lu1pmlg6l@4ax.com>
Source record: 39560

On Mon, 25 Jun 2007 17:18:44 -0700, art <aunwin@insightbb.com> wrote:

>> > I have no problem with that statement so it
>> >provides an ideal starting point.
>>
>> There are accepted convention in faithfully quoting a document you are
>> immediately responding to. To take my words and re-arrange them to
>> suit your own way of understanding is NOT a quote from me.
>
>If you will be specific I will gladly change to your satisfaction
>and apologise if required. I don't remember using double quotes("..")
>but I am not going to quibble.

Hi Arthur,

Your statement above shown following the initial >> >
is a corrupted interpretation, not a quote of mine.

The statement that follows with the initial >>
is a complete and accurate quote of mine.

> I would be more than happy to read that
>source if you state without qualification that Gauss's law of Statics
>was modified by Maxwell to form a basis of a radiating antenna
>is illustrated in that book.

Nearly any Fields text discusses this with 100s of pages of math,
Feynman skips the math (no one can challenge him in that department)
and simply dwells on the science.

>I know of no reference anywhere that refers to a radiator or cluster
>of
>radiators

I gave you references for Bennetti and Tosi. If you choose to
"forget" them, I see little point in this humble enquiry of yours.

>loaded with static particles in a closed loop or "pill box"
>as defined by Gaussian law.

As you are asking for references of Gaussian Law, as it has been
extended into the time domain; then, yes, it is obvious you are not
aware. However, you are also not aware that they also leave behind
statics for good and obvious reasons: radiation is dynamic, not
static.

>Certainly the good Doctor did not intimate
>that such a reference was in that book but I welcome a snippit of

>that conversation that tells me otherwise.
>If you can state what page where it can be seen I would be most
>gratefull and certainly would provide it to the PTO as required
>by law . If Feynman supplied that history that would be fine by me.
>Such a reference is not only required by law but it would
>also provide a reference of prior use of that "law" against which
>my request can be referred to for similarities, together with
>a description of that antenna that the public can also see
>for there own education. Providing this reference would be
>seen as a courtesy by me and supplied without rancour and
>certainly would provide what the group has been asking for
>i.e. something that everybody can understand and be grateful
>for.

Given your bipolar attitudes and posturing, I seriously doubt you would express gratitude of any meaningful measure. And as far as the requirements of the law go, that's between you and the judge. Further, my already having provided these references in the past (something you steadfastly refuse to do for others irrespective of their color or stripe) would it seem ironic of me to suggest, as you have in the past, that I am not here to do your job?

In Volume 2, Feynman devotes chapter 5 to what is called "Application of Gauss' Law." You have been plagiarizing it for months. It employs surfaces, it employs equilibrium, and it is specifically about STATIC charges, or charges moving in an uniform motion (which is to say non-accelerating, which, of course, would bring about radiation). All such matters necessarily restrict the change of charge to 0 (there is no time element).

This is can all be found in a first semester Physics syllabus which is, in essence, an elaboration of High School Physics.

This is all a rehash of the thread that Mark already supplied a reference for! The citations are all there!

At the expense of bandwidth, I will repeat the cogent points:
First from Dr. D:
>In volume
>II of the Feynman Lectures on Physics, the title of chapter 15,
>section 6 is "What is true for statics is false for dynamics".

I pointed out to Dr. D that he had neglected to read the footnote provided by Feynman, so as to not trip up the student in unforgivable misunderstandings:
>At the bottom of that Table is a footnote explaining the bold arrow of
>your Gauss' law. It reads:
> "The equations marked by an arrow (-ï¿½) are Maxwell's equations."
>
>The table equation, and the one you reference in the text are both
>Maxwell's.

I then went on to complete the reference of "Gauss' Law":
>>Then in chapter 18, section 1 paragraph 3 you will find the statement:
>> "In dynamic as well as static fields, Gauss' law is always valid".
>
>That chapter, too, clearly defines the same equation you are making an
>appeal to as "Maxwell's equations." Observe Table 18-1 "Classical
>Physics"

There is, of course, more material in that thread that bears DIRECTLY to "Gauss' Law" being extended into the time domain by Maxwell. This is the stuff of a second semester Physics syllabus (at least when I took it, it was). I will leave that to the bailiff to remind you of your legal responsibilities for complete disclosure to the PTO. I am sure the examiner has already studied this material (it is normally required of them besides the Law degree); luckily it has no bearing on the issuance of any patent.

73's
Richard Clark, KB7QHC

2353. Re: What is the best software to model HF Quads 4el and larger

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 07:29:20 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1182842960.020354.301850@p77g2000hsh.googlegroups.com>
Source record: 39561

On 22 jun, 02:04, videorov <video...@verizon.net> wrote:
> Multiband also .

See the ''Antenna Modeling Software Notes" chapter on http://www.cebik.com/radio.html

Arie.

2354. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 10:37:42 UTC
From: nm5k@wt.net
Message-ID: <1182854262.409107.254240@q75g2000hsh.googlegroups.com>
Source record: 39562

On Jun 25, 6:31 pm, "Jimmie D" <GFEN...@carolina.rr.com> wrote:

>
> Seems like I have seen a lot of Ham STIKS lately that were use to construct
> homebrew antennas.
>
> Jimmie

They are good for tinkering with, and they are cheap.
A hamstick on it's own can be a real good antenna as is
if you modify it to work on a lower band by adding a longer
stinger.
Some brands vary though. Some have semi decent length
stingers from the factory, and some are real short, or have
no stinger. Those are the worst.
The one in the picture was a 6 ft 20 meter stick which
had no real stinger on it. It was pretty lame on it's designed
band. But I added a 5 ft stinger and used it for 40m.
Worked quite well on the trunk of my car. Almost bugcatcher
level performance with no large lumped coil.
So if one were to want to use a hamstick for a mobile,
they are better off to buy one for a higher band, and
then clamp various stingers to work the lower bands.
It will be more efficient than the sticks actually sold
for those lower bands. IE: my original antenna which
John Smith seems to think I've made up in my mind,
was a CB antenna originally. A firestick I think..
I got it free too.. I've never spent a dime on any of
my mobile antennas... Well, except for wire
in some cases.
I added the coil to work 80 and 40. But on 20-10,
I just used various lengths of stinger, and the coil
was bypassed with a jumper. That antenna on 20m,
is better than most that are sold for 20m.. :/
More stinger, and less windings.. Also the methods
of windings can effect current distribution. The better
versions wind more coil up high, as to resemble a
lumped coil in that location.
This improves current distribution same as it would
with a normal lumped coil..
Many of the sticks have a winding at the base just
for matching. But the matching portion can be
included with the main lumped coil too. It doesn't

have to be at the base. But my latest version has
no helical windings. Just the large coil. It's pretty
much purely a "plastic bugcatcher"..
MK

2355. Re: Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 12:21:04 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <ceydnYjtldHZmRzbnZ2dnUVZ_oKnnZ2d@comcast.com>
Source record: 39563

Hi Irv,

Surprisingly, the 545 seems to work better on VHF fm with the R/S Disconne
for all bands.

Regards,
Bob

"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:2aSfi.62502$xq1.58156@pd7urf1no...
> Robert11 wrote:
>> Hi,
>>
>> Real newbie regarding antenna theory, but am trying to learn.
>> Have ordered the ARRL antenna book.
>>
>> a. In my attic, right next to each other, I have a Scantenna and a
>> Discone antenna.
>> Both have the same coax run to my study downstairs. Don't remember the
>> type of coax, but it's the large diameter, "low loss" type for both.
>>
>> The Scantenna feeds a new Uniden BCD996 Scanner.
>> The Discone feeds my JRC NRD 545 (with the VHF converter board).
>>
>> When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away
>> (way beyond my line of sight, but they probably have a high tower) the
>> 545 with the Disconne is vastly superior.
>
>>
> What happens when you connect the 996 to the Discone and vice
> versa?
>
> Irv VE6BP

2356. From OP: Re: Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 12:23:08 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <NM6dnadNDvIimRzbnZ2dnUVZ_tCtnZ2d@comcast.com>
Source record: 39564

Hello,

Thanks all for the info., and thoughts. Appreciate it.
Sure is lots to learn. Tough subject (for me)

Bob

"Robert11" <rgsros@notme.com> wrote in message
news:8ZednfVW9IOvLOLbnZ2dnUVZ_tOmnZ2d@comcast.com...
> Hi,
>
> Real newbie regarding antenna theory, but am trying to learn.
> Have ordered the ARRL antenna book.
>
> a. In my attic, right next to each other, I have a Scantenna and a
> Discone antenna.
> Both have the same coax run to my study downstairs. Don't remember the
> type of coax, but it's the large diameter, "low loss" type for both.
>
> The Scantenna feeds a new Uniden BCD996 Scanner.
> The Discone feeds my JRC NRD 545 (with the VHF converter board).
>
> When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away
> (way beyond my line of sight, but they probably have a high tower) the 545
> with the Disconne is vastly superior.
>
> Of course the 545 is a much, much better radio than the the Uniden, but I
> assumed that for this type of listening configuration, reception would be
> mainly limited by the antenna ?
>
> I also thought that the Discone would be most effective for aero., and
> very minimally effective for more or less horizontal signal paths like
> from the Coast Guard Tower to me.
>
> Any thoughts on this, and on Discones (for "horiz." propagated signals) in
> general ?
>
> b. Never thought about this before, but have started wondering.
> Might be a good question for all you experts out there.
>
> Live in a typical New England Colonial with a plastic Louvre in the attic
> on each gable end that are screened to keep the bugs out.
> Screens are metal.
>

> As mentioned, in the attic I have two VHF antennas, the Scantenna and a
> Discone.
> (do listening only)
>
> Was wondering if the metal screens might have any effect on what I can
> pick up in the more or less horizontal directions ?
> e.g., P.D.'s from our or a neighboring town, and the Coast Guard station.
>
> Probably have no effect for aero comm listening as these received signals
> are pretty much from a vertical, or near vertical direction.
>
> Should I go to the trouble of replacing them with plastic screens ?
>
> Distance from antennas to the screens is probably about 20 feet or so.
> This subtends a relatively small angle, but not that small. Haven't
> measured the screen, but assume about the size of a typical house bedroom
> window.
>
> Any thoughts on this ?
>
> As always, thanks,
> Bob
>
>
>

2357. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 14:29:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3p9gi.18295$RX.17907@newssvr11.news.prodigy.net>
Source record: 39565

John Smith I wrote:
> We are too old!
> Leave the BS to the younger crowd.

At my age, BS means "blood sugar".

2358. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 14:53:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <el82835g5frhk11rfj2glg6f5qgg3is9gb@4ax.com>
Source record: 39566

On Tue, 26 Jun 2007 05:17:45 -0700, art <aunwin@insightbb.com> wrote:

>If you would be kind enough to give me the name
>of the book I will put an order in for it.

Arthur,

The subject has been discussed by several who agree to the authority, including Dr. D. If you choose to snip out that title in your response here to only ask for it again - what does that demonstrate?

The names of inventors are suitably unique for a general search.

Earlier citations were full to authors, works, chapters, tables, and publishers to further refine any search.

As late as 36 hours ago, Mark supplied the specific link as I've mentioned three times now. I see you have tendered no thanks to him for his effort, nor have applauded his memory recall in your behalf. Such is the shallowness of your generousity.

You don't even have to face your own advice to others telling them to do their own search. You merely have to review the correspondence (no more complex than double-clicking the link Mark provided).

73's
Richard Clark, KB7QHC

2359. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 15:35:45 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <bec28350fr97m55k4p2g7n519eot3ar2je@4ax.com>
Source record: 39567

>John Smith I wrote:
>A DLM by unknown builder: http://assemblywizard.tekcities.com/dlm.jpg

I saw the picture. It looks like a coil base not much unlike the
ham-stick, then a piece of wire back to ground, presumably a match,
above the helical, is a piece of brass or copper wire, then a regular
loading coil, and another piece of brass or copper for the stinger.

It doesn't sound like the descriptions I am hearing.
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2360. Re: End-feeding dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 15:45:12 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <02d283d2m0o7m0fmujq3oqs4u7gf0pho32@4ax.com>
Source record: 39568

On Thu, 21 Jun 2007 04:34:14 -0700, Denny <k8do@mailblocks.com> wrote:

> To further add
>> to the mix, I suggested he tie the tuner to the fence line and
>> backstop.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>That was canny advice, Richard... The top rail of the fence and
>backstop 'could' have been an NVIS antenna - which will get you
>smokin' reports out to a few hundred miles...
>I do this routinely for Field Day with a horizontal loop for 80 meters
>being strung about 20 feet high over a low, wet, fertilized field next
>to a river... The guys run QRP off a battery and are amazed how they
>can break pile ups... I have never bothered to point out to them that
>the vast majority of their contacts are within a 500 mile circle...
>They are happy and I believe in ignorance being bliss...
>
>
>denny / k8do

a local qrp contact is still a qrp contact. Many contacts is better
than few, if that's what you are wanting to make.

It might not win field day, but it has to be better than not being
heard atall.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2361. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 16:30:56 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <_8idndREdIeiohzbnZ2dnUVZ8turnZ2d@bt.com>
Source record: 39569

<big snip>
> > >> Art et al.
> >
> > >> I am not aware if this reference has been posted to this newsgroup.
> >
> > >>http://n-t.ru/tpe/ng/gvg.htm
> >
> > >> It seems to concern research conducted in Russia and to be relevant
to what
> > >> Art is trying to explain.
> >
> > >> The article and references appear genuine as far as I can ascertain,
but the
> > >> English translation leaves a bit to be desired.
> >
> > >> Strictly a neutral bystander in this discussion
> >
> > >> Regards
> >
> > >> Mike G0ULI- Hide quoted text -
> >
> > >> - Show quoted text -
> >
> > > Mike, How you came across this and why is something
> > > I could not possibly have done myself. I find it unbelievable
> > > that somebody in Russia would collect all this information
> > > and place things in their correct order and where the
> > > information came from and it arrives in some wierd way
> > > at this newsgroup at this specific time.
> > > Much of what he is stating is relavent to Gauss and
> > > his input to science and what use was made of his input.
> > > He has explained things so much better than I ever could
> > > but then he is a scientist with authority where as I am
> > > just a retired engineer blindly finding a way thru science and
> > > radiation. This paper is a keeper for me and will be valuable
> > > to me in so many ways. I note that you are neutral but
> > > you have obviously have been reading my posts for you to
> > > make the connection and sharing it with the group.
> > > I can't thank you enough for doing what you have done
> > > and it is certainly no problem to me that you are neutral.
> > > What is important that views that I hold have now been published
> > > on the other side of the pond that gives a modicom of credability
> > > to what I have been sharing. Thanks again
> > > Regards

> > > Art Unwin....KB9MZ.....XG
> >
> > Nikolai Noskov. He thinks Einstein's ideas on relativity are
> > total bunk.
>
> There is always contention regading ideasduring the century or more
> that they are made. Einstein idea is a composition of ideas provided
> by other scientists which provided a path for him to follow.
> Obviously other ideas are in the format stage which will conclude
> in further ideas on which to build a building block. You as a
> scientist
> are just one of many that have ideas on this aspect of science and
> if you live another 100 years so that you could study incomming data
> you could possibly state if I knew that earlier I would not have taken
> up my previous position. Hawkins and others are also involved with
> the universe trying to match their logic with prior scientists and
> mathematical laws that have survived the test of time but all
> aditions
> must also pass the testof time to the satifaction of all. Actually
> one could compare your position on the ascertion that the world
> was flat while taking comfort with the thought that those who
> would disagree would proclame the opposite only after one was dead.
> If twisted logic was in the majority then twisted logic always wins
> until it becomes a minority which requires the adition of time.
> If you take the position that particles collide while travelling
> with the same velocity and in the same direction ala within
> the confines of a Gaussian field, you also can make a disclosure
> that can add to the general discussion on radiation and be considered
> as you say 'an honest attempt to understand the physical universe.
> I for one will not call you nuts.
> Art Unwin KB9MZ.......XG
>
>
>
>
> He does have a nice paper on the propulsion
> > mechanism of flying saucers, though. That seems to fit with
> > much of the material on this newsgroup, lately. I guess it was
> > inevitable that the twisted logic of insanity would eventually prevail
> > here. It's much easier to just be nuts than to make an honest attempt to
> > understand the physical universe.
> > 73,
> > Tom Donaly, KA6RUH- Hide quoted text -
> >
> > - Show quoted text -
>
>

Tom

I prefer to think that the Russians adopt a more pragmatic approach to physics than in the West. They seem to be far happier to work with observed phenomena without necessarily bothering with total understanding of how it works. It probably isn't good science from a Western viewpoint but in the main, their stuff seems to work better than some over engineered Western designs. With a country covering 18 time zones it is inevitable that a degree of Far Eastern philosophy will influence their scientic thinking. If it works, don't fix it and accept that there are some things we are not currently in a position to understand. That doesn't mean we shouldn't try though.

Einstein's ideas are the best predictive theories we have to date but they are certainly considered incomplete in the light of current research. Not complete bunk by any means, but not the whole story either.

Mike G0ULI

2362. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 17:25:25 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <9_bgi.229395$p47.12915@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39570

art wrote:

>
> So you cannot supply or point to an instance where a Gaussian antenna
> is clearly represented using the Gaussian law of Statics.
> That was the question I asked.
> Thanks for the chat
> Art
>

Art,

Nobody can supply or point to an instance in this newsgroup where a
Gaussian antenna is clearly represented using the Gaussian law of Statics.

I guess you are correct: equilibrium prevails.

73,
Gene
W4SZ

2363. Re: Should I use a balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 17:31:11 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <1382j99aopb1ide@corp.supernews.com>
Source record: 39571

I don't think you need one Bob, If you have a little extra footage on your feed line this will do the same thing: wind about six turns around a 6-7 inch coffee can, ppull the can out and tape the coil up really good with electrical tape and then raise your antenna back up in the air. You will have accomplished the same thing as a balun 1:1. Every time I ever did this(many-many times over the past 30 years) it also lowered my swr a bit.

KF5DE

"John Smith I" <assemblywizard@gmail.com> wrote in message news:f5milbguk1@nnrp.linuxfan.it...
> Bob D. wrote:
>
>> ... Would a 1:1 balun provide any 'PRACTICAL' improvement? (It seems to
>> be getting-out just fine without a balun.)
>
> Why not decide yourself--this one is simple enough, just grab a toroid:
> http://assemblywizard.tekcities.com/180px-balun.jpg
>
> JS

2364. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 17:50:21 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5rjlhlcj1@nnrp.linuxfan.it>
Source record: 39572

Buck wrote:

> ...
> It doesn't sound like the descriptions I am hearing.

Buck:

Take a look at the patent. You have to create an account to view it,
the account is free:

http://www.freepatentsonline.com/7187335.html

Regards,
JS

2365. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 17:53:37 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5rjrikpv1@nnrp.linuxfan.it>
Source record: 39573

Cecil Moore wrote:

> ...
> At my age, BS means "blood sugar".

Cecil:

Much too often, BS = Boring Stuff :-(

Regards,
JS

2366. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 18:24:30 UTC
From: herbert.don@gmail.com
Message-ID: <1182882270.968620.140490@e16g2000pri.googlegroups.com>
Source record: 39574

On Jun 25, 1:10 pm, "Dave" <n...@nowhere.com> wrote:
> Ok, lets try it this way... step by step, inch by inch, we may yet figure
> out what this antenna is.
>
> First question:
> What is the least number of wires needed to build a gaussian antenna?

I was tempted to ask this or something like it but art has never
answered any of my questions. good luck

2367. Re: Discone, etc. Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 18:29:11 UTC
From: herbert.don@gmail.com
Message-ID: <1182882551.813582.85050@z28g2000prd.googlegroups.com>
Source record: 39575

On Jun 25, 5:14 am, "Robert11" <rgs...@notme.com> wrote:
> Hi,
>
> Real newbie regarding antenna theory, but am trying to learn.
> Have ordered the ARRL antenna book.
>
> a. In my attic, right next to each other, I have a Scantenna and a Discone
> antenna.
> Both have the same coax run to my study downstairs. Don't remember the type
> of coax, but it's the large diameter, "low loss" type for both.
>
> The Scantenna feeds a new Uniden BCD996 Scanner.
> The Discone feeds my JRC NRD 545 (with the VHF converter board).
>
> When tuned to the Coast Guard station (156.8 MHz fm) about 25 miles away
> (way beyond my line of sight, but they probably have a high tower) the 545
> with the Disconne is vastly superior.
>
> Of course the 545 is a much, much better radio than the the Uniden, but I
> assumed that for this type of listening configuration, reception would be
> mainly limited by the antenna ?
>
> I also thought that the Discone would be most effective for aero., and very
> minimally effective for more or less horizontal signal paths like from the
> Coast Guard Tower to me.
>
> Any thoughts on this, and on Discones (for "horiz." propagated signals) in
> general ?
>
> b. Never thought about this before, but have started wondering.
> Might be a good question for all you experts out there.
>
> Live in a typical New England Colonial with a plastic Louvre in the attic on
> each gable end that are screened to keep the bugs out.
> Screens are metal.
>
> As mentioned, in the attic I have two VHF antennas, the Scantenna and a
> Discone.
> (do listening only)
>
> Was wondering if the metal screens might have any effect on what I can pick
> up in the more or less horizontal directions ?
> e.g., P.D.'s from our or a neighboring town, and the Coast Guard station.
>

> Probably have no effect for aero comm listening as these received signals
> are pretty much from a vertical, or near vertical direction.
>
> Should I go to the trouble of replacing them with plastic screens ?
>
> Distance from antennas to the screens is probably about 20 feet or so.
> This subtends a relatively small angle, but not that small. Haven't
> measured the screen, but assume about the size of a typical house bedroom
> window.
>
> Any thoughts on this ?
>
> As always, thanks,
> Bob

sounds like you have a good setup.
the scrreen doesn't seem to be a problem especially when it is far
away.
Are both antennas near or apart from each other to explain a
differnce?
If they are togethre then this proves the screen and other stuff isnt
a problem.

2368. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 18:44:13 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5rmqfkpv2@nnrp.linuxfan.it>
Source record: 39576

Buck wrote:

> ...
> It doesn't sound like the descriptions I am hearing.

Hopefully, this URL will take you right to a schematic of the antenna:

http://tinyurl.com/2tqon2

JS

2369. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 19:31:13 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <ild2835006g5csref3adca5a5to4i77el1@4ax.com>
Source record: 39577

On Wed, 20 Jun 2007 11:31:19 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Buck wrote:
>
> > [stuff]
>
>Or, you may just want to use an, apparently, tried and accepted design:
>
>http://www.hamuniverse.com/balun.html
>
>Regards,
>JS

That's close. they say it is good for 160-10 meters, but what if I
only want one for 10 meters or just 2 meters? Is there a rule of
thumb to build x turns at x diameter.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2370. Re: Ugly Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 19:49:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5rqle$6o4$1@nnrp.linuxfan.it>
Source record: 39578

Buck wrote:

> ...
> That's close. they say it is good for 160-10 meters, but what if I
> only want one for 10 meters or just 2 meters? Is there a rule of
> thumb to build x turns at x diameter.
>

Buck:

Personally, I just use a big toroid with sufficient turns of coax looped through it (if using large diameter coax, I stack two or more toroids.) Ferrite beads are another path one can utilize ...

I consider a +jX of 10X the coax impedance at the freq(s) in question sufficient (and yes, I know some get by with 5X, and 5X is much more "handleable" at 160m)--it is just a glorified choke; examine all the formulas, equations, tables and charts you wish, and complete your experiments--you will only reach this same conclusion. Since you are only choking the currents on the outside of the braid, too much +jX is not a real critical consideration--having enough is ...

Unfortunately, no black magic is used in its construction, but still, and even at my age, I am fond of fairy-tales :-(

Others who have actually used the air core chokes of coax would be, better, able to provide you with real world data, no doubt.

With the junk drawer of toroids I purchased decades ago--I have a lifetime supply. (Indeed, I may need another lifetime to make full use of 'em!)

Regards,
JS

2371. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 20:25:16 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <4ft283lg66sa3ko9ocvmpmphqj95g3bqck@4ax.com>
Source record: 39579

On Tue, 26 Jun 2007 11:44:13 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>Buck wrote:
>
> > ...
>> It doesn't sound like the descriptions I am hearing.
>
>Hopefully, this URL will take you right to a schematic of the antenna:
>
>http://tinyurl.com/2tqon2
>
>JS

The section below with pictures made a difference. I saw that the
patent is in concept, that is the arrangement of the coils for the
desired effect and the design of coils which can be helical, squared
off, etc.

Thanks.

Buck
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2372. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 20:34:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5rt9k$fp6$1@nnrp.linuxfan.it>
Source record: 39580

Buck wrote:

> ...
> The section below with pictures made a difference. I saw that the
> patent is in concept, that is the arrangement of the coils for the
> desired effect and the design of coils which can be helical, squared
> off, etc.
>
> Thanks.
>
> Buck

Buck:

Yeah, all that alright.

However, he also claims the "arrangement" he has increases the impedance of the 1/4 wave shortened antenna to 72-100 ohms. This is interesting in and of itself, shortened antennas tend to have impedances in the single digits and are difficult to match efficiently ...

I am just beginning to toy with this version, maybe can get serious this weekend ...

Regards,
JS

2373. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:06:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5rvhe$3p$1@news.service.uci.edu>
Source record: 39435

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> Cecil Moore wrote:
>>
>>> Jim, you and others have disagreed with definitions in the IEEE
>>> Dictionary and implied it is not worth the paper upon which it is
>>> printed. One need only to access Google to verify that fact.
>
>
> Accessing Google, the first thing I found was:
>
> Jim Kelley wrote:
> > ... nowhere will
> > you see the IEEE refer to watts traveling through a wire.
>
> Yet the IEEE says:
> "power-flow vector ... giving magnitude and direction of *power*
> per unit-area *propagating* in the wave."
>
> The unit of power is the watt. Waves travel through wires. The
> IEEE Dictionary says, in so many words, that watts per unit
> area are propagating in the wave along the wire. "Propagating"
> and "flowing" are close enough to be considered synonyms.

Thus illustrating your belief that the IEEE claims that power propagates through wires. Obviously, if the question were put to them, they would say they were defining the Poynting Vector, not inventing a new natural phenomenon. It is your belief here with which I disagree. That has always been my point, as is plainly evident from your quote.

73, AC6XG

2374. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:07:00 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns995BAE3493EF2mcoslocomcastnet@216.196.97.136>
Source record: 39431

Jim Kelley <jwkelley@uci.edu> wrote in
news:f5pa3e$k88$1@news.service.uci.edu:

> Time for group therapy. :-)

Well, that works too.

- 73 de Mike KB3EIA -

2375. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:08:52 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns995BAE8572067mcoslocomcastnet@216.196.97.136>
Source record: 39432

Tom Ring <news0003@taring.org> wrote in
news:468086ce$0$17200$39cecf19@news.twtelecom.net:

> More like a group admission of what they have stated. Hugs are west
> coast BS.

I tend to agree. But it would be a hoot to get Cecil and Jim in a group
hug. Maybe even just an 807 or two.

- 73 de Mike KB3EIA -

2376. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:13:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8gv283l571u25gmrs4jacevqqc00frb2to@4ax.com>
Source record: 39433

On Tue, 26 Jun 2007 08:58:59 -0700, art <aunwin@insightbb.com> wrote:

>So you cannot supply or point to an instance where a Gaussian antenna
>is clearly represented using the Gaussian law of Statics.

There is no such thing. Given that you haven't gotten a grasp on what constitutes "Gauss' Law," you are going to be forever fishing for validation.

All the toads you've kissed, you have later spit on for not becoming Princes of your cause. That, or they've hopped off into the bushes leaving you to proclaim their valuable support, erudition, and academic majesty; and who only left because they became sullied by mixing with us in this viper pit. ;-)

73's
Richard Clark, KB7QHC

2377. Re: Should I use a balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:18:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3k0383hqsotgrmcp9muj9mh7rlj950afqq@4ax.com>
Source record: 39434

On Sun, 24 Jun 2007 13:51:30 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

>Should I:
>1 - Don't worry, be happy.
>2 - Run right out and install one right now.
>3 - Wait until the thing falls down, then put one on.

Yes.

73's
Richard Clark, KB7QHC

2378. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 21:21:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Xrfgi.8117$9b5.7255@trndny05>
Source record: 39436

"art" <aunwin@insightbb.com> wrote in message
news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> Ok, lets try it this way... step by step, inch by inch, we may yet
>> figure
>> out what this antenna is.
>>
>> First question:
>> What is the least number of wires needed to build a gaussian antenna?
>
> Not necessary Dave. Richard is very familiar with the subject at hand
> as well as its underpinnings that can be understood by EEs
> and is providing a reference that will make all things clear.
> You asked for it and your wish is going to be granted in a clear
> and precise manner that you and the group have requested.
> You should now be able to build it yourself with out mumbo jumbo
> from me to confuse you.
> No need for me anymore, you now have an expert at your call.
> Don't forget Poyntings input.
> Art
>
whats a 'Richard'??

I want to hear it straight from the source. I have asked over and over for you to define the terms and you can't put it into words this poor engineer can understand, so i thought we would try to build an example from the bottom up. but if you can't help with that then maybe the whole thing is just out of my reach and i should go back to good old yagis and phased arrays.

2379. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 22:17:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Tfggi.3943$bj5.774@trndny07>
Source record: 39437

```
"art" <aunwin@insightbb.com> wrote in message
news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
> On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>>
>>
>>
>> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> Ok, lets try it this way... step by step, inch by inch, we may yet
>> >> figure
>> >> out what this antenna is.
>>
>> >> First question:
>> >> What is the least number of wires needed to build a gaussian antenna?
>>
>> > Not necessary Dave. Richard is very familiar with the subject at hand
>> > as well as its underpinnings that can be understood by EEs
>> > and is providing a reference that will make all things clear.
>> > You asked for it and your wish is going to be granted in a clear
>> > and precise manner that you and the group have requested.
>> > You should now be able to build it yourself with out mumbo jumbo
>> > from me to confuse you.
>> > No need for me anymore, you now have an expert at your call.
>> > Don't forget Poyntings input.
>> > Art
>>
>> whats a 'Richard'??
>>
>> I want to hear it straight from the source. I have asked over and over
>> for
>> you to define the terms and you can't put it into words this poor
>> engineer
>> can understand, so i thought we would try to build an example from the
>> bottom up. but if you can't help with that then maybe the whole thing is
>> just out of my reach and i should go back to good old yagis and phased
>> arrays.- Hide quoted text -
>>
>> - Show quoted text -
>
> Sounds reasonable
>
if it sounds so reasonable, how many wires does it take?
```

2380. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 22:34:54 UTC
From: You <You@shadow.orgs>
Message-ID: <You-8AA01C.14343626062007@netnews.worldnet.att.net>
Source record: 39438

In article <f5p4pl$7hb$2@nntp1.jpl.nasa.gov>,
Jim Lux <james.p.lux@jpl.nasa.gov> wrote:

> Karl NVW wrote:
> > eganders wrote:
> >
> >> I am a consultant for an AVL (automatic vehicle location system)
> >> system used by the Southeastern counties of Michigan. The system is
> >> used on winter maintenance vehicles and works on 900 MHz. The
> >> vehicles are often stored overnight in metal buildings where it is
> >> difficult to obtain transceiver communication from the AVL system. Is
> >> there a low cost (possibly passive) way to port 900 MHz radio
> >> transmissions into these buildings?
> >>
> >> Thanks,
> >>
> >> Eric Anderson
> >>
> > One would expect a person who is acting professionally as an RF
> > consultant to already have significant knowledge in this area. I
> > realize this is a government job, but I wouldn't hire a day laborer to
> > act as a master carpenter or project manager. Please don't bill the
> > transit property for your time spent here trying to learn things in a
> > subject are which you're supposed to already have mastered.
>
> Our man Eric might not be a RF consultant, eh? Perhaps he's a software
> guy, or a system integrator, or looking for general ideas before leaping
> out and hiring an RF consultant?
>

sounds more like a Bookkeeper, turned Corp. IT Guru, only because noone
else wanted the job, and he got stuck with it. Lack of Knowledge of the
Technology, doesn't make one incompitant, Not asking the right questions,
DOES.....

2381. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 23:03:56 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <wXggi.5200$yN.3917@trnddc07>
Source record: 39439

"You" <You@shadow.orgs> wrote in message
news:You-8AA01C.14343626062007@netnews.worldnet.att.net...
> In article <f5p4pl$7hb$2@nntp1.jpl.nasa.gov>,
> Jim Lux <james.p.lux@jpl.nasa.gov> wrote:
>
>> Karl NVW wrote:
>> > eganders wrote:
>> >
>> >> I am a consultant for an AVL (automatic vehicle location system)
>> >> system used by the Southeastern counties of Michigan. The system is
>> >> used on winter maintenance vehicles and works on 900 MHz. The
>> >> vehicles are often stored overnight in metal buildings where it is
>> >> difficult to obtain transceiver communication from the AVL system. Is
>> >> there a low cost (possibly passive) way to port 900 MHz radio
>> >> transmissions into these buildings?
>> >>
>> >> Thanks,
>> >>
>> >> Eric Anderson
>> >>
What the heck....I'll give an opinion, since no one else has.
You might try a passive repeater antenna system. It would consist of an
outside antenna (preferrably directional with gain) pointed at the distant
station, connected by a transmission line to an antenna as near as possible
to the maintenance vehicles.

I say "try" because only a small part of the radiated power is intercepted
by the passive repeater receive antenna. Then that small part is
re-radiated in a pattern such a much smaller signal arrives at the ultimate
antenna.

If you have homebrewing 900 mHz antenna skills, test hardware can be
constructed rather inexpensively.

2382. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 23:09:13 UTC
From: Dave <noone@nowhere.com>
Message-ID: <t0hgi.8130$9b5.5044@trndny05>
Source record: 39440

```
"art" <aunwin@insightbb.com> wrote in message
news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
> On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>>
>>
>>
>> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>>
>> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>>
>> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> Ok, lets try it this way... step by step, inch by inch, we may yet
>> >> >> figure
>> >> >> out what this antenna is.
>>
>> >> >> First question:
>> >> >> What is the least number of wires needed to build a gaussian
>> >> >> antenna?
>>
>> >> > Not necessary Dave. Richard is very familiar with the subject at
>> >> > hand
>> >> > as well as its underpinnings that can be understood by EEs
>> >> > and is providing a reference that will make all things clear.
>> >> > You asked for it and your wish is going to be granted in a clear
>> >> > and precise manner that you and the group have requested.
>> >> > You should now be able to build it yourself with out mumbo jumbo
>> >> > from me to confuse you.
>> >> > No need for me anymore, you now have an expert at your call.
>> >> > Don't forget Poyntings input.
>> >> > Art
>>
>> >> whats a 'Richard'??
>>
>> >> I want to hear it straight from the source. I have asked over and
>> >> over
>> >> for
>> >> you to define the terms and you can't put it into words this poor
>> >> engineer
>> >> can understand, so i thought we would try to build an example from the
>> >> bottom up. but if you can't help with that then maybe the whole thing
```

>> >> is
>> >> just out of my reach and i should go back to good old yagis and phased
>> >> arrays.- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > Sounds reasonable
>>
>> if it sounds so reasonable, how many wires does it take?- Hide quoted
>> text -
>>
>> - Show quoted text -
>
> As many as you want and have fun.
> The subject is dead. Let it go
> Join the boiling water saga that
> is where the action is
> Art
>
no, this is my subject so i'll say when it's dead... i don't want to know
how many i can use, i want to know the minimum number necessary.

2383. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 23:36:48 UTC
From: Dave <noone@nowhere.com>
Message-ID: <kqhgi.6812$G85.3074@trndny08>
Source record: 39441

```
"art" <aunwin@insightbb.com> wrote in message
news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
> On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>>
>>
>>
>> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >
>> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >
>> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >
>> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>> >> >> >
>> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> Ok, lets try it this way... step by step, inch by inch, we may
>> >> >> >> >> yet
>> >> >> >> >> figure
>> >> >> >> >> out what this antenna is.
>> >> >> >> >
>> >> >> >> >> First question:
>> >> >> >> >> What is the least number of wires needed to build a gaussian
>> >> >> >> >> antenna?
>> >> >> >> >
>> >> >> > Not necessary Dave. Richard is very familiar with the subject at
>> >> >> > hand
>> >> >> > as well as its underpinnings that can be understood by EEs
>> >> >> > and is providing a reference that will make all things clear.
>> >> >> > You asked for it and your wish is going to be granted in a clear
>> >> >> > and precise manner that you and the group have requested.
>> >> >> > You should now be able to build it yourself with out mumbo jumbo
>> >> >> > from me to confuse you.
>> >> >> > No need for me anymore, you now have an expert at your call.
>> >> >> > Don't forget Poyntings input.
>> >> >> > Art
>> >> >> >
>> >> >> whats a 'Richard'??
>> >> >
>> >> I want to hear it straight from the source. I have asked over and
```

>> >> >> over
>> >> >> for
>> >> >> you to define the terms and you can't put it into words this poor
>> >> >> engineer
>> >> >> can understand, so i thought we would try to build an example from
>> >> >> the
>> >> >> bottom up. but if you can't help with that then maybe the whole
>> >> >> thing
>> >> >> is
>> >> >> just out of my reach and i should go back to good old yagis and
>> >> >> phased
>> >> >> arrays.- Hide quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > Sounds reasonable
>>
>> >> if it sounds so reasonable, how many wires does it take?- Hide quoted
>> >> text -
>>
>> >> - Show quoted text -
>>
>> > As many as you want and have fun.
>> > The subject is dead. Let it go
>> > Join the boiling water saga that
>> > is where the action is
>> > Art
>>
>> no, this is my subject so i'll say when it's dead... i don't want to know
>> how many i can use, i want to know the minimum number necessary.- Hide
>> quoted text -
>>
>> - Show quoted text -
>
> One
>

ok, thats a start.

assuming i want to operate on 14195khz, how long should the wire be?

2384. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-26 23:54:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6Hhgi.22504$C96.13798@newssvr23.news.prodigy.net>
Source record: 39442

Jim Kelley wrote:
> Thus illustrating your belief that the IEEE claims that power propagates
> through wires. Obviously, if the question were put to them, they would
> say they were defining the Poynting Vector, not inventing a new natural
> phenomenon. It is your belief here with which I disagree. That has
> always been my point, as is plainly evident from your quote.

Jim, you are free to believe that the moon is made
out of green cheese. The irony is that you convinced
me years ago to give up on the concept of power
propagating as described in the IEEE Dictionary.

So now I don't believe in propagating power and
"that is my belief here with which you disagree"???

Seems whatever side I take, right or wrong, you
are determined to take the other side so you can
continue arguing about it.
--
73, Cecil http://www.w5dxp.com

2385. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 00:09:24 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <VUhgi.22506$C96.10259@newssvr23.news.prodigy.net>
Source record: 39443

Mike Coslo wrote:
> I tend to agree. But it would be a hoot to get Cecil and Jim in a group
> hug. Maybe even just an 807 or two.

Strange thing is that Jim and I were once in agreement.
He originally provided me with the Melles-Groit web
page which agrees with my concept of wave interaction
being able to cause 100% reflection in the absence
of a short, open, or purely reactive impedance.

Now, whatever I say, right or wrong, he disagrees with
it. He once talked me out of the IEEE concept of
"power propagating in a wave". Now he seems to be
saying the IEEE was right after all.
--
73, Cecil http://www.w5dxp.com

2386. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 00:30:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5sb3q$9ld$1@news.service.uci.edu>
Source record: 39444

Cecil Moore wrote:

> Now he seems to be
> saying the IEEE was right after all.

Seems? I believe I mentioned quite explicitly that I have never
claimed that the IEEE was wrong.

ac6xg

2387. Re: Looking back

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 01:07:43 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <HLigi.46$Q36.35@newsfe12.lga>
Source record: 39445

"art" <aunwin@insightbb.com> wrote in message
news:1182903860.246841.63320@m36g2000hse.googlegroups.com...
> If the American Indian had foresight would they still
> have required beads before they gave amnesty to
> immigrants? Would they have built a virtual border fence
> with the beads by putting a string thru them?
> How many Mexicans will it take to go back to Mexico
> and make it the 52nd state of America? Is there a Bay of Pigs
> south of the border? Can the Officers speak English to up the moral
> of the returning invadors? Who will collect money to enable Roy to
> return from Germany because of the lack of sales of ELNEC.?
> Can we send him 'boots that were made for walking'
> All very serious questions for when the 'water' boils away
> Art KB9MZ......XG
>

Brilliant my dear Artson, brilliant!!!

2388. Danger to antenna test range?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 01:16:17 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <JTigi.47$Q36.35@newsfe12.lga>
Source record: 39446

From www.FreeRepublic.com

BREAKING NEWS: Fire in Garden Canyon
Sierra Vista Herald/Review ^ | Bill Hess

Posted on 06/26/2007 8:58:15 PM EDT by SandRat

FORT HUACHUCA - A fire on this southern Arizona post Tuesday is thought to have been caused by a ricocheting shell from a 40 mm grenade launcher, post officials said.

The blaze, which around noon had consumed about 200 acres on the fort, started about 10:30 a.m.

Using the special range on the post were soldiers of the Arizona Army National Guard's 860th Military Police Company, according to fort officials. The company, whose headquarters is in Casa Grande, is at the fort doing its annual two-week training.

Fighting the fire is a number of U.S. Forest Service assets, including two Hot Shot Crews, one from Payson and the other from Heber, local Forest Service firefighters, a water-dropping helicopter and a single-engine air tanker and a twin engine heavy aircraft, both of which are dropping slurry.

Bill Wilcox, the fire manager for the Coronado National Forest's Sierra Vista Ranger District, said more than 50 firefighters, which also include fort firefighters, were on the scene.

Because of concerns the blaze may double in size Tuesday afternoon, Wilcox said he ordered additional Hot Shot crews and more air assets.

Concerns of the fire spreading led to the closure of Garden Canyon, said post spokeswoman Tanja Linton.

Additionally, individuals were sent up into Garden Canyon to ask birders to leave, she said.

Soldiers from the 309th Military Intelligence Battalion also were training in the canyon area, and a decision was made to remove the estimated 250 individuals for safety reasons, Linton said.

There is no estimated time the fire will be contained.

The investigation into the fire continues.

2389. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 02:32:34 UTC
From: richardharrison@webtv.net
Message-ID: <1626-4681CC42-75@storefull-3253.bay.webtv.net>
Source record: 39447

Jim Lux wrote:
"Is there a low cost (possibly passive) way to port 900 MHz radio transmissions into these buildings?"

I`m assuming full-duplex (simultaneous transmissions and receptions are required. Half-duplex 2-way extensions indoors, through tunnels, etc. are routinely obtained using a land-mobile station antenna port connected to TV twinlead run through the building, tunnel, etc. It works like gangbusters. Special Andrew Corp. rafiating Heliax is not required.

For full-duplex, it is only slightly more complicated to do something silimiar. A metal building which can keep radio signals out should also keep them in.

First I would try the simple expedient of antennas back-to-back, one outside the building and the other inside. Problem is in the huge signal loss in the first few feet from the re-transmission antenna. As much as 99% of the signal is likely lost. That may or may not be acceptable.

For the full-duplex solution, you will need two amplifiers, one for each direction of transmission. These go inside the buildiing. The input of one amplifier is connected to one of the outside antennas. The amplifier output is connected to 300-ohm TV twinlead which is run around the interior of the builrding so that some part of the twinlead is never very far from anyplace a vehicle may be parked in the buillding.

The input of the second amplifier is connected to a similarly placed run of twinlead. The two twinlead runs are separated so that the input of the second amplifier isn`t overloaded by the output of the first amplifier and that a feedback loop isn`t created. output of the second amplifier is fed to its antenna outside the building.

Separate frequencies are used in full-duplex systems so the probability of feedback is small.

I suppose the AVL system is using a satellite and highly directive antennas can be used. 900-MHz is a low microwave frequency so cheap consumer-electronics amplifiers may be applicable. A 900-MHz dish antenna with significant gain is much larger than those used for the Dish TV network. Ordinary microwave systems use circulators to connect their receivers and transmitters to a common antenna. The vehicles in your AVL system surely don`t use big dishes so there is probably no need for high-gain antennas. Your system may be a one-way system for all I know. You can use applicable parts of what I described above.

Best regards, Richard Harrison, KB5WZI

2390. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 02:43:40 UTC
From: richardharrison@webtv.net
Message-ID: <1625-4681CEDC-667@storefull-3253.bay.webtv.net>
Source record: 39448

Art wrote:
"Whatever wire you have throw it away and get a longer one."

That response is incompatible with Art`s previous specification of an antenna resonant in its parts and in total.

Best regards, Richard Harrison, KB5WZI

2391. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 03:00:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <opkgi.16049$2v1.4325@newssvr14.news.prodigy.net>
Source record: 39449

Jim Kelley wrote:
>
> Cecil Moore wrote:
>> Now he seems to be saying the IEEE was right after all.
>
> Seems? I believe I mentioned quite explicitly that I have never claimed
> that the IEEE was wrong.

In 1998, as a result of me quoting the IEEE Dictionary phrase,
"power propagating in a wave", you made postings saying that
power doesn't flow. Although you did not explicitly claim the
IEEE was wrong, you clearly implicitly disagreed with the IEEE
concept of "power propagating in a wave", which I supported at
that time. If you had not disagreed, you and I would not have
been arguing.
--
73, Cecil http://www.w5dxp.com

2392. Re: Gaussian antenna planar form

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 03:08:50 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4681d4d4$0$17202$39cecf19@news.twtelecom.net>
Source record: 39450

Richard Clark wrote:
> On Tue, 26 Jun 2007 05:17:45 -0700, art <aunwin@insightbb.com> wrote:
>
>> If you would be kind enough to give me the name
>> of the book I will put an order in for it.
>
> Arthur,
>
> The subject has been discussed by several who agree to the authority,
> including Dr. D. If you choose to snip out that title in your
> response here to only ask for it again - what does that demonstrate?
>
> The names of inventors are suitably unique for a general search.
>
> Earlier citations were full to authors, works, chapters, tables, and
> publishers to further refine any search.
>
> As late as 36 hours ago, Mark supplied the specific link as I've
> mentioned three times now. I see you have tendered no thanks to him
> for his effort, nor have applauded his memory recall in your behalf.
> Such is the shallowness of your generousity.
>
> You don't even have to face your own advice to others telling them to
> do their own search. You merely have to review the correspondence (no
> more complex than double-clicking the link Mark provided).
>
> 73's
> Richard Clark, KB7QHC

He is a lost cause, Richard. I plonked him months ago, and only see his reponses through those who still waste their time with him. If we all filtered him, he would disappear.

tom
K0TAR

2393. Re: Yagi Question: Where To Buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 03:14:04 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <1Ckgi.456669$JN6.48087@newsfe17.phx>
Source record: 39451

"Robert11" <rgsros@notme.com> wrote in message
news:bpWdnacJH8gmJujbnZ2dnUVZ_oqmnZ2d@comcast.com...
> Hi,
>
> Not very knowledgeable at all re antennas, but let me ask the following,
> please.
>
> Would like to try a Yagi for up in my attic to hopefully receive maritime
> comms from the harbor, about 20 miles away, on my scanner (receive only
> usage).

< snip >

> Much thanks,
> Bob

CAUTION: If you buy/build/borrow a yagi, please note that the marine band signals will be vertically polarized. Mount the yagi with the elements up-and-down, not side-to-side, like a TV antenna. Having the polarization wrong will be like moving many miles away further from the harbor -- not good.

2394. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 03:52:41 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5smurbag1@nnrp.linuxfan.it>
Source record: 39452

art wrote:

> ...
> but it does come to mind that the aperture, which is related to gain,
> ...
> Regards
> Art

Yes Art, this IS the most perplexing of all ... the aperture ...

How can you reduce an antenna with a "capture" of 1, to a "capture" of .3333333 and not suffer a signal loss of related proportions.

I ponder this.

Regards,
JS

2395. Re: Danger to antenna test range?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 04:19:22 UTC
From: Wes Stewart <n7ws*@*yahoo.com>
Message-ID: <fho3831k88uu17k3qaggd34ls21604bua7@4ax.com>
Source record: 39453

On Tue, 26 Jun 2007 21:16:17 -0400, "Yuri Blanarovich"
<K3BU@optonline.net> wrote:

If you're talking about this range:

http://www.epg.army.mil/Test_Beds/ATF.htm

I doubt it.

What little vegetation that's there would burn up in about five
minutes.

Here's a sample:

http://k6mhe.com/n7ws/misc/Compact_Range.jpg

BTW, you get quite a view from the top of the "Red Tower."

http://k6mhe.com/n7ws/misc/Range_3.jpg

2396. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 05:16:39 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5srs9$ua8$1@nnrp.linuxfan.it>
Source record: 39454

art wrote:

> ...

Art:

For my "rule of thumb" uses, the equation:

0.13 x (wavelength)2

gets me into the ballpark. And, although the aperture of a thin wire is almost nil, it is pictured as an ellipse-squared in the material I have digested, the preceding equation giving its effective aperture area ...

You got anything better?

Regards,
JS

2397. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 05:19:06 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ss0s$ua8$2@nnrp.linuxfan.it>
Source record: 39455

John Smith I wrote:

I also meant to include in the above post, this antenna performs admirably well with NO top hat (only a short whip) ... indeed, in that form the "disrespect for aperture" is most notable.

JS

2398. Re: Looking back

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 11:05:23 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1182942323.294712.201820@q75g2000hsh.googlegroups.com>
Source record: 39456

On Jun 26, 9:07 pm, "Yuri Blanarovich" <K...@optonline.net> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1182903860.246841.63320@m36g2000hse.googlegroups.com...
>
> > If the American Indian had foresight would they still
> > have required beads before they gave amnesty to
> > immigrants? Would they have built a virtual border fence
> > with the beads by putting a string thru them?
> > How many Mexicans will it take to go back to Mexico
> > and make it the 52nd state of America? Is there a Bay of Pigs
> > south of the border? Can the Officers speak English to up the moral
> > of the returning invadors? Who will collect money to enable Roy to
> > return from Germany because of the lack of sales of ELNEC.?
> > Can we send him 'boots that were made for walking'
> > All very serious questions for when the 'water' boils away
> > Art KB9MZ......XG
>
> Brilliant my dear Artson, brilliant!!!

Well gee, in regards to Roy I have paid him for ElNec, EzNec, and EzNec
+ 5.0... Seems right there should be enough pesos to book passage in
the bilge of some tramp freighter... Whilst listening to the rumble
and clanging of the ancient engine on the tramp he will have time to
work on 6.0, thus refreshing his cold beer fund once he is back in
civilization...

denny / k8do

2399. Re: Danger to antenna test range?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 12:35:08 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <7Qsgi.5757$A17.5251@newsfe12.lga>
Source record: 39457

Glad that test range would be out of danger. I just wondered if there was any chance that it was endangered. I heard about it, never had chance to see it. Our son graduated from Tucson UofA, he was skydiving at the base, contemplating to become AF pilot.

Unfortunate that the "environmentalblists" are causing forests not to be maintained and not having clearing for the roads for fire breaks and easy access by the firefighters.

73 Yuri, K3BU

"Wes Stewart" <n7ws*@*yahoo.com> wrote in message
news:fho3831k88uu17k3qaggd34ls21604bua7@4ax.com...
> On Tue, 26 Jun 2007 21:16:17 -0400, "Yuri Blanarovich"
> <K3BU@optonline.net> wrote:
>
> If you're talking about this range:
>
> http://www.epg.army.mil/Test_Beds/ATF.htm
>
> I doubt it.
>
> What little vegetation that's there would burn up in about five
> minutes.
>
> Here's a sample:
>
> http://k6mhe.com/n7ws/misc/Compact_Range.jpg
>
> BTW, you get quite a view from the top of the "Red Tower."
>
> http://k6mhe.com/n7ws/misc/Range_3.jpg
>
>

2400. Re: Looking back

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 13:13:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <7478c$46826263$18d6b40c$27523@KNOLOGY.NET>
Source record: 39458

Who will collect money to enable Roy to
>> > return from Germany because of the lack of sales of ELNEC.?
>> > Can we send him 'boots that were made for walking'
>> > All very serious questions for when the 'water' boils away
>> > Art KB9MZ......XG
>>
>> Brilliant my dear Artson, brilliant!!!
>
> Well gee, in regards to Roy I have paid him for ElNec, EzNec, and EzNec
> + 5.0... Seems right there should be enough pesos to book passage in
> the bilge of some tramp freighter... Whilst listening to the rumble
> and clanging of the ancient engine on the tramp he will have time to
> work on 6.0, thus refreshing his cold beer fund once he is back in
> civilization...
>
> denny / k8do
>
I'm contemplating purchase of EZNEC 5.0 just to play with two
Flag antennas on one rotatable mast. Why shouldn't I?
Similar to this one:
http://taliaphoto.com/n4is/BIG_DUAL_LOOP.html
Mike

2401. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 15:01:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5tu5akfi1@nnrp.linuxfan.it>
Source record: 39459

John Smith I wrote:
> Actually, old news from 3 years ago ...
>
> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> JS

I am taking for granted that everyone realizes the inventor can be
emailed directly:

RVI3489U@URI.EDU

Regards,
JS

2402. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 15:18:07 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <Pcvgi.18195$y_7.8992@newssvr27.news.prodigy.net>
Source record: 39460

Richard Harrison wrote:
> Art wrote:
> "Whatever wire you have throw it away and get a longer one."
>
> That response is incompatible with Art`s previous specification of an
> antenna resonant in its parts and in total.
>
> Best regards, Richard Harrison, KB5WZI
>

I think Art senses a Socratic interrogation developing here, that might be an attempt to discredit his ideas. People with theories don't like to have them questioned.
73,
Tom Donaly, KA6RUH

2403. Re: Looking back

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 15:23:13 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <Bhvgi.18196$y_7.3862@newssvr27.news.prodigy.net>
Source record: 39461

art wrote:
> If the American Indian had foresight would they still
> have required beads before they gave amnesty to
> immigrants? Would they have built a virtual border fence
> with the beads by putting a string thru them?
> How many Mexicans will it take to go back to Mexico
> and make it the 52nd state of America? Is there a Bay of Pigs
> south of the border? Can the Officers speak English to up the moral
> of the returning invadors? Who will collect money to enable Roy to
> return from Germany because of the lack of sales of ELNEC.?
> Can we send him 'boots that were made for walking'
> All very serious questions for when the 'water' boils away
> Art KB9MZ......XG
>

It takes talent to make an invidious word salad.
73,
Tom Donaly, KA6RUH

2404. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 18:10:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f5u98nspv1@news.service.uci.edu>
Source record: 39462

Cecil Moore wrote:
>
> In 1998, as a result of me quoting the IEEE Dictionary phrase,
> "power propagating in a wave", you made postings saying that
> power doesn't flow. Although you did not explicitly claim the
> IEEE was wrong, you clearly implicitly disagreed with the IEEE
> concept of "power propagating in a wave", which I supported at
> that time. If you had not disagreed, you and I would not have
> been arguing.

Your memory apparently fails you a bit here. If you'll take a better look at those correspondences you'll find that what actually transpired is you were attempting to use the IEEE definitions to support your argument that power flows in a transmission line. It was my contention then that the IEEE did not support such a view, and that remains my view.

73, Jim AC6XG

2405. Re: getting radio communication into a metal building

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 18:41:18 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-9DB44D.14411827062007@nntp.aioe.org>
Source record: 39463

In article <1182253342.688113.245470@g4g2000hsf.googlegroups.com>,
eganders <eganders@yahoo.com> wrote:

> The system is
> used on winter maintenance vehicles and works on 900 MHz. The
> vehicles are often stored overnight in metal buildings where it is
> difficult to obtain transceiver communication from the AVL system. Is
> there a low cost (possibly passive) way to port 900 MHz radio
> transmissions into these buildings?

Eric-

As others have mentioned, a two-antenna system may work. If that is not sufficient, there are bidirectional amplifiers that might make it work.

If the AVL system uses packet radio technology, another packet radio transceiver close to the building can be used as a digital repeater. Depending on just how shielded the metal buildings are, being close may be sufficient. The AVL system would need to be programmed to include the repeater's ID for repeated transmissions.

You might also consider a phone line connection to a low power transceiver inside each of the buildings. This may be the most dependable method.

Fred
K4DII

2406. CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 18:45:49 UTC
From: "Ken S. Tucker" <dynamics@vianet.on.ca>
Message-ID: <1182969949.201264.255100@d30g2000prg.googlegroups.com>
Source record: 39464

Hi fella's
Let me know if I should go to another group.
We're doing experiments with UHF antennae,
design.
CD's have a conductive aluminum substrate,
and diameter in UHF range.
We got into experimenting with them and have
unusual results, some very good, using them
as reflectors and directors.
Anyone else screwed around with these?
Regards
Ken S. Tucker

2407. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 20:43:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%Zzgi.9071$c06.6470@newssvr22.news.prodigy.net>
Source record: 39465

Jim Kelley wrote:
> It was my contention
> then that the IEEE did not support such a view, and that remains my view.

Do you support the IEEE's contention that
"power propagates in a wave"? It's a simple
yes/no question, Jim.

You are between a rock and a hard place so we
can expect nothing except infinite diversions
and zero straight answers.
--
73, Cecil http://www.w5dxp.com

2408. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 21:02:39 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PfAgi.7535$G85.4939@trndny08>
Source record: 39466

```
"art" <aunwin@insightbb.com> wrote in message
news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
> On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>
>> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >>
>> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >>
>> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >>
>> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >>
>> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>> >> >> >>
>> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> Ok, lets try it this way... step by step, inch by inch, we
>> >> >> >> >> may
>> >> >> >> >> yet
>> >> >> >> >> figure
>> >> >> >> >> out what this antenna is.
>> >> >> >> >>
>> >> >> >> >> First question:
>> >> >> >> >> What is the least number of wires needed to build a gaussian
>> >> >> >> >> antenna?
>> >> >> >> >>
>> >> >> >> > Not necessary Dave. Richard is very familiar with the subject
>> >> >> >> > at
>> >> >> >> > hand
>> >> >> >> > as well as its underpinnings that can be understood by EEs
>> >> >> >> > and is providing a reference that will make all things clear.
>> >> >> >> > You asked for it and your wish is going to be granted in a
>> >> >> >> > clear
```

>> >> >> >> > and precise manner that you and the group have requested.
>> >> >> >> > You should now be able to build it yourself with out mumbo
>> >> >> >> > jumbo
>> >> >> >> > from me to confuse you.
>> >> >> >> > No need for me anymore, you now have an expert at your call.
>> >> >> >> > Don't forget Poyntings input.
>> >> >> >> > Art
>>
>> >> >> >> whats a 'Richard'??
>>
>> >> >> >> I want to hear it straight from the source. I have asked over
>> >> >> >> and
>> >> >> >> over
>> >> >> >> for
>> >> >> >> you to define the terms and you can't put it into words this
>> >> >> >> poor
>> >> >> >> engineer
>> >> >> >> can understand, so i thought we would try to build an example
>> >> >> >> from
>> >> >> >> the
>> >> >> >> bottom up. but if you can't help with that then maybe the whole
>> >> >> >> thing
>> >> >> >> is
>> >> >> >> just out of my reach and i should go back to good old yagis and
>> >> >> >> phased
>> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> - Show quoted text -
>>
>> >> >> > Sounds reasonable
>>
>> >> >> if it sounds so reasonable, how many wires does it take?- Hide
>> >> >> quoted
>> >> >> text -
>>
>> >> >> - Show quoted text -
>>
>> >> > As many as you want and have fun.
>> >> > The subject is dead. Let it go
>> >> > Join the boiling water saga that
>> >> > is where the action is
>> >> > Art
>>
>> >> no, this is my subject so i'll say when it's dead... i don't want to
>> >> know
>> >> how many i can use, i want to know the minimum number necessary.- Hide
>> >> quoted text -
>>
>> >> - Show quoted text -
>>

>> > One
>>
>> ok, thats a start.
>>
>> assuming i want to operate on 14195khz, how long should the wire be?-
>> Hide quoted text -
>>
>> - Show quoted text -
>
> Whatever wire you have throw it away and get a longer one
>

ok, random length... can do. now how do i connect it to a piece of coax?

2409. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 21:24:13 UTC
From: Dave <noone@nowhere.com>
Message-ID: <1AAgi.2233$t95.443@trndny01>
Source record: 39467

```
"art" <aunwin@insightbb.com> wrote in message
news:1182978801.020398.318990@n2g2000hse.googlegroups.com...
> On 27 Jun, 14:02, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
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>> news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
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>> >> >>news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
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>> >> >> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
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>> >> >> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >> >> >>
>> >> >> >> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
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>> >> >> >> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >> >> >> >>
>> >> >> >> >> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> Ok, lets try it this way... step by step, inch by inch,
>> >> >> >> >> >> >> >> >> >> we
>> >> >> >> >> >> >> >> >> >> may
>> >> >> >> >> >> >> >> >> >> yet
>> >> >> >> >> >> >> >> >> >> figure
>> >> >> >> >> >> >> >> >> >> out what this antenna is.
>> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> First question:
>> >> >> >> >> >> >> >> >> >> What is the least number of wires needed to build a
>> >> >> >> >> >> >> >> >> >> gaussian
>> >> >> >> >> >> >> >> >> >> antenna?
>> >> >> >> >> >> >> >> >>
```

>> >> >> >> >> > Not necessary Dave. Richard is very familiar with the
>> >> >> >> >> > subject
>> >> >> >> >> > at
>> >> >> >> >> > hand
>> >> >> >> >> > as well as its underpinnings that can be understood by EEs
>> >> >> >> >> > and is providing a reference that will make all things
>> >> >> >> >> > clear.
>> >> >> >> >> > You asked for it and your wish is going to be granted in a
>> >> >> >> >> > clear
>> >> >> >> >> > and precise manner that you and the group have requested.
>> >> >> >> >> > You should now be able to build it yourself with out mumbo
>> >> >> >> >> > jumbo
>> >> >> >> >> > from me to confuse you.
>> >> >> >> >> > No need for me anymore, you now have an expert at your
>> >> >> >> >> > call.
>> >> >> >> >> > Don't forget Poyntings input.
>> >> >> >> >> > Art
>>
>> >> >> >> >> whats a 'Richard'??
>>
>> >> >> >> >> I want to hear it straight from the source. I have asked
>> >> >> >> >> over
>> >> >> >> >> and
>> >> >> >> >> over
>> >> >> >> >> for
>> >> >> >> >> you to define the terms and you can't put it into words this
>> >> >> >> >> poor
>> >> >> >> >> engineer
>> >> >> >> >> can understand, so i thought we would try to build an example
>> >> >> >> >> from
>> >> >> >> >> the
>> >> >> >> >> bottom up. but if you can't help with that then maybe the
>> >> >> >> >> whole
>> >> >> >> >> thing
>> >> >> >> >> is
>> >> >> >> >> just out of my reach and i should go back to good old yagis
>> >> >> >> >> and
>> >> >> >> >> phased
>> >> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> >> - Show quoted text -
>>
>> >> >> >> > Sounds reasonable
>>
>> >> >> >> if it sounds so reasonable, how many wires does it take?- Hide
>> >> >> >> quoted
>> >> >> >> text -
>>
>> >> >> >> - Show quoted text -
>>

>> >> >> > As many as you want and have fun.
>> >> >> > The subject is dead. Let it go
>> >> >> > Join the boiling water saga that
>> >> >> > is where the action is
>> >> >> > Art
>>
>> >> >> no, this is my subject so i'll say when it's dead... i don't want
>> >> >> to
>> >> >> know
>> >> >> how many i can use, i want to know the minimum number necessary.-
>> >> >> Hide
>> >> >> quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > One
>>
>> >> ok, thats a start.
>>
>> >> assuming i want to operate on 14195khz, how long should the wire be?-
>> >> Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > Whatever wire you have throw it away and get a longer one
>>
>> ok, random length... can do. now how do i connect it to a piece of
>> coax?- Hide quoted text -
>>
>> - Show quoted text -
>
> O.K. For the last time I will go along until such time
> it is obvious you have other intentions.So I start again.
>
> Make a dipole of random shapes and heights that is resonant
> at your design frequency. Note the radiator can be any length
> as long as it is resonant. For the sake of this discussion
> or interrogation let us use a plain half wave dipole.
> The feed coax feeds the dipole at it's center in the normal way.
> Art KB9MZ......XG
>

ok, so its a plain half wave dipole, fed with normal coax in the normal way.
so what makes it 'gaussian'?

2410. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 21:44:20 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1182980660.994436.206490@g4g2000hsf.googlegroups.com>
Source record: 39468

On Jun 27, 8:18 am, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
> Richard Harrison wrote:
> > Art wrote:
> > "Whatever wire you have throw it away and get a longer one."
>
> > That response is incompatible with Art`s previous specification of an
> > antenna resonant in its parts and in total.
>
> > Best regards, Richard Harrison, KB5WZI
>
> I think Art senses a Socratic interrogation developing here, that might
> be an attempt to discredit his ideas. People with theories don't like to
> have them questioned.
> 73,
> Tom Donaly, KA6RUH

No, Tom, SOME people with theories don't like to have them questioned. I welcome questions. I welcome examples and counter-examples. I would hope anyone wanting a deeper understanding of the universe in which they live would want the same. I like Richard Feynman's image of a huge game board, like a chess board, but we can only see a small part of it, and only watch it over a short period of time. From what little we see, we try to figure out the rules of the game, but we can never be certain we've figured them all out. Accurate, honest reporting of observations is welcome, for it is through them that we can share in the learning. I do tend to distrust those who report observations and are unwilling to openly discuss them.

Cheers,
Tom

2411. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 22:28:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <IwBgi.12621$XH5.7763@trndny02>
Source record: 39469

```
"art" <aunwin@insightbb.com> wrote in message
news:1182981629.699650.270990@c77g2000hse.googlegroups.com...
> On 27 Jun, 14:24, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182978801.020398.318990@n2g2000hse.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 27 Jun, 14:02, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>
>> >> >>news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
>> >>
>> >> >> > On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >>
>> >> >> >> >>news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
>> >> >> >>
>> >> >> >> >> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >>
>> >> >> >> >> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >> >> >> >> >>
>> >> >> >> >> >> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> >> >> Ok, lets try it this way... step by step, inch by
>> >> >> >> >> >> >> >> >> >> >> >> inch,
>> >> >> >> >> >> >> >> >> >> >> >> we
>> >> >> >> >> >> >> >> >> >> >> >> may
>> >> >> >> >> >> >> >> >> >> >> >> yet
>> >> >> >> >> >> >> >> >> >> >> >> figure
>> >> >> >> >> >> >> >> >> >> >> >> out what this antenna is.
```

>>
>> >> >> >> >> >> >> First question:
>> >> >> >> >> >> >> What is the least number of wires needed to build a
>> >> >> >> >> >> >> gaussian
>> >> >> >> >> >> >> antenna?
>>
>> >> >> >> >> >> > Not necessary Dave. Richard is very familiar with the
>> >> >> >> >> >> > subject
>> >> >> >> >> >> > at
>> >> >> >> >> >> > hand
>> >> >> >> >> >> > as well as its underpinnings that can be understood by
>> >> >> >> >> >> > EEs
>> >> >> >> >> >> > and is providing a reference that will make all things
>> >> >> >> >> >> > clear.
>> >> >> >> >> >> > You asked for it and your wish is going to be granted in
>> >> >> >> >> >> > a
>> >> >> >> >> >> > clear
>> >> >> >> >> >> > and precise manner that you and the group have
>> >> >> >> >> >> > requested.
>> >> >> >> >> >> > You should now be able to build it yourself with out
>> >> >> >> >> >> > mumbo
>> >> >> >> >> >> > jumbo
>> >> >> >> >> >> > from me to confuse you.
>> >> >> >> >> >> > No need for me anymore, you now have an expert at your
>> >> >> >> >> >> > call.
>> >> >> >> >> >> > Don't forget Poyntings input.
>> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> whats a 'Richard'??
>>
>> >> >> >> >> >> I want to hear it straight from the source. I have asked
>> >> >> >> >> >> over
>> >> >> >> >> >> and
>> >> >> >> >> >> over
>> >> >> >> >> >> for
>> >> >> >> >> >> you to define the terms and you can't put it into words
>> >> >> >> >> >> this
>> >> >> >> >> >> poor
>> >> >> >> >> >> engineer
>> >> >> >> >> >> can understand, so i thought we would try to build an
>> >> >> >> >> >> example
>> >> >> >> >> >> from
>> >> >> >> >> >> the
>> >> >> >> >> >> bottom up. but if you can't help with that then maybe the
>> >> >> >> >> >> whole
>> >> >> >> >> >> thing
>> >> >> >> >> >> is
>> >> >> >> >> >> just out of my reach and i should go back to good old
>> >> >> >> >> >> yagis
>> >> >> >> >> >> and

>> >> >> >> >> >> phased
>> >> >> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> > Sounds reasonable
>>
>> >> >> >> >> if it sounds so reasonable, how many wires does it take?-
>> >> >> >> >> Hide
>> >> >> >> >> quoted
>> >> >> >> >> text -
>>
>> >> >> >> >> - Show quoted text -
>>
>> >> >> >> > As many as you want and have fun.
>> >> >> >> > The subject is dead. Let it go
>> >> >> >> > Join the boiling water saga that
>> >> >> >> > is where the action is
>> >> >> >> > Art
>>
>> >> >> >> no, this is my subject so i'll say when it's dead... i don't
>> >> >> >> want
>> >> >> >> to
>> >> >> >> know
>> >> >> >> how many i can use, i want to know the minimum number
>> >> >> >> necessary.-
>> >> >> >> Hide
>> >> >> >> quoted text -
>>
>> >> >> >> - Show quoted text -
>>
>> >> >> > One
>>
>> >> >> ok, thats a start.
>>
>> >> >> assuming i want to operate on 14195khz, how long should the wire
>> >> >> be?-
>> >> >> Hide quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > Whatever wire you have throw it away and get a longer one
>>
>> >> ok, random length... can do. now how do i connect it to a piece of
>> >> coax?- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > O.K. For the last time I will go along until such time
>> > it is obvious you have other intentions.So I start again.

>>
>> > Make a dipole of random shapes and heights that is resonant
>> > at your design frequency. Note the radiator can be any length
>> > as long as it is resonant. For the sake of this discussion
>> > or interrogation let us use a plain half wave dipole.
>> > The feed coax feeds the dipole at it's center in the normal way.
>> > Art KB9MZ......XG
>>
>> ok, so its a plain half wave dipole, fed with normal coax in the normal
>> way.
>> so what makes it 'gaussian'?- Hide quoted text -
>>
>> - Show quoted text -
>
> Because it's resonant at the desired frequency. This is the
> basic form of a Gaussian antenna which is also the starting
> point of a Yagi antenna if viewed as a single radiator
> Art
>

so 'gaussian' == 'resonant'
why didn't you say so in the first place?
so a properly tuned yagi-uda array is a 'gaussian' antenna?

2412. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-27 23:23:50 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <mkCgi.7785$bP5.3485@newssvr19.news.prodigy.net>
Source record: 39470

K7ITM wrote:
> On Jun 27, 8:18 am, "Tom Donaly" <dtdon...@sbcglobal.net> wrote:
>> Richard Harrison wrote:
>>> Art wrote:
>>> "Whatever wire you have throw it away and get a longer one."
>>> That response is incompatible with Art`s previous specification of an
>>> antenna resonant in its parts and in total.
>>> Best regards, Richard Harrison, KB5WZI
>> I think Art senses a Socratic interrogation developing here, that might
>> be an attempt to discredit his ideas. People with theories don't like to
>> have them questioned.
>> 73,
>> Tom Donaly, KA6RUH
>
> No, Tom, SOME people with theories don't like to have them
> questioned. I welcome questions. I welcome examples and counter-
> examples. I would hope anyone wanting a deeper understanding of the
> universe in which they live would want the same. I like Richard
> Feynman's image of a huge game board, like a chess board, but we can
> only see a small part of it, and only watch it over a short period of
> time. From what little we see, we try to figure out the rules of the
> game, but we can never be certain we've figured them all out.
> Accurate, honest reporting of observations is welcome, for it is
> through them that we can share in the learning. I do tend to distrust
> those who report observations and are unwilling to openly discuss
> them.
>
> Cheers,
> Tom
>

Hi, Tom,
You're right, I should have written "dogmas." Maybe that's
wrong, too, though. At any rate, a vigorous discussion never hurt anyone.
73,
Tom Donaly, KA6RUH

2413. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 01:23:36 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <%3Egi.565$ca.522@bignews4.bellsouth.net>
Source record: 39471

"Ken S. Tucker" <dynamics@vianet.on.ca> wrote in message
news:1182969949.201264.255100@d30g2000prg.googlegroups.com...
> Hi fella's
> Let me know if I should go to another group.
> We're doing experiments with UHF antennae,
> design.
> CD's have a conductive aluminum substrate,
> and diameter in UHF range.
> We got into experimenting with them and have
> unusual results, some very good, using them
> as reflectors and directors.
> Anyone else screwed around with these?
> Regards
> Ken S. Tucker

Not yet, but how would you "fine tune" one as a director?
Wire antennas are easy to tweak by clipping a bit off the ends.
Lots of folk pick a material easy to work with, but CDs may not fit that
category.

2414. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 01:27:03 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <f5v2pp$46m$1@news.albasani.net>
Source record: 39472

Ken S. Tucker wrote:

> ...

How about the aluminum platters (disks) out of old used hard drives?
They seem they would be much easier to work with ...

JS

2415. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 03:25:57 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2007.06.28.03.25.28@ME.networksplus.net>
Source record: 39473

On Fri, 15 Jun 2007 11:14:51 +0000, Scott wrote:

> I don't think a callbook listing would be acceptable "proof" for the FCC
> to give him credit for having passed the code test in the past. But,
> again, since no code test is required anymore, he can simply re-test for
> any class license and request his old call as a vanity callsign.

Actually, it did provide the necessary proof for 5WPM. One just had to
be careful to include the year of the callbook in the photocopy. I used
old callbooks a number of times at the VEC's recommendation.

But, the point remains that proof of passing the Morse Code exam is now a
moot point, so this is just an acedemic exercise.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds,
the pessimist fears this is true."

2416. AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 04:38:01 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183005481.445745.166800@z28g2000prd.googlegroups.com>
Source record: 39474
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hi:

Please don't be annoyed/offended by my question.

I have a very weird question about electromagnetic radiation,
carriers, and modulators.

Is it mathematically-possible to carry a modulator signal with a
frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
power-10^1,000,000,000) nanosecond?

If it is not mathematically-possible, then please explain why.

10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
extremely short amount of time. 10^-(1,000,000,000-to-the-
power-10^1,000,000,000) nanosecond is even shorter because a
nanosecond is shorter than a second.

10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
gigacycles is even more because a gigacycle is more than a cycle.

Giga-eon = a billion eons

Eon = a billion years

Gigacycle = a billion cycles.

*nanocycle = billionth of a cycle

Gigaphoton = a billion photons

10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
large large number.

10^1,000,000,000 = 10-to-the-power-1,000,000,000

So you get:

(10-to-the-power-1,000,000,000) to the power (10-to-the-
power-1,000,000,000)

10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)

10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000) is an extremely small number at it equals 10-to-the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000)]

No offense but please respond with reasonable answers & keep out the jokes, off-topic nonsense, taunts, insults, and trivializations. I am really interested in this.

Thanks,

Radium

2417. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 04:43:10 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5ve9h$57d$1@nnrp.linuxfan.it>
Source record: 39475
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

> ...
> Thanks,
>
> Radium
>

ROFLOL!!!

JS

2418. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 04:59:11 UTC
From: Eeyore <rabbitsfriendsandrelations@hotmail.com>
Message-ID: <4683403D.24A0BC36@hotmail.com>
Source record: 39476
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

> Hi:
>
> Please don't be annoyed/offended by my question.

Why not ?

You're a trolling IDIOT.

Graham

2419. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 05:00:36 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f5vfa7vrk3@nnrp.linuxfan.it>
Source record: 39477

John Smith I wrote:

> [chit]

OK. So I went and wrote the inventor, the correspondence follows, he
knows naysaying idiots when he sees 'em--I think the following makes it
quite obvious:

> Thanks John but I pay very little attention to that stuff. I now have a
> patent on the DLM and 6 more pending and several new applications in
> electromagnetics and antennas. I work with the EE dept here at URI and also
> with the physics dept. as well as several other departments where my antennas
> and expertise are being well received. I now also work with many undergrad
> and post grad students.
>
> The DLM works, they just don't want to admit it to themselves. What the DLM
> does is it stores magnetic potential energy in the inductance of the helix and
> moves it to another part of the antenna. In doing so creates a very large
> current profile along the antenna. It is 2.778 times greater that for a
> quarterwave for the same power input, hence it is why it is about 1/3 the
> size. I also invented the flat helix which makes the fully planner DLM
> possible.
>
> Anyway it has been licensed to several applications including cellphones, RFID
> and automotive applications. A large automotive supplier has it licensed for 6
> applications with 4 more coming, One of these has been in tire pressure
> monitoring, using my antenna they invented the first batteryless RFID tire
> pressure monitor. Expect to use between 90 and 100 million antennas in 2008 in
> just this one application. They went from a nobody in that market to most
> likely owning it.
>
> Within a few years I will be a multi millionaire so you see I just don't give
> a dam what they think. Can you blame me, I am laughing all the way to the
> bank.
>
> I am now into thinfilm and monilithic antennas using DLM antenna technology. I
> now have antennas so small operatng in the Ghz region that you need to use a
> microscope to see them.
>
> Thanks for the info but I pay very little attention to what THOSE people say,
> think etc. They are pretty ignorant. Best regards and good to hear from you.
> Rob
>
>

> >===== Original Message From John Smith I <assemblywizard@gmail.com> =====
>> >Mr. Vincent:
>> >
>> >Your DLM antenna has some discussion going on about it in amateur circles.
>> >
>> >You may wish to view the usenet news group "rec.radio.amateur.antenna"
>> >
>> >And, specifically, the thread:
>> >
>> >Guy from university physics dept. makes claims to incite/provoke amateurs!
>> >
>> >There have been a couple of naysayers! <grin>
>> >
>> >Warm regards,
>> >JS
>
> Robert Vincent
> Dept of Physics
> University of Rhode Island
> 401-874-2063
>
>

And, if you think EZNEC (and ALL other software emulation of real world constructions) is doing anything but running you in circles about the past--think again ... of course if all you wish to find is the past--it serves well ...

Regards,
JS

2420. Re: Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 05:09:43 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <QnHgi.1380$3p.698@bigfe9.bellsouth.net>
Source record: 39478

"NW_Pilot" <usenet@aircraft-nospam-delivery.net> wrote in message
news:G4SdnVO50r99S-DbnZ2dnUVZ_sWdnZ2d@comcast.com...
> What's the best wire for a wire and size antenna operating on 3413 8843
> 5574 13354 "2mhz thru 30mhz" Using a 706MKIIG & SGC 237 Tuner.

If you're stretching out a long antenna, then copperweld wire (copper-clad
steel) may be the way to go.
But best by the pocketbook would be 14ga THHN, which comes in handy 500ft
reels.
Copperweld has the strength, and it WILL put a nick in your wirecutters.

2421. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:03:02 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183010582.391938.50950@o11g2000prd.googlegroups.com>
Source record: 39479
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 27, 9:38 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Please don't be annoyed/offended by my question.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
> large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
> gigacycles is even more because a gigacycle is more than a cycle.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> Gigacycle = a billion cycles.
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.
>

> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
> Thanks,
>
> Radium

2422. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:03:31 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183010611.659317.24250@i13g2000prf.googlegroups.com>
Source record: 39480
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 27, 9:43 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Radium wrote:
> > ...
> > Thanks,
>
> > Radium
>
> ROFLOL!!!
>
> JS

2423. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:03:45 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183010625.510845.270760@e9g2000prf.googlegroups.com>
Source record: 39481
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 27, 9:59 pm, Eeyore <rabbitsfriendsandrelati...@hotmail.com>
wrote:
> Radium wrote:
> > Hi:
>
> > Please don't be annoyed/offended by my question.
>
> Why not ?
>
> You're a trolling IDIOT.
>
> Graham

2424. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:42:22 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <jLIgi.9372$oh3.7617@newsfe03.phx>
Source record: 39482

<ukmonitor@hotmail.com> wrote in message
news:1182170744.440527.38970@c77g2000hse.googlegroups.com...
> Hi All,
>
> Here's a challenge !
>
> Having recently acquired a Yaesu FT-879 HF transceiver I'd like to use
> it for portable operation from my camper van. Ideally to take
> advantage of the improving HF conditions during my lunch hour at work.
>
> So I originally thought about buying a Yaesu ATAS-120A, but then I
> realised that I wasn't that interested in mobile operation. So I could
> consider something a bit more efficient.
>
> Suggestions for alternatives or best length of wire and transformer
> ratio would be greatly appreciated.
>
> UKM
>

See the Outbacker antennas http://www.outbackerantennas.com/products.html .
Some appear to meet your requirments.

One of our club's hams used one at Field Day last year and this. (Outbacker
8, I think) He did as well as the guys who had much bigger antennas. He
merely clamped it to a chain-link fence at head-level and he was on the air.
The mass of your camper van might be OK if you can't park adjacent to a
suitable fence or other structure.

Downsides: Not cheap; band changes require your attendance at the antenna
unless you switch among many of them. (You are quite wealthy, right? :-)

There are also vehicle-mount products known as "screwdriver antennas" but I
am not prepared to address them.

73,
"Sal"
(really KD6VKW)

2425. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:44:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <i7l683tjuriufremntkqpfsvhrmh0fsn9b@4ax.com>
Source record: 39483
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>Please don't be annoyed/offended by my question.

Why? Would you expect facts to change if I were annoyed or offended?
>If it is not mathematically-possible, then please explain why.

Oh, that's easy. The worlds supply of zeros, nulls, and comma
separators is strictly limited. The galactic supply of such things
were created by the big bang and are not being made any more. If you
consume a substantial number of zeros, the zeros must be borrowed from
somewhere. While it is mathematically possible to bury the reader in
zeros, it is ecologically incorrect to do so. Also, be advised that
the government budget and trade deficits have cornered the supply of
zeros, and may soon approach an astronomical accumulation of zeros. At
the present rate of zero depletion, you may soon be forced to use
large exponentials, in order to avoid consuming zeros.

>No offense

Would defense be acceptable?

>but please respond with reasonable answers & keep out the
>jokes, off-topic nonsense, taunts, insults, and trivializations. I am
>really interested in this.

There are about 10^80 particles in the universe. Do with them as you
please but do save the zeros for those that need them.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2426. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 06:50:41 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183013441.330611.92160@i13g2000prf.googlegroups.com>
Source record: 39484
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 27, 11:44 pm, Jeff Liebermann <j...@cruzio.com> wrote:
> Radium <gluceg...@gmail.com> hath wroth:
>
> >Please don't be annoyed/offended by my question.
>
> Why? Would you expect facts to change if I were annoyed or offended?
>
> >If it is not mathematically-possible, then please explain why.
>
> Oh, that's easy. The worlds supply of zeros, nulls, and comma
> separators is strictly limited. The galactic supply of such things
> were created by the big bang and are not being made any more. If you
> consume a substantial number of zeros, the zeros must be borrowed from
> somewhere. While it is mathematically possible to bury the reader in
> zeros, it is ecologically incorrect to do so. Also, be advised that
> the government budget and trade deficits have cornered the supply of
> zeros, and may soon approach an astronomical accumulation of zeros. At
> the present rate of zero depletion, you may soon be forced to use
> large exponentials, in order to avoid consuming zeros.
>
> >No offense
>
> Would defense be acceptable?
>
> >but please respond with reasonable answers & keep out the
> >jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> >really interested in this.
>
> There are about 10^80 particles in the universe. Do with them as you
> please but do save the zeros for those that need them.
>
> --
> Jeff Liebermann j...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

2427. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 07:15:06 UTC
From: m II <c@in.the.hat>
Message-ID: <_dJgi.14479$tB5.12849@edtnps90>
Source record: 39485
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:

> There are about 10^80 particles in the universe. Do with them as you
> please but do save the zeros for those that need them.

an a-null-ment is in order.

mike

2428. Re: Multi lobes

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 07:19:34 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <ciJgi.2919$uq2.2820@newsfe06.phx>
Source record: 39486

"art" <aunwin@insightbb.com> wrote in message
news:1181705684.873780.26880@z28g2000prd.googlegroups.com...
> I haven't been on the air for a long time but I don't remember any
> conversations
> as to the upper lobe being used for communication. I always assumed
> that
> I was using the main lobe. Today I was messing around with some
> antenna designs
> and I arrived at one where there was only the lower single lobe to the
> front
> with the upper lobe somehow being removed.
> I have no idea what the ommission of any upper lobe would have of any
> consequence.
> Anybody had experience with this sort of thing?
> I suppose that in the early stages of propagation the lower lobe
> could make
> a connection where as the upper lobe transmission may well be absorbed
> by the upper layers that had not yet obtained reflected powers, but
> that is
> just conjector on my part.
> Art
>

The upper lobes may participate in local (non-skip) comms. The mode is near-vertical incidence skywave, NVIS.

See http://www.tactical-link.com/field_deployed_nvis.htm, among others.

We have a local 10m net every week and some of the stations experience a slow fade or flutter which we have taken to be returns of NVIS that are arriving with a slight doppler shift off a layer whose height is changing. I won't swear to this; I am also engaging in conjecture. However, when the 10m DX is in, the distant stations don't ever have this flutter. I use a horizontal antenna and the station that has the most variation most often is also horizontal. (The clues keep piling up.)

BTW, the articles about NVIS seem NOT to address freqs as high as the 10m band. Make of this what you will.

73,
"Sal"

2429. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 07:21:31 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183015291.772121.40260@z28g2000prd.googlegroups.com>
Source record: 39487
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 28, 12:15 am, m II <c...@in.the.hat> wrote:
> Jeff Liebermann wrote:
> > There are about 10^80 particles in the universe. Do with them as you
> > please but do save the zeros for those that need them.
>
> an a-null-ment is in order.
>
> mike
```

2430. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 07:52:19 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <VMJgi.221466$Fk2.4472@newsfe08.phx>
Source record: 39488
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1183005481.445745.166800@z28g2000prd.googlegroups.com...

< snip >

>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.

Didn't you pull something like this crap in the sci.engr.television.advanced
newsgroup a few years ago? The correct anwer then and now is that the
output signal is the modulating signal with a slow phase change impressed on
it proportional to the instantaneous amplitude of the carrier. Think
"rotating vector."

No further replies forthcoming, as my troll-o-meter is edging into the red
zone.

2431. very interesant

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 10:12:47 UTC
From: tiger <juanjolitri@mixmail.com>
Message-ID: <1183025567.541982.124190@c77g2000hse.googlegroups.com>
Source record: 39489

TO GAIN MONEY FAST, facil and LEGALLY. The best form to make fast money If you really want to know if this works, it observes by same you, and it only watches how much people this doing this. If this does not convince to you, nothing will do it you do not let pass this opportunity, I did not believe it but I was convinced and now all my family and friends we are improving our lives! you do not have anything to lose but if that to win much. You will realize that is something truely ingenious, that is and it will make you gain a few euros and it only costs 6 EUROS or 6 U.S. dollars, and that is not nothing compared with which reportarte could if you dedicate to time and sacrifice. YOU WANT TO MAKE MONEY TO PAY YOUR DEBTS? IT LEGALLY INVESTS To 5 MINUTES OF YOUR TIME And SIDES THAT THIS REALLY WORKS And IN ADDITION! Permíteme decirte that I found it. And that that I detest those schemes of marketing with several levels, or to make orders by mail, or putting propagandas in you exceed of mail, etc., the list is interminable. I proved all the odiosos schemes of hacerte rich express during 5 years. It was sailing by the groups (GOOGLE, YAHOO, ALTAVISTA, ETC.) when I saw an article that something said to obtain fast money. Pensè in Internet? Good, I said myself to same me, I have to do what type of scheme can present/display in Internet. This article described the way to send BY MAIL 1 CURRENCY OF EURO or 1 DOLLAR AMERICAN To ONLY 6 PEOPLE and TO GAIN $ 50,000 IN CASH IN 4 WEEKS. Good, the more I thought about this the more anxious was. So I concluded yes! clear it must of being a swindle. But as most of us I felt curiosity, so I continued reading. After meditating it and consulting it with some people I decided to try it! Really it is worth only 6 euros or 6 dollars and 6 seals of mail, I have spent more buying lottery and never I have won. *** This is not a swindle; he is not indecente, is not illegal; and he is free 99% of risk, really works if you follow the instructions, you will receive extraordinary dividends. Now you will be part of the business of the mail lists. In this business your product is not solid nor tangible, is a service. You are in the business of the development of the lists of mail (Mailing lists) Good first of all the main intention of this letter is convencerte of which this it is an honest system, legal and extremely profitable and also a form to obtain excellent income in a very short period of time. It is possible to also stand out, that this system has fulfilled its cycle natural, that is to say, has verified its effectiveness and with excellent results. Also, this system does not require physical contact with people, it does not require either of a heavy or difficult work, and the best thing: you will not have to leave house except gathering its mail. This it is a program of ELECTRONIC SUPPORT that takes advantage of the world-wide platform Internet, which guarantees its operation in perfect form. 100 % OF THE

TIMES! Thousands of people have resorted to this average one to obtain good capitals and thus to initiate their own business. Basically, it becomes possible through a chain that goes to thousands of people and who will also be made reality for you, only with your collaboration. For that reason I recommend to you TO FOLLOW CAREFUL and EXACTLY the INSTRUCTIONS OF THIS LETTER, recalcándote once again that this is 100 % insurance and that you will not regret to have read this I articulate and put in practice... IT SHARES MONEY And IT RECEIVES FAST MONEY... BY MAIL. THIS REALLY WORKS!!!!!! LÉELO PLEASE, IS SUITABLE LÉERLO. TO YOU! FAST MONEY! If you are very anxious and you do not want to read what continuous, it sees the section of the instructions at the end of this article directly. **** the $50,000 in cash could be a high point to reach, but it was possible. I imagined that perhaps it could have a reach of $1,000 more or less, so I did it. As they said the instructions in the article, I sent by mail a SINGLE EURO to each one of the six people of the list that contained I articulate that I read. I included a small note that PLEASE said "to INCLÚYEME IN YOUR LIST OF CORRESPONDENCE Or email" along with the Euro. Soon I remade the list in where saquè to first, I above moved a position to each one of the rest and included my name at the end of her. This was the form to obtain that the money began to arrive to me. Soon I took this list that finished modifying and I PUBLISHED it IN ALL the NEWSGROUP (Groups of the News or Forums of Discussion) and BBS LOCAL THAT KNEW DEPENDS COMPLETELY ON YOU, Of the INDIVIDUAL. You must follow it and to publish it where it is possible to you, whichever but is published and more people see it, will have but possibilities for all of making but money, this determined whichever arrived to you by mail. It is really easy to do it... Let us review the reasons of so that to do it: the only expenses are: 6 Estampillas, 6 you exceed and 6 EURO (a currency of a EURO or a dollar for each one in the list), soon to publish the article with your name including in ALL the NEWSGROUP that are happened to you (this are free) and soon to hope that you exceed them arrive to you. All we have 6 EUROS to spend in a easy investment and that it does not entail no type of effort with a SPECTACULAR one compensates OF BETWEEN $15,000 and $25,000 in single 3 to 5 weeks. So prívate to play the lottery, or today better eats in house instead of going outside and invests those 6 EUROS in which one pleasing surprise can darte. There is no form to lose! As this works exactly, Next I detail the simple instucciones to you of how you are going to obtain that easy money arrives to you. Prepárate to obtain it, this is the form... ********** INSTRUCTIONS: *** STEP 1: It obtains 6 white sheets of paper and writes the following thing: "PLEASE IT INCLUDES MY NAME IN YOUR LIST OF CORRESPONDENCE Or Email" Or "PLEASE ADD MY NAME TO YOUR LIST". Soon, it also writes your name, direction and electronic mail (and mail). Like a pretty detail pon also in which POSITION appeared each name of the people when you sent your EURO (Ejm: "You were in the 3 position" or "You were in slot 3") like making it but complete. That one is, to make money and to pass it well at the same time, everything with good will. Now it doubles this page where you have written the previous thing, around the currency of

1 Euro or of the bill of 1 dollar American, you do not send to checks nor another type of payments, single EUROS or American Dollars. Ponlo everything within 1 on and màndalo to each one of the 6 listed people, the idea to double the paper around the Euro is for assuring that it is going to arrive at his destiny and THAT IS IMPORTANT!!!!! Of another way the people who work in the mail podrìa to detect that she is money and to remain with the thousands of you exceed that they are to you arriving; so that she recommends herself to surround everything, additionally, in a dark paper or of coal so that she does not see herself through on). What these doing are to create a service and like so, makes LEGAL COMPLETELY. From now on these not sending to him to a EURO or a DOLAR to some person without any reason, these paying to a EURO or a DOLAR by a legitimate service (I assure to you, again, that this is completely legal). Immediately afterwards, it sends the 6 you exceed (better with fine cardboard or waddings in case of being currency so that one does not notice and it disappears by the way) to the following directions: 1.HÉCTOR LLANEZA ALVAREZ C/ELEUTERIO QUINTANILLA Nº32 3ºA C.P 33208 GIJÓN ASTURIAS SPAIN 2.VICTOR ENRIQUE HUMOFFE DORREGO 588. 3ºPISO DTO. 35 BELL. C.P 2804 BS. AS. ARGENTINA BALD 3.ILUMINADA BELTRÁN C/PEDRO JUAN NÚÑEZ Nº 8 PTA: 5 C.P.46021 VALENCIA VALENCIA SPAIN CANARY 4.JORGE CRESPO CELDRÁN C/ISLAS 180 ESC/ 1 PTA/17 C.P.46024 VALENCIA VALENCIA SPAIN 5, Eduardo Yafe Silva Irigoyen n· 86 Santa Lucia dep. Canelones Uruguay C.P. 90700 6, JUAN.JOSE GONZALEZ PARRA SEPARATED FROM Nº POST OFFICE 63 30002 C.P MURCIA MURCIA SPAIN *** STEP 2: Listening with care, this is the form of as you are going to receive Money by mail. It watches the list of the SIX people, flock the name #1 of the list of above, and adds yours at the end of her, so the one that was # 2 happens to be # 1 and the one that was # 3 happens to be # 2, the one that was # 4 happens to be # 3 and the one that was # 5 happens to be 4 etc... and YOU are now number 6, includes your name, direction, C.P. and country *** STEP 3: It changes everything what you create advisable of this article, but tries to maintain it but near the possible thing the original one. Now pon your article in at least 200 NEWSGROUP, also calls Forums of Discussion or Groups of the News (they exist more than 24,000 groups). Sòlo you need 200, but at the most amount you put, but money will arrive to you. Here some indications of like introducing itself in the newsgroup go. LIKE HANDLING THE NEWSGROUP: In the first place, you do not need to write up all this letter again to do the yours own one. Only pon the cursor at the beginning of this letter and drags downwards so that everything is "shaded". Later, it presses keys CTRL +C, of this form is in the memory of your computer. Soon, it opens an application Block de Notas (NotePad), Wordpad or MsWord preferably. Soon, once opened anyone of these applications it places the cursor at the beginning of a leaf in target and presses CTRL+V, and you will already have this letter and you will be able to add your name and direction in #6 being followed the instructions of above. By I complete guard this letter with your changes in a new file of the application. HE IS EVERYTHING! Everything what you must do now is meterte in different "newsgroup", forums, classified, or announcements

free, etc. and to publish it. It remembers that whenever you want to do it it was enough with opening the file kept, copying it and to stick it in the area of message of the newsgroup, or classified, forum or announcement free, etc. In order to arrive at them in any finder pon these terms: newsgroup, forums of discussion, classified, announcements free or guestbooks; and they will appear thousands of pages. You do not forget to publish all the announcement or letter but with YOUR NAME in position 6, disappearing the 1; when you already have practice to only will take about 30 seconds you by each newsgroup. It is recommended, in addition, that when you publish the description of this article you try to give a name him that "catches", as "IT NEEDS MONEY RÁPIDO?, reads EAST ARTICLE" or "IT NEEDS MONEY TO PAY HIS DEBTS", "IT LOWERS EAST FILE and IT READS AS IT CAN RECEIVE MONEY BY MAIL" etc. and not thus "DESIRE MILLION IN 1 WEEK", because nobody took you in serio.********RECUERDA, WHICHEVER MAS NEWSGROUP YOU OBTAIN, MAS ANSWERS (and MONEY) YOU RECEIVE! BUT YOU MUST ENTER AT LEAST 200. * ********* ALREADY IS!!... Your you will be receiving money worldwide, of places that nor you know and in few days. ** ASEGÚRATE OF WHICH ALL the CORRECT DIRECTIONS ARE ** Now So that of all this: of 200 sent announcements, we say that to single receipt 5 answers (lowest example). THEN I WILL HAVE GAINED 5 EUROS or DOLARES WITH MY NAME in the position # 6 of èsta letter. Now each one of the 5 people who sent a Euro or DOLAR to me también creates a minimum of 200 newsgroup each one with my name in no. 5 of the List and if to these people to only 5 people to each one of the 5 original ones responded them, this would cause that I gained 25 more Euros (DOLARES), now, if these 25 people create a 200 minimum of newgroups with my name in no. 4 and receiving sòlo 5 answers of each one. Estaria winning other 125 Euros (Dolares)adicionales. Now 125 people put their same 200 groups with my name in no. 3 and they only receive 5 answers of each one, I I would receive additional from 625 Euros (Dolares)!!!! Ok? Aquì is the amused part more, each one of these 625 people put its letters in other 200 groups with my name in only 5 no. 2 and each one receives answer, this causes that I receive 3,125 EUROS (DOLARES)!!!!!!! These 3,125 people enviaràn èste message to a minimum of 200 newgroups with my name in no. 1 and if only 5 people of the 200 groups respond I will be receiving 15,625 EUROS (DOLARES)!!!!! Of an Original investment of of 6 Euros or 6 Dolares more stamps (seals). INCREDIBLE! and as I said before, that single 5 people respond is very little, the real average would be of 20-30 people! There that we put these numbers but to calculate. If single 15 people respond, this does: In # 6 15 Euros (Dolares) In # 5 225 Euros (Dolares) In # 4 3,375 Euros (Dolares) In # 3 50,625 Euros (Dolares) In # 2 759,375 Euros (Dolares) In # 1 11.390.625 Euros (Dolares) Yes, more than ELEVEN MILLION EUROS (DOLARES)! Once your name no longer is in the list, it again removes the last announcement from the newsgroup. What you must remember is that thousands of people more, anywhere in the world, connect to Internet every day and will read these articles every day as your and I we do it. So I believe that nobody would have problems to invest 1 EURO or DOLAR and to see if it really works. Some people get to think

"and if nobody decides to answer to me". That which is the probability that this happens when there are thousands and thousands of honest people (who as you and I) they look for a way to have extra money... and who they are arranged to treat, because "there is no worse fight than the one than it does not become". Esteem that exists Every day of 20.000 to 50.000 new users (anywhere in the world). ANOTHER SYSTEM TO COMMUNICATE IS OBTAINING the email OF PARTICULAR PEOPLE. THEY MUST BE At least 200 DIRECTIONS, And THIS HAS A MINIMUM EFFECTIVENESS From The 5 To 15%. IF SINGLE YOU LOOK FOR PEOPLE WHO SPEAK SPANISH, IT SEES An Email SUPPLIER And PRINTS A LATIN LAST NAME ALREADY And THIS. Another form is to publish this letter in your PAGINA WEB (if you have it). *** Recuerda to do this of CORRECT, CLEAN and HONEST form and will work with complete certainty. You only must be honest. Asegúrate TO PRINT this article NOW, tries to maintain the list of all those that always send money to you and fíjate in the newsgroup and sees if all are participating cleanly. It remembers, HONESTY IS The BEST METHOD. You do not need to make tricks with the basic idea make money in this! ******* By the way, that if your you defraud to the people putting messages with your name and you do not send any money to the others of the list, your you will not receive ANYTHING almost. I have talked with people who met who did this and single they got to collect about $150,00, and that after 7 weeks. Some decided to prove again, doing it correctly, and in 4-5 weeks received more than $10,000.00. This is the cleanest and honest way to share fortune that I never have seen, without costing to us much except a little time. The TIME IS IMPORTANT, for that reason you do not let pass but of 7 days of the moment that you see east email or announcement. Let us follow all the rules of the business. "the fruits of the honesty take shelter in very just a short time and always last for" Chinese Proverb. Thanks again. You test. LAST STEP: And this it is the step that màs SIMPLY I like SIENTATE and ENJOY, BECAUSE the CASH COMES IN WAY!!!!! Delay to see just a little bit of money during the second week, but to apartir of the third week, STORM OF YOU EXCEED IN YOUR MAIL. Everything what you must do is to receive it and deals with not shouting very hard, when DES tells you that èsta time you obtained!!!!!! When you begin to be short of money, it reactivates this one file and re-it publishes such in places in which you are going them to publish now and new places that you will know in the future. Always mantèn by hand a copy of this article, REACTIVALO whenever you need money. HONESTY IS WHAT MAKES PREVAIL To ÈSTE PROGRAMS YOU DO NOT FORGET IT. GOOD LUCK!

2432. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 11:05:49 UTC
From: ukmonitor@hotmail.com
Message-ID: <1183028749.176222.172990@g4g2000hsf.googlegroups.com>
Source record: 39490

On Jun 28, 7:42 am, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> <ukmoni...@hotmail.com> wrote in message
>
> news:1182170744.440527.38970@c77g2000hse.googlegroups.com...
>
>
>
>
>
> > Hi All,
>
> > Here's a challenge !
>
> > Having recently acquired a Yaesu FT-879 HF transceiver I'd like to use
> > it for portable operation from my camper van. Ideally to take
> > advantage of the improving HF conditions during my lunch hour at work.
>
> > So I originally thought about buying a Yaesu ATAS-120A, but then I
> > realised that I wasn't that interested in mobile operation. So I could
> > consider something a bit more efficient.
>
> > Suggestions for alternatives or best length of wire and transformer
> > ratio would be greatly appreciated.
>
> > UKM
>
> See the Outbacker antennashttp://www.outbackerantennas.com/products.html.
> Some appear to meet your requirments.
>
> One of our club's hams used one at Field Day last year and this. (Outbacker
> 8, I think) He did as well as the guys who had much bigger antennas. He
> merely clamped it to a chain-link fence at head-level and he was on the air.
> The mass of your camper van might be OK if you can't park adjacent to a
> suitable fence or other structure.
>
> Downsides: Not cheap; band changes require your attendance at the antenna
> unless you switch among many of them. (You are quite wealthy, right? :-)
>
> There are also vehicle-mount products known as "screwdriver antennas" but I
> am not prepared to address them.
>
> 73,
> "Sal"

> (really KD6VKW)- Hide quoted text -
>
> - Show quoted text -

Hi Sal,

Thanks for this. I'm familiar with the outbacker range so I''l take a look for some construction ideas.

In the meantime I've been doing further research and experimentation, and have now found a good initial solution.

By using a vertical wire of a suitable magic length (7.2, 8.8 or 11.8m) supported by the fishing pole, I can get the LDG tuner to provide a good match on all Amateur bands from 80m upto 6m as the impedance presented to the tuner is just within it's (slightly limited) matching range.

This has resulted in good signal strength reports on several bands, even when using just 10watts ssb, so it's an excellent starting point that I can work from.

The next stage is to improve the chassis bonding, play with some impedance matching transformers and an optional counterpoise to try and reduce the RF level inside the Van on 80m.

A linear loaded vertical possibly using multicore cable also shows some promise. My initial measurements with an RF sweeper indicates that it could add a useful secondary resonance at the low frequency end, which may benefit the tuner.

A remote field strength meter is also in the plan, so that I can make quantative measurements.

Once again thanks for the feedback.

UKM

2433. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 11:09:37 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <06ednWIgrbJ1Cx7bnZ2dnUVZ8tmhnZ2d@bt.com>
Source record: 39491
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183005481.445745.166800@z28g2000prd.googlegroups.com...
> Hi:
>
> Please don't be annoyed/offended by my question.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
> large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
> gigacycles is even more because a gigacycle is more than a cycle.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> Gigacycle = a billion cycles.
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.

>
> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
>
> Thanks,
>
> Radium
>

Radium

The answer is no. It takes a finite time for even so called 'instantaneous' quantum interactions to occur, so the frequencies quoted are a nonsense. Essentially frequencies above around 10 ^ 30 Hz may (as) well not exist. I am probably a few orders of magnitude out here, but that is the general idea.

For a detailed explaination see "The Road to Reality: A complete Guide to the Laws of the Universe by Roger Penrose - ISBN 0739458477". Available from Amazon and all good booksellers. Mr. Penrose has collaborated with some of the greatest theoretical mathamaticians and physicists of the last fifty years and if you can follow the maths, all will become clear. This book will explain a lot of the maths required anyway, so worth giving it a go.

Most mathematicians prefer to simplify equations by removing superfluous zeroes and exponents by cancellation on either side of the equation. :-)

Mike G0ULI

2434. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 11:44:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6aNgi.9158$c06.4567@newssvr22.news.prodigy.net>
Source record: 39492

ukmonitor@hotmail.com wrote:
> By using a vertical wire of a suitable magic length (7.2, 8.8 or
> 11.8m) supported by the fishing pole, I can get the LDG tuner to
> provide a good match on all Amateur bands from 80m upto 6m as the
> impedance presented to the tuner is just within it's (slightly
> limited) matching range.

When a vertical monopole length is much longer than
5/8WL, the take-off-angle increases and much of the
radiated RF is lost into space on the higher
frequencies.

For instance, on 6m using the 7.2m monopole, the
take-off-angle is ~56 degrees.

7.2m is ~5/8WL on 12m, not good for 6m-10m.
8.8m is ~5/8WL on 15m, not good for 6m-12m.
11.8m is ~5/8WL on 17m, not good for 6m-15m.
--
73, Cecil http://www.w5dxp.com

2435. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 11:46:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ucNgi.9159$c06.6028@newssvr22.news.prodigy.net>
Source record: 39493
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Mike Kaliski wrote:
> For a detailed explaination see "The Road to Reality: A complete Guide to
> the Laws of the Universe by Roger Penrose - ISBN 0739458477".

Mike, does he say anything about quantum entanglement?
--
73, Cecil http://www.w5dxp.com

2436. Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 13:19:44 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1183036784.292812.205830@i38g2000prf.googlegroups.com>
Source record: 39494

While pondering the design of a broadband antenna that would cover
from 50 to 450 Mhz I considered a log periodic array. This would serve
my purpose but the size would be inconvienent. Then I had a thought,
Could I remove the elements that are not required for amateur band
coverage? In my case I am only interested in 50, 144,and 432 MHz
bands, Would this allow me to shorten the boom by an amout equal to
the space occupied by the removed elements and have a gain of 7Dbd.
Could I cover all 3 bands with just the elements for 6 and 2m?
Any thoughts on this would be greatly appreciaated.

Jimmie

2437. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 13:40:44 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-4CD2F5.06404428062007@individual.net>
Source record: 39495

In article <1183036784.292812.205830@i38g2000prf.googlegroups.com>,
JIMMIE <JIMMIEDEE123@YAHOO.COM> wrote:

> While pondering the design of a broadband antenna that would cover
> from 50 to 450 Mhz I considered a log periodic array. This would serve
> my purpose but the size would be inconvienent. Then I had a thought,
> Could I remove the elements that are not required for amateur band
> coverage? In my case I am only interested in 50, 144,and 432 MHz
> bands, Would this allow me to shorten the boom by an amout equal to
> the space occupied by the removed elements and have a gain of 7Dbd.
> Could I cover all 3 bands with just the elements for 6 and 2m?
> Any thoughts on this would be greatly appreciaated.
>
> Jimmie

No, you need some coverage to provide the gain. Think of a standard
yagi, without the reflector and director it's just a dipole. Personally
I built one almost exactly like you are talking about (25 years ago),
the performance stunk and I scraped it

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

2438. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 13:42:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3VOgi.22858$C96.13718@newssvr23.news.prodigy.net>
Source record: 39496

JIMMIE wrote:
> While pondering the design of a broadband antenna that would cover
> from 50 to 450 Mhz I considered a log periodic array. This would serve
> my purpose but the size would be inconvienent. Then I had a thought,
> Could I remove the elements that are not required for amateur band
> coverage? In my case I am only interested in 50, 144,and 432 MHz
> bands, Would this allow me to shorten the boom by an amout equal to
> the space occupied by the removed elements and have a gain of 7Dbd.
> Could I cover all 3 bands with just the elements for 6 and 2m?
> Any thoughts on this would be greatly appreciaated.

A properly functioning LP usually has only one set of
elements resonant at a time. For 70cm operation, three
sets of elements would be resonant, one set at 1/2WL,
one set at 3/2WL, and one set at 9/2WL.
--
73, Cecil http://www.w5dxp.com

2439. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 14:32:17 UTC
From: ukmonitor@hotmail.com
Message-ID: <1183041137.687256.290620@m36g2000hse.googlegroups.com>
Source record: 39498

On Jun 28, 12:44 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> ukmoni...@hotmail.com wrote:
> > By using a vertical wire of a suitable magic length (7.2, 8.8 or
> > 11.8m) supported by the fishing pole, I can get the LDG tuner to
> > provide a good match on all Amateur bands from 80m upto 6m as the
> > impedance presented to the tuner is just within it's (slightly
> > limited) matching range.
>
> When a vertical monopole length is much longer than
> 5/8WL, the take-off-angle increases and much of the
> radiated RF is lost into space on the higher
> frequencies.
>
> For instance, on 6m using the 7.2m monopole, the
> take-off-angle is ~56 degrees.
>
> 7.2m is ~5/8WL on 12m, not good for 6m-10m.
> 8.8m is ~5/8WL on 15m, not good for 6m-12m.
> 11.8m is ~5/8WL on 17m, not good for 6m-15m.
> --
> 73, Cecil http://www.w5dxp.com

Hi Cecil,

Thanks for this, I must admit I hadn't considered the affect on
radiation angle.

I guess I'm prepared to trade this on 10m and 6m if it's going to
result in a reduction of less than say 10dB useful gain, just for ease
of operation. Epecially as both these bands tend to be either 'open'
or 'shut' with not much in-between. Just so I can get a feel for
this, what sort of magnitude are we talking about in terms of
elevation angle vs dB's

Alternatively could I coil a portion of the vertical to create
something aproximating to a 6m colinear which may help the situation
on the worst band without affecting the matching range too much on the
other bands.

Just to get this in proportion, If I've got sufficient space and time
(and the weather is good) I can roll out a ZS6BKW version of the G5RV
using the 10m pole as a support to create an inverted V (which works
very well as a general all rounder). The vertical is meant to be a
quick, cheap and cheerful, 'let's grab some QSO's' during the lunch
hour antenna, so any suggestions for alternatives which permit quick
band changing would be welcome.

Looks like I'll have to bite the bullet and start getting used to
modelling with NEC or similar.

UKM

2440. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 14:35:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yBPgi.9172$c06.1531@newssvr22.news.prodigy.net>
Source record: 39497

Cecil Moore wrote:
> A properly functioning LP usually has only one set of
> elements resonant at a time. For 70cm operation, three
> sets of elements would be resonant, one set at 1/2WL,
> one set at 3/2WL, and one set at 9/2WL.

The above should have said HF LP. Here is one "compact
hybrid" that is advertised to cover 30 MHz to 3 GHZ.
It only weighs 8 pounds.

http://www.tdkrfsolutions.com/WebDataSheets/HLP-3003CWebSheet.htm
--
73, Cecil, w5dxp.com

2441. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 14:36:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rbh78358qa8211b20ich27d8pnmsahhtnd@4ax.com>
Source record: 39499

On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE123@YAHOO.COM>
wrote:

>While pondering the design of a broadband antenna that would cover
>from 50 to 450 Mhz I considered a log periodic array. This would serve
>my purpose but the size would be inconvienent. Then I had a thought,
>Could I remove the elements that are not required for amateur band
>coverage? In my case I am only interested in 50, 144,and 432 MHz
>bands, Would this allow me to shorten the boom by an amout equal to
>the space occupied by the removed elements and have a gain of 7Dbd.
>Could I cover all 3 bands with just the elements for 6 and 2m?
>Any thoughts on this would be greatly appreciaated.

Hi Jimmie,

What you are then asking for is NOT a broadband antenna; but rather a
multiband antenna, or even three, interlaced single band antennas.
Don't try this at home with a gaussian bundle.

To answer your question more directly, yes you can remove those
elements that do not contribute to the three bands. Unfortunately, to
maintain its LDPA aspects, you still have to maintain some outliers
for each band. This doesn't necessarily shorten it, because an LPDA's
length is driven by many other considerations such as bandwidth and
gain, not just simply extremes (yes, that too is part of the mix,
simply a complex part of the mix).

No to your last question. The matter of resonance is still a first
principle. However, the 2M band is loosely related to the 70cM band,
and if you are building an LPDA (and sweep the elements, chevron
style) there may be a chance of it performing there too.

All-in-all, don't expect remarkable gain after having gone through all
these exceptions.

73's
Richard Clark, KB7QHC

2442. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 14:54:18 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1183042458.347229.316570@e9g2000prf.googlegroups.com>
Source record: 39500

On Jun 28, 10:36 am, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE...@YAHOO.COM>
> wrote:
>
> >While pondering the design of a broadband antenna that would cover
> >from 50 to 450 Mhz I considered a log periodic array. This would serve
> >my purpose but the size would be inconvienent. Then I had a thought,
> >Could I remove the elements that are not required for amateur band
> >coverage? In my case I am only interested in 50, 144,and 432 MHz
> >bands, Would this allow me to shorten the boom by an amout equal to
> >the space occupied by the removed elements and have a gain of 7Dbd.
> >Could I cover all 3 bands with just the elements for 6 and 2m?
> >Any thoughts on this would be greatly appreciaated.
>
> Hi Jimmie,
>
> What you are then asking for is NOT a broadband antenna; but rather a
> multiband antenna, or even three, interlaced single band antennas.
> Don't try this at home with a gaussian bundle.
>
> To answer your question more directly, yes you can remove those
> elements that do not contribute to the three bands. Unfortunately, to
> maintain its LDPA aspects, you still have to maintain some outliers
> for each band. This doesn't necessarily shorten it, because an LPDA's
> length is driven by many other considerations such as bandwidth and
> gain, not just simply extremes (yes, that too is part of the mix,
> simply a complex part of the mix).
>
> No to your last question. The matter of resonance is still a first
> principle. However, the 2M band is loosely related to the 70cM band,
> and if you are building an LPDA (and sweep the elements, chevron
> style) there may be a chance of it performing there too.
>
> All-in-all, don't expect remarkable gain after having gone through all
> these exceptions.
>
> 73's
> Richard Clark, KB7QHC

Thanks this is what I was expecting but I think I am going to try it
anyway.
Also thanks for not mentioning that the 7Dbd gain would be a little
overly optimistic, I meant dbi. I also realize now that butchering the
the antenna would not save that much in size or material even if it

did work.

Jimmie

2443. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 14:56:30 UTC
From: ukmonitor@hotmail.com
Message-ID: <1183042590.760867.196360@n2g2000hse.googlegroups.com>
Source record: 39501

On Jun 28, 3:32 pm, ukmoni...@hotmail.com wrote:
> On Jun 28, 12:44 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>
>
>
>
>
> > ukmoni...@hotmail.com wrote:
> > > By using a vertical wire of a suitable magic length (7.2, 8.8 or
> > > 11.8m) supported by the fishing pole, I can get the LDG tuner to
> > > provide a good match on all Amateur bands from 80m upto 6m as the
> > > impedance presented to the tuner is just within it's (slightly
> > > limited) matching range.
>
> > When a vertical monopole length is much longer than
> > 5/8WL, the take-off-angle increases and much of the
> > radiated RF is lost into space on the higher
> > frequencies.
>
> > For instance, on 6m using the 7.2m monopole, the
> > take-off-angle is ~56 degrees.
>
> > 7.2m is ~5/8WL on 12m, not good for 6m-10m.
> > 8.8m is ~5/8WL on 15m, not good for 6m-12m.
> > 11.8m is ~5/8WL on 17m, not good for 6m-15m.
> > --
> > 73, Cecil http://www.w5dxp.com
>
> Hi Cecil,
>
> Thanks for this, I must admit I hadn't considered the affect on
> radiation angle.
>
> I guess I'm prepared to trade this on 10m and 6m if it's going to
> result in a reduction of less than say 10dB useful gain, just for ease
> of operation. Epecially as both these bands tend to be either 'open'
> or 'shut' with not much in-between. Just so I can get a feel for
> this, what sort of magnitude are we talking about in terms of
> elevation angle vs dB's
>
> Alternatively could I coil a portion of the vertical to create
> something aproximating to a 6m colinear which may help the situation
> on the worst band without affecting the matching range too much on the
> other bands.

>
> Just to get this in proportion, If I've got sufficient space and time
> (and the weather is good) I can roll out a ZS6BKW version of the G5RV
> using the 10m pole as a support to create an inverted V (which works
> very well as a general all rounder). The vertical is meant to be a
> quick, cheap and cheerful, 'let's grab some QSO's' during the lunch
> hour antenna, so any suggestions for alternatives which permit quick
> band changing would be welcome.
>
> Looks like I'll have to bite the bullet and start getting used to
> modelling with NEC or similar.
>
> UKM- Hide quoted text -
>
> - Show quoted text -

Hi Again,

OK I just found this which answers most of my questions.

http://www.moonraker.com.au/techni/patterns.htm

Looks like some form of loading coil say 60% up may be the way to go.

As before suggestions welcolmed.

UKM

2444. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 16:13:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <x1Rgi.22891$C96.14733@newssvr23.news.prodigy.net>
Source record: 39502

ukmonitor@hotmail.com wrote:
> OK I just found this which answers most of my questions.
> http://www.moonraker.com.au/techni/patterns.htm
> Looks like some form of loading coil say 60% up may be the way to go.

In general, loading coils are used on verticals that
are too short. Traps are used on verticals that are
too long. Traps are high-impedance parallel resonant
circuits that tend to block the flow of RF current
through them.

If you keep those previous lengths and install traps
for the higher bands, you should be in good shape.
--
73, Cecil, w5dxp.com

2445. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 16:34:17 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f60nus$ii7$1@nnrp.linuxfan.it>
Source record: 39503

art wrote:

> For those you may be interested I did not move to E mail
> it was just that the interogation stopped after
> my last response. Why I do not know but at least you
> know that the thread stopping was not due to anything
> on my part. Obviously this thread is now dead.
> Regards
> Art
>

Art:

If you ever present enough data where a simple 3 element construction of
your design might be attempted--I'll be there ...

Regards,
JS

2446. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 16:36:34 UTC
From: H.Wabnig
Message-ID: <3ro783lu1nchl43ksf1hequakcou5b10be@4ax.com>
Source record: 39504

On Thu, 28 Jun 2007 09:35:37 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>Cecil Moore wrote:
>> A properly functioning LP usually has only one set of
>> elements resonant at a time. For 70cm operation, three
>> sets of elements would be resonant, one set at 1/2WL,
>> one set at 3/2WL, and one set at 9/2WL.
>
>The above should have said HF LP. Here is one "compact
>hybrid" that is advertised to cover 30 MHz to 3 GHZ.
>It only weighs 8 pounds.
>
>http://www.tdkrfsolutions.com/WebDataSheets/HLP-3003CWebSheet.htm

How would they possibly get a direction effect on the lower
frequencies with that design
I doubt it.

w.

2447. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 16:55:55 UTC
From: Martin <mrbgoogle@hotmail.com>
Message-ID: <1183049755.531767.139580@o61g2000hsh.googlegroups.com>
Source record: 39505
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

```
On Jun 28, 3:52 am, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183005481.445745.166800@z28g2000prd.googlegroups.com...
>
> < snip >
>
>
>
> > No offense but please respond with reasonable answers & keep out the
> > jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> > really interested in this.
>
> Didn't you pull something like this crap in the sci.engr.television.advanced
> newsgroup a few years ago? The correct anwer then and now is that the
> output signal is the modulating signal with a slow phase change impressed on
> it proportional to the instantaneous amplitude of the carrier. Think
> "rotating vector."
>
> No further replies forthcoming, as my troll-o-meter is edging into the red
> zone.

Your troll-o-meter is defective, it should be pegged hard in the red
zone.
Please have it recalibrated to a proper sensitivity.
```

2448. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:04:03 UTC
From: dplatt@radagast.org
Message-ID: <396dl4-e7c.ln1@radagast.org>
Source record: 39507

In article <%3Egi.565$ca.522@bignews4.bellsouth.net>,
Hal Rosser <hmrosser@bellsouth.net> wrote:

>Not yet, but how would you "fine tune" one as a director?
>Wire antennas are easy to tweak by clipping a bit off the ends.
>Lots of folk pick a material easy to work with, but CDs may not fit that
>category.

Perhaps one could use a compass, and simply scribe a circle of
appropriate radius through the aluminized layer? Experimentation
would be required, as the area outside the scribed circle would
probably act as a capacitive load for the director disc inside.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2449. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:06:22 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <iURgi.3202$yp.713@trnddc08>
Source record: 39506

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:1183042458.347229.316570@e9g2000prf.googlegroups.com...
> On Jun 28, 10:36 am, Richard Clark <kb7...@comcast.net> wrote:
>> On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE...@YAHOO.COM>
>> wrote:
>>
>> >While pondering the design of a broadband antenna that would cover
>> >from 50 to 450 Mhz I considered a log periodic array. This would serve
>> >my purpose but the size would be inconvienent. Then I had a thought,
>> >Could I remove the elements that are not required for amateur band
>> >coverage? In my case I am only interested in 50, 144,and 432 MHz
>> >bands, Would this allow me to shorten the boom by an amout equal to
>> >the space occupied by the removed elements and have a gain of 7Dbd.
>> >Could I cover all 3 bands with just the elements for 6 and 2m?
>> >Any thoughts on this would be greatly appreciaated.
>>
>> Hi Jimmie,
>>
>> What you are then asking for is NOT a broadband antenna; but rather a
>> multiband antenna, or even three, interlaced single band antennas.
>> Don't try this at home with a gaussian bundle.
>>
>> To answer your question more directly, yes you can remove those
>> elements that do not contribute to the three bands. Unfortunately, to
>> maintain its LDPA aspects, you still have to maintain some outliers
>> for each band. This doesn't necessarily shorten it, because an LPDA's
>> length is driven by many other considerations such as bandwidth and
>> gain, not just simply extremes (yes, that too is part of the mix,
>> simply a complex part of the mix).
>>
>> No to your last question. The matter of resonance is still a first
>> principle. However, the 2M band is loosely related to the 70cM band,
>> and if you are building an LPDA (and sweep the elements, chevron
>> style) there may be a chance of it performing there too.
>>
>> All-in-all, don't expect remarkable gain after having gone through all
>> these exceptions.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Thanks this is what I was expecting but I think I am going to try it
> anyway.
<SNIP>

> Jimmie

Hi Jimmie

Have you figured out which elements to remove and which will remain?

Jerry

2450. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:20:07 UTC
From: dplatt@radagast.org
Message-ID: <777dl4-e7c.ln1@radagast.org>
Source record: 39517

>> Here's a challenge !
>>
>> Having recently acquired a Yaesu FT-879 HF transceiver I'd like to use
>> it for portable operation from my camper van. Ideally to take
>> advantage of the improving HF conditions during my lunch hour at work.
>>
>> So I originally thought about buying a Yaesu ATAS-120A, but then I
>> realised that I wasn't that interested in mobile operation. So I could
>> consider something a bit more efficient.

>See the Outbacker antennas http://www.outbackerantennas.com/products.html .
>Some appear to meet your requirments.
>
>One of our club's hams used one at Field Day last year and this. (Outbacker
>8, I think) He did as well as the guys who had much bigger antennas. He
>merely clamped it to a chain-link fence at head-level and he was on the air.
>The mass of your camper van might be OK if you can't park adjacent to a
>suitable fence or other structure.
>
>Downsides: Not cheap; band changes require your attendance at the antenna
>unless you switch among many of them. (You are quite wealthy, right? :-)

Based on the tests I've seen, the Outbacker is a bit more efficient
than Hamsticks (but not by much), and is probably less efficient than
all but the smallest of screwdriver-type antennas (including the ATAS).

If you're interested in a fairly traditional mobile-type antenna
(an inductively-loaded short radiator) with higher efficiency,
consider a bugcatcher - a lower mast, a large air-core center-loading
inductor, and a long whip on top (possibly with a capacity hat).
By winding the center coil properly (large-diameter wire or tubing,
turns spaced apart, with the right length/diameter ratio) you can get
a significantly higher Q in the coil (and thus lower losses) than
you'll get with a tightly-wound screwdriver coil or a helically-
wound Hamstick or Outbacker.

You may want one coil per band... although it's possible to work
multiple bands, with some additional loss, by using a jumper to short
out some of the coil turns on the higher-frequency bands. I've seen
some "dual-band" bugcatcher designs, in which the full coil is used to
load the antenna on 75 meters, and a series-resonant circuit shorts
out some of the turns on 40 meters.

Mount the antenna as high as possible on the van... ideally, so that
all of the antenna is up above the vehicle body.

Since you don't plan to actually operate while driving, you can use a taller antenna than would be possible while mobile, and may not need additional guying.

Another possibility is to simply throw up a random wire (perhaps an inverted-L, suspended via thin rope from nearby trees... use the vehicle body as a ground (perhaps with a counterpoise wire) and use a wide-range antenna tuner. Any reasonably thin, flexible stranded wire could be used... some specialist dealers such as The Wireman sell antenna wires which are reportedly easy to coil without kinking.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

2451. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:22:08 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <M8WdneZJb7aqcx7bnZ2dnUVZ8qijnZ2d@bt.com>
Source record: 39508
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:ucNgi.9159$c06.6028@newssvr22.news.prodigy.net...
> Mike Kaliski wrote:
> > For a detailed explaination see "The Road to Reality: A complete Guide
to
> > the Laws of the Universe by Roger Penrose - ISBN 0739458477".
>
> Mike, does he say anything about quantum entanglement?
> --
> 73, Cecil http://www.w5dxp.com

Cecil

Yes indeed he does. This book is about as leading edge as it gets. The author has worked closely with Stephen Hawking and people of similar academic credentials. It doesn't get any better than that.

It is clear from reading this book that we have reached a plateau in our capability of understanding how the universe works and we need to await the arrival of new technology and techniques to be able to test the latest theories. The theory has outstripped the technology for the time being.

Mike G0ULI

2452. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:28:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vjp783d1h7f9erqeq0ljp2mho1rdbfjn40@4ax.com>
Source record: 39509

On Thu, 28 Jun 2007 09:34:17 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>art wrote:
>>Obviously this thread is now dead.

DOA is the technical term.

>If you ever present enough data where a simple 3 element construction of
>your design might be attempted--I'll be there ...

He did that. You weren't there? The invitation was probably lost in the mail. This 3 element construction conformed to the conventional outcome of poor performance for having ignored first principles. Note that ignorance was a forced choice, not a haphazard accident. Arthur worked hard to design efficiency out of his theory.

Optimization, ironically, is forced out of the goal of the software he uses to "optimize" through a crippled set of constraints. There are certainly a lot of conflicting goals here, but achieving a patent and validation here must be worth the pain. Reminds me of the "Life of Brian."

What Arthur is laying claim to is his unique description of a jumble of elements that can only be expected to perform to the same degree of inadequacy. Hence, the gausssian arrays paradigm explains how a hodge-podge of elements, that through poor efficiency and total lack of consideration for effectively adding their phase contributions, present a muddled performance at best. I must admit that few patents deliberately seek to corner mediocrity.

It has been long established through common sense that optimal performance is intrinsically related to all elements presenting a boresight alignment to the wave front such that each element offers the most efficient phase coupling. Arthur's paradigm explicitly decouples all efficient alignments (which is unpatentable as being long-standing usage of the common practitioner) to focus on deliberately enforced poor efficiency (which is patentable as this is no one's marketable goal).

This poor focus is found both in terms of antenna development, and the expression of its particulars. In essence, the less Arthur says explicitly about his paradigm (choosing, instead to mock any questioner - or ignoring others like Herbert), then the less chance of his failure being evident.

However, we do get glimpses of the chief characteristics:
On Wed, 27 Jun 2007 14:13:21 -0700, art <aunwin@insightbb.com> wrote:
>Note the radiator can be any length as long as it is resonant.

We all note there is nothing here that sets gausssian arrays apart from standard ones - even to the point of noting there is nothing of an array in:
On Tue, 26 Jun 2007 16:15:10 -0700, art <aunwin@insightbb.com> wrote:
> >i want to know the minimum number necessary.
>One

Hence we find ourselves in an old arena with an historical match between gausssian arrays and fractal antennas, both claiming that the dipole is their legitimate claim drawn under their umbrella of uniqueness.

73's
Richard Clark, KB7QHC

2453. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:47:10 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052830.181483.250600@m37g2000prh.googlegroups.com>
Source record: 39510
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 28, 10:22 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrote in message
>
> news:ucNgi.9159$c06.6028@newssvr22.news.prodigy.net...
>
> > Mike Kaliski wrote:
> > > For a detailed explaination see "The Road to Reality: A complete Guide
> to
> > > the Laws of the Universe by Roger Penrose - ISBN 0739458477".
>
> > Mike, does he say anything about quantum entanglement?
> > --
> > 73, Cecil http://www.w5dxp.com
>
> Cecil
>
> Yes indeed he does. This book is about as leading edge as it gets. The
> author has worked closely with Stephen Hawking and people of similar
> academic credentials. It doesn't get any better than that.
>
> It is clear from reading this book that we have reached a plateau in our
> capability of understanding how the universe works and we need to await the
> arrival of new technology and techniques to be able to test the latest
> theories. The theory has outstripped the technology for the time being.
>
> Mike G0ULI

? . . .

2454. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:47:59 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052879.588089.251490@m37g2000prh.googlegroups.com>
Source record: 39511
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 28, 12:15 am, m II <c...@in.the.hat> wrote:
> Jeff Liebermann wrote:
> > There are about 10^80 particles in the universe. Do with them as you
> > please but do save the zeros for those that need them.
>
> an a-null-ment is in order.
>
> mike

. . . ? . . .
```

2455. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:48:17 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052897.576668.251670@m37g2000prh.googlegroups.com>
Source record: 39512
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna

```
On Jun 28, 12:52 am, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183005481.445745.166800@z28g2000prd.googlegroups.com...
>
> < snip >
>
>
>
> > No offense but please respond with reasonable answers & keep out the
> > jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> > really interested in this.
>
> Didn't you pull something like this crap in the sci.engr.television.advanced
> newsgroup a few years ago? The correct anwer then and now is that the
> output signal is the modulating signal with a slow phase change impressed on
> it proportional to the instantaneous amplitude of the carrier. Think
> "rotating vector."
>
> No further replies forthcoming, as my troll-o-meter is edging into the red
> zone.

. . . ? . . .
```

2456. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:48:35 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052915.965950.245460@e9g2000prf.googlegroups.com>
Source record: 39513
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna

On Jun 28, 9:55 am, Martin <mrbgoo...@hotmail.com> wrote:
> On Jun 28, 3:52 am, "Sal M. Onella" <salmone...@food.poisoning.org>
> wrote:
>
>
>
>
>
> > "Radium" <gluceg...@gmail.com> wrote in message
>
> >news:1183005481.445745.166800@z28g2000prd.googlegroups.com...
>
> > < snip >
>
> > > No offense but please respond with reasonable answers & keep out the
> > > jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> > > really interested in this.
>
> > Didn't you pull something like this crap in the sci.engr.television.advanced
> > newsgroup a few years ago? The correct anwer then and now is that the
> > output signal is the modulating signal with a slow phase change impressed on
> > it proportional to the instantaneous amplitude of the carrier. Think
> > "rotating vector."
>
> > No further replies forthcoming, as my troll-o-meter is edging into the red
> > zone.
>
> Your troll-o-meter is defective, it should be pegged hard in the red
> zone.
> Please have it recalibrated to a proper sensitivity.- Hide quoted text -
>
> - Show quoted text -

. . . ? . . .

2457. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:49:06 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052946.176171.3720@x35g2000prf.googlegroups.com>
Source record: 39514
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 28, 4:09 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183005481.445745.166800@z28g2000prd.googlegroups.com...
>
>
>
>
>
>
> > Hi:
>
> > Please don't be annoyed/offended by my question.
>
> > I have a very weird question about electromagnetic radiation,
> > carriers, and modulators.
>
> > Is it mathematically-possible to carry a modulator signal with a
> > frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> > every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> > an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> > frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> > nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> > eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> > power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> > power-10^1,000,000,000) nanosecond?
>
> > If it is not mathematically-possible, then please explain why.
>
> > 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> > extremely short amount of time. 10^-(1,000,000,000-to-the-
> > power-10^1,000,000,000) nanosecond is even shorter because a
> > nanosecond is shorter than a second.
>
> > 10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
> > large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
> > gigacycles is even more because a gigacycle is more than a cycle.
>
> > Giga-eon = a billion eons
>
> > Eon = a billion years
>
> > Gigacycle = a billion cycles.

> > *nanocycle = billionth of a cycle
> >
> > Gigaphoton = a billion photons
> >
> > 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> > large large number.
> >
> > 10^1,000,000,000 = 10-to-the-power-1,000,000,000
> >
> > So you get:
> >
> > (10-to-the-power-1,000,000,000) to the power (10-to-the-
> > power-1,000,000,000)
> >
> > 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> > power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
> >
> > 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> > power-1,000,000,000) is an extremely small number at it equals 10-to-
> > the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> > to-the-power-1,000,000,000)]
> >
> > No offense but please respond with reasonable answers & keep out the
> > jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> > really interested in this.
> >
> > Thanks,
> >
> > Radium
> >
> Radium
>
> The answer is no. It takes a finite time for even so called 'instantaneous'
> quantum interactions to occur, so the frequencies quoted are a nonsense.
> Essentially frequencies above around 10 ^ 30 Hz may (as) well not exist. I
> am probably a few orders of magnitude out here, but that is the general
> idea.
>
> For a detailed explaination see "The Road to Reality: A complete Guide to
> the Laws of the Universe by Roger Penrose - ISBN 0739458477". Available from
> Amazon and all good booksellers. Mr. Penrose has collaborated with some of
> the greatest theoretical mathamaticians and physicists of the last fifty
> years and if you can follow the maths, all will become clear. This book will
> explain a lot of the maths required anyway, so worth giving it a go.
>
> Most mathematicians prefer to simplify equations by removing superfluous
> zeroes and exponents by cancellation on either side of the equation. :-)
>
> Mike G0ULI- Hide quoted text -

>
> - Show quoted text -

. . . ? . . .

2458. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 17:49:47 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183052987.367343.274620@g37g2000prf.googlegroups.com>
Source record: 39515
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 28, 4:46 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Mike Kaliski wrote:
> > For a detailed explaination see "The Road to Reality: A complete Guide to
> > the Laws of the Universe by Roger Penrose - ISBN 0739458477".
>
> Mike, does he say anything about quantum entanglement?
> --
> 73, Cecil http://www.w5dxp.com

. . . ? . . .
```

2459. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 18:03:27 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2A945FF.6C74C%dbowey@comcast.net>
Source record: 39516
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/28/07 10:22 AM, in article M8WdneZJb7aqcx7bnZ2dnUVZ8qijnZ2d@bt.com,
"Mike Kaliski" <michael.kaliski@tesco.net> wrote:

>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:ucNgi.9159$c06.6028@newssvr22.news.prodigy.net...
>> Mike Kaliski wrote:
>>> For a detailed explaination see "The Road to Reality: A complete Guide
> to
>>> the Laws of the Universe by Roger Penrose - ISBN 0739458477".
>>
>> Mike, does he say anything about quantum entanglement?
>> --
>> 73, Cecil http://www.w5dxp.com
>
> Cecil
>
> Yes indeed he does. This book is about as leading edge as it gets. The
> author has worked closely with Stephen Hawking and people of similar
> academic credentials. It doesn't get any better than that.
>
> It is clear from reading this book that we have reached a plateau in our
> capability of understanding how the universe works and we need to await the
> arrival of new technology and techniques to be able to test the latest
> theories. The theory has outstripped the technology for the time being.
>
> Mike G0ULI
>
>

They don't know how to tie strings together?

2460. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 18:05:36 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f60t9g$7ob$2@nntp1.jpl.nasa.gov>
Source record: 39520

Hal Rosser wrote:
> "Ken S. Tucker" <dynamics@vianet.on.ca> wrote in message
> news:1182969949.201264.255100@d30g2000prg.googlegroups.com...
>
>>Hi fella's
>>Let me know if I should go to another group.
>>We're doing experiments with UHF antennae,
>>design.
>>CD's have a conductive aluminum substrate,
>>and diameter in UHF range.
>>We got into experimenting with them and have
>>unusual results, some very good, using them
>>as reflectors and directors.
>>Anyone else screwed around with these?
>>Regards
>>Ken S. Tucker
>
>
> Not yet, but how would you "fine tune" one as a director?
Sand paper?

> Wire antennas are easy to tweak by clipping a bit off the ends.
> Lots of folk pick a material easy to work with, but CDs may not fit that
> category.
>
>

2461. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 18:37:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <hdTgi.36086$Um6.18596@newssvr12.news.prodigy.net>
Source record: 39518

H. Wabnig wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> http://www.tdkrfsolutions.com/WebDataSheets/HLP-3003CWebSheet.htm
>
> How would they possibly get a direction effect on the lower
> frequencies with that design I doubt it.

Maybe in an anechoic chamber, one doesn't need
a directional antenna?
--
73, Cecil, w5dxp.com

2462. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 18:45:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <9iv783922noaj4fvtuvdh9fjja8tpg745m@4ax.com>
Source record: 39519
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

m II <c@in.the.hat> hath wroth:

>Jeff Liebermann wrote:
>
>> There are about 10^80 particles in the universe. Do with them as you
>> please but do save the zeros for those that need them.

>an a-null-ment is in order.
>mike

Divorcing oneself from reality is probably easier and cheaper than
getting the church involved in an annulment.

The problem here is that most people don't understand the difference
between a zero and a null. Zeros are easy as they are place holders
for orders of magnitude increases in quantities. Nulls are what's
left when we run out of zeros. Think of nulls as place holders for
the missing zeros.

The uncontrolled substitution of nulls for missing zeros has the
potential for destroying civilization as we know it. For example, a
check written for a million dollars would normally be inscribed:
$1,000,000.00
When all the zero have been consumed and replaced by nulls, it would
look like this:
$1, , .
which leaves much to the imagination. Perhaps we should add zeros to
the endangered "specie" list?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2463. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:04:12 UTC
From: "Ken S. Tucker" <dynamics@vianet.on.ca>
Message-ID: <1183057452.153673.163200@i13g2000prf.googlegroups.com>
Source record: 39521

On Jun 28, 10:04 am, dpl...@radagast.org (Dave Platt) wrote:
> In article <%3Egi.565$ca....@bignews4.bellsouth.net>,
>
> Hal Rosser <hmros...@bellsouth.net> wrote:
> >Not yet, but how would you "fine tune" one as a director?
> >Wire antennas are easy to tweak by clipping a bit off the ends.
> >Lots of folk pick a material easy to work with, but CDs may not fit that
> >category.
>
> Perhaps one could use a compass, and simply scribe a circle of
> appropriate radius through the aluminized layer? Experimentation
> would be required, as the area outside the scribed circle would
> probably act as a capacitive load for the director disc inside.
>
> --
> Dave Platt <dpl...@radagast.org> AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

Thanks all for your answers and questions.
I'm less than competent in understanding
antenna design, though I've installed 100's
of them and studied a fair amount physics.

Recall that a loop antenna is good for UHF,
the closest thing in antenna theory would be
a folded dipole receiver. (I'm thinking of Hal's
question here), what sort of director-reflector
would improve a loop antenna?

Dave's "scribe" suggestion sounds interesting.
I wonder if discs may have advantages over
over conventional wire elements, perhaps due
to capacitive effects?
Regards
Ken

2464. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:04:36 UTC
From: James Beck <jim@reallykillersystems.com>
Message-ID: <MPG.20edd0501132885298a0b2@newsgroups.bellsouth.net>
Source record: 39522
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <1183052987.367343.274620@g37g2000prf.googlegroups.com>, rhf-newsgroups@pacbell.net says...
> On Jun 28, 4:46 am, Cecil Moore <nos...@w5dxp.com> wrote:
> > Mike Kaliski wrote:
> > > For a detailed explaination see "The Road to Reality: A complete Guide to
> > > the Laws of the Universe by Roger Penrose - ISBN 0739458477".
> >
> > Mike, does he say anything about quantum entanglement?
> > --
> > 73, Cecil http://www.w5dxp.com
>
> . . . ? . . .
>
>
I see there are a lot of unanswered questions in your life.

2465. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:08:31 UTC
From: Bob's Backfire Burrito <BLAMPOW!@pullmyfinger.org>
Message-ID: <PGTgi.42624$5j1.35676@newssvr21.news.prodigy.net>
Source record: 39523
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Eeyore" <rabbitsfriendsandrelations@hotmail.com> wrote in message
news:4683403D.24A0BC36@hotmail.com...
>
>
" Radium"

Is a certified nutcase........
nothing new here.

2466. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:09:37 UTC
From: Larry Finger <Larry.Finger@lwfinger.net>
Message-ID: <RHTgi.127979$Sa4.3321@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39524
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
Jeff Liebermann wrote:
> m II <c@in.the.hat> hath wroth:
>
>> Jeff Liebermann wrote:
>>
>>> There are about 10^80 particles in the universe. Do with them as you
>>> please but do save the zeros for those that need them.
>
>> an a-null-ment is in order.
>> mike
>
> Divorcing oneself from reality is probably easier and cheaper than
> getting the church involved in an annulment.
>
> The problem here is that most people don't understand the difference
> between a zero and a null. Zeros are easy as they are place holders
> for orders of magnitude increases in quantities. Nulls are what's
> left when we run out of zeros. Think of nulls as place holders for
> the missing zeros.
>
> The uncontrolled substitution of nulls for missing zeros has the
> potential for destroying civilization as we know it. For example, a
> check written for a million dollars would normally be inscribed:
> $1,000,000.00
> When all the zero have been consumed and replaced by nulls, it would
> look like this:
> $1, , .
> which leaves much to the imagination. Perhaps we should add zeros to
> the endangered "specie" list?
>
Doesn't the space collapse so that we end up with $1...?
```

2467. Re: Suggestions please - portable antenna for camper van

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:25:16 UTC
From: ukmonitor@hotmail.com
Message-ID: <1183058716.449624.12000@u2g2000hsc.googlegroups.com>
Source record: 39525

Snip >

> Based on the tests I've seen, the Outbacker is a bit more efficient
> than Hamsticks (but not by much), and is probably less efficient than
> all but the smallest of screwdriver-type antennas (including the ATAS).
>
> If you're interested in a fairly traditional mobile-type antenna
> (an inductively-loaded short radiator) with higher efficiency,
> consider a bugcatcher - a lower mast, a large air-core center-loading
> inductor, and a long whip on top (possibly with a capacity hat).
> By winding the center coil properly (large-diameter wire or tubing,
> turns spaced apart, with the right length/diameter ratio) you can get
> a significantly higher Q in the coil (and thus lower losses) than
> you'll get with a tightly-wound screwdriver coil or a helically-
> wound Hamstick or Outbacker.
>
> You may want one coil per band... although it's possible to work
> multiple bands, with some additional loss, by using a jumper to short
> out some of the coil turns on the higher-frequency bands. I've seen
> some "dual-band" bugcatcher designs, in which the full coil is used to
> load the antenna on 75 meters, and a series-resonant circuit shorts
> out some of the turns on 40 meters.
>
> Mount the antenna as high as possible on the van... ideally, so that
> all of the antenna is up above the vehicle body.
>
> Since you don't plan to actually operate while driving, you can use a
> taller antenna than would be possible while mobile, and may not need
> additional guying.
>
> Another possibility is to simply throw up a random wire (perhaps an
> inverted-L, suspended via thin rope from nearby trees... use the
> vehicle body as a ground (perhaps with a counterpoise wire) and use a
> wide-range antenna tuner. Any reasonably thin, flexible stranded wire
> could be used... some specialist dealers such as The Wireman sell
> antenna wires which are reportedly easy to coil without kinking.
>
> --
> Dave Platt <dpl...@radagast.org> AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!- Hide quoted text -
>
> - Show quoted text -

OK this is getting interesting now !

Thanks for all your suggestions, I respect your judgement as I realise what a wealth of experience I'm tapping into.

I had discounted random wires hanging from trees, as I wanted the whole thing to be attached to the van. The G5RV is relatively easy to deploy when I have the space, but I'm trying to operate from a standard car park bay, without drawing too much attention to myself by having lots of wires running across other bays which people are trying to park in. Likewise I didn't want to use critical matching components or high-Q tuned circuits which may require adjustments every time I moved location or it started to rain (actually I should have said stopped raining, as that is less frequent).

As I already have a Z-11 I thought I could use it as an autocoupler at the base of the antenna. It's capable of doing this but it doesn't have quite as wide a matching range as say the SGC range. LDG 6 to 1000 ohms vs SGC 0.3 to 3000 ohms (from memory) So providing I don't use a coax feed to the antenna base and the impedance stays within the 6 -1000 ohm boundaries, so I don't need an additional 4:1 balun, then the losses should be down to acceptable levels.

I realise that I could simply create a muliband trapped vertical, say using coax based traps to reduce the size and weight. However I wish to maximise the full length of the 10m pole as much as possible. Bearing in mind that the lowest 2m or so of the pole would be below the van roof, so I can only really use the remaining 8m or so, which I need to optimise as much as possible.

The existing 7.2m wire works OK but it would benefit from a bit more inductive loading to reduce the capacitive reactance at 3.5MHz to be within the tuning limits of the Z-11. The other problem as indcated by Cecil is the length being greater than 5/8 wave at 10m and 6m resulting in a poor angle of radiation.

I thought that by adding a 3m phasing section in the form of a coil at 1.5m down from the top of the mast with approx 2.7m below, the phasing section this would approximate to a 1/4 over 1/2 wave collinear for 6m, and add some loading at 3.5MHz. My thinking is that this would use the length of the pole to it's best advantage on the 6m band and reduce the radiation angle to acceptable limits on 10m.

I could play with overall lengths of wire (say 8.8m or 11.8m and the length and size of the phasing coil to optimise the 6m gain and impedance range on each of the bands if this was worth doing. But as I said before I'm not agonising over the last dB of performance as I would on the microwave bands. I believe it's a law of diminishing returns, you need a lot of optimisation to gain a few dB but in most cases an S point difference goes practically unnoticed. Especially when the environment surrounding the vehicle will have a significant effect on the overall radiation efficiency.

I had thought about the ATAS-120 but having 80m is useful for inter-UK contacts and I would think that I could at least match the performance of an ATAS on the higher bands and beat it on the lower ones. Has anyone seen efficency figures for the ATAS ?

Another thought which struck me was that I could wind a counterpoise coil on the bottom 2m of the pole which would be below the roof of the van. This would be close coupled into the van body as well as other nearby objects such as fences ect. but it may improve things slightly by adding an additional counterpoise element. Something like the W2IK IK-STIC design.

Keep the suggestions coming !

UKM

2468. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:42:45 UTC
From: Dave <noone@nowhere.com>
Message-ID: <VaUgi.6056$bj5.4837@trndny07>
Source record: 39526

```
"art" <aunwin@insightbb.com> wrote in message
news:1182985879.282184.268680@q69g2000hsb.googlegroups.com...
> On 27 Jun, 15:28, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182981629.699650.270990@c77g2000hse.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 27 Jun, 14:24, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>
>> >> >>news:1182978801.020398.318990@n2g2000hse.googlegroups.com...
>> >>
>> >> >> > On 27 Jun, 14:02, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >>
>> >> >> >> >>news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
>> >> >> >>
>> >> >> >> >> > On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >>
>> >> >> >> >> >> >>news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
>> >> >> >> >> >>
>> >> >> >> >> >> >> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> >> >> >> >> Ok, lets try it this way... step by step, inch by
>> >> >> >> >> >> >> >> >> >> >> >> >> >> inch,
```

>> >> >> >> >> >> >> >> we
>> >> >> >> >> >> >> >> may
>> >> >> >> >> >> >> >> yet
>> >> >> >> >> >> >> >> figure
>> >> >> >> >> >> >> >> out what this antenna is.
>>
>> >> >> >> >> >> >> >> First question:
>> >> >> >> >> >> >> >> What is the least number of wires needed to build a
>> >> >> >> >> >> >> >> gaussian
>> >> >> >> >> >> >> >> antenna?
>>
>> >> >> >> >> >> >> > Not necessary Dave. Richard is very familiar with the
>> >> >> >> >> >> >> > subject
>> >> >> >> >> >> >> > at
>> >> >> >> >> >> >> > hand
>> >> >> >> >> >> >> > as well as its underpinnings that can be understood
>> >> >> >> >> >> >> > by
>> >> >> >> >> >> >> > EEs
>> >> >> >> >> >> >> > and is providing a reference that will make all
>> >> >> >> >> >> >> > things
>> >> >> >> >> >> >> > clear.
>> >> >> >> >> >> >> > You asked for it and your wish is going to be granted
>> >> >> >> >> >> >> > in
>> >> >> >> >> >> >> > a
>> >> >> >> >> >> >> > clear
>> >> >> >> >> >> >> > and precise manner that you and the group have
>> >> >> >> >> >> >> > requested.
>> >> >> >> >> >> >> > You should now be able to build it yourself with out
>> >> >> >> >> >> >> > mumbo
>> >> >> >> >> >> >> > jumbo
>> >> >> >> >> >> >> > from me to confuse you.
>> >> >> >> >> >> >> > No need for me anymore, you now have an expert at
>> >> >> >> >> >> >> > your
>> >> >> >> >> >> >> > call.
>> >> >> >> >> >> >> > Don't forget Poyntings input.
>> >> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> >> whats a 'Richard'??
>>
>> >> >> >> >> >> >> I want to hear it straight from the source. I have
>> >> >> >> >> >> >> asked
>> >> >> >> >> >> >> over
>> >> >> >> >> >> >> and
>> >> >> >> >> >> >> over
>> >> >> >> >> >> >> for
>> >> >> >> >> >> >> you to define the terms and you can't put it into words
>> >> >> >> >> >> >> this
>> >> >> >> >> >> >> poor
>> >> >> >> >> >> >> engineer
>> >> >> >> >> >> >> can understand, so i thought we would try to build an

>> >> >> >> >> >> >> example
>> >> >> >> >> >> >> from
>> >> >> >> >> >> >> the
>> >> >> >> >> >> >> bottom up. but if you can't help with that then maybe
>> >> >> >> >> >> >> the
>> >> >> >> >> >> >> whole
>> >> >> >> >> >> >> thing
>> >> >> >> >> >> >> is
>> >> >> >> >> >> >> just out of my reach and i should go back to good old
>> >> >> >> >> >> >> yagis
>> >> >> >> >> >> >> and
>> >> >> >> >> >> >> phased
>> >> >> >> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> >> > Sounds reasonable
>>
>> >> >> >> >> >> if it sounds so reasonable, how many wires does it take?-
>> >> >> >> >> >> Hide
>> >> >> >> >> >> quoted
>> >> >> >> >> >> text -
>>
>> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> > As many as you want and have fun.
>> >> >> >> >> > The subject is dead. Let it go
>> >> >> >> >> > Join the boiling water saga that
>> >> >> >> >> > is where the action is
>> >> >> >> >> > Art
>>
>> >> >> >> >> no, this is my subject so i'll say when it's dead... i don't
>> >> >> >> >> want
>> >> >> >> >> to
>> >> >> >> >> know
>> >> >> >> >> how many i can use, i want to know the minimum number
>> >> >> >> >> necessary.-
>> >> >> >> >> Hide
>> >> >> >> >> quoted text -
>>
>> >> >> >> >> - Show quoted text -
>>
>> >> >> >> > One
>>
>> >> >> >> ok, thats a start.
>>
>> >> >> >> assuming i want to operate on 14195khz, how long should the wire
>> >> >> >> be?-
>> >> >> >> Hide quoted text -
>>

>> >> >> >> - Show quoted text -
>>
>> >> >> > Whatever wire you have throw it away and get a longer one
>>
>> >> >> ok, random length... can do. now how do i connect it to a piece of
>> >> >> coax?- Hide quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > O.K. For the last time I will go along until such time
>> >> > it is obvious you have other intentions.So I start again.
>>
>> >> > Make a dipole of random shapes and heights that is resonant
>> >> > at your design frequency. Note the radiator can be any length
>> >> > as long as it is resonant. For the sake of this discussion
>> >> > or interrogation let us use a plain half wave dipole.
>> >> > The feed coax feeds the dipole at it's center in the normal way.
>> >> > Art KB9MZ......XG
>>
>> >> ok, so its a plain half wave dipole, fed with normal coax in the
>> >> normal
>> >> way.
>> >> so what makes it 'gaussian'?- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > Because it's resonant at the desired frequency. This is the
>> > basic form of a Gaussian antenna which is also the starting
>> > point of a Yagi antenna if viewed as a single radiator
>> > Art
>>
>> so 'gaussian' == 'resonant'
>> why didn't you say so in the first place?
>> so a properly tuned yagi-uda array is a 'gaussian' antenna?- Hide quoted
>> text -
>>
>> - Show quoted text -
>
> First David before I go on others may jump in
> and take the thread away from you. If that occurres
> we can talk via E mail so that you are not penalised
> They can use another thread in parallel which
> I will respond to. This thread will remain a
> civil and academic interrogation as you have requested.
> ....
> No, I would not stretch things that far based on
> just one element or one piece of a jigsaw puzzle
> A Yagi array is based on an array of elements
> not just one. You wanted to procede in small steps
> as provided by you, specific and to the point.

> For starters a Yagi array is planar and a Gaussian
> array antenna can be and usually , from my
> research, is otherwise. Note the Gaussian element
> is of random shape and height but always resonant
> and not necessarily tied to a 1/2 wl.
> Art
>

no, the interrogation isn't over... it was just my bedtime.

ok, so ignore the yagi for now. you classify a resonant random length wire as a gaussian element. is there any other essential characteristic besides resonance? How does 'equilibrium' fit into the description?

2469. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 19:57:11 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1183060631.177305.187830@d30g2000prg.googlegroups.com>
Source record: 39527

On Jun 28, 1:06 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
>
> news:1183042458.347229.316570@e9g2000prf.googlegroups.com...
>
>
>
>
>
> > On Jun 28, 10:36 am, Richard Clark <kb7...@comcast.net> wrote:
> >> On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE...@YAHOO.COM>
> >> wrote:
>
> >> >While pondering the design of a broadband antenna that would cover
> >> >from 50 to 450 Mhz I considered a log periodic array. This would serve
> >> >my purpose but the size would be inconvienent. Then I had a thought,
> >> >Could I remove the elements that are not required for amateur band
> >> >coverage? In my case I am only interested in 50, 144,and 432 MHz
> >> >bands, Would this allow me to shorten the boom by an amout equal to
> >> >the space occupied by the removed elements and have a gain of 7Dbd.
> >> >Could I cover all 3 bands with just the elements for 6 and 2m?
> >> >Any thoughts on this would be greatly appreciaated.
>
> >> Hi Jimmie,
>
> >> What you are then asking for is NOT a broadband antenna; but rather a
> >> multiband antenna, or even three, interlaced single band antennas.
> >> Don't try this at home with a gaussian bundle.
>
> >> To answer your question more directly, yes you can remove those
> >> elements that do not contribute to the three bands. Unfortunately, to
> >> maintain its LDPA aspects, you still have to maintain some outliers
> >> for each band. This doesn't necessarily shorten it, because an LPDA's
> >> length is driven by many other considerations such as bandwidth and
> >> gain, not just simply extremes (yes, that too is part of the mix,
> >> simply a complex part of the mix).
>
> >> No to your last question. The matter of resonance is still a first
> >> principle. However, the 2M band is loosely related to the 70cM band,
> >> and if you are building an LPDA (and sweep the elements, chevron
> >> style) there may be a chance of it performing there too.
>
> >> All-in-all, don't expect remarkable gain after having gone through all
> >> these exceptions.

>
> >> 73's
> >> Richard Clark, KB7QHC
>
> > Thanks this is what I was expecting but I think I am going to try it
> > anyway.
> <SNIP>
> > Jimmie
>
> Hi Jimmie
>
> Have you figured out which elements to remove and which will remain?
>
> Jerry- Hide quoted text -
>
> - Show quoted text -

In reality it will probably be designed as if it were 2 or 3 single band lpda antennas. Cebik has a couple of designs like that and I will just put them on one boom trying them spead out and with the space removed. For now I am thinking four four element cells for each band.

Im also curious to find out how a swept element 2m antenna will work on 70cm.

Jimmie

2470. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 20:03:35 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f614bpqop1@aioe.org>
Source record: 39529

After poring myself mango margarita and energizing my dead brain cells, I am cocluding that:

We see all kinds of dormant "geniouses" coming up with antenna designs that defy the laws of physics and 100 some years of antenna developments. Claims to various miraculous new principles and patent applications aimed at those who have no clues about antennas, but are a potential suckers for commercialization.

We know how the dipole or vertical work, their designs and factors affecting reduced size were beaten to death over 100 years and basic principles are known regardles if someone claims to have purple electrons skirting the laws of physics. Freaken fractals outdoing the full size radiators, EH splitting the atom and E - H fields, UofRI storing the energy in a coil, yadayadayada etc.

Art's mumbo-jumbo troll and superiority of XG mechanical engineer over dumb amateurs is another pathetic example of trying to mirror his "patent" immortalizing his "invention" that director is a reflector and vice versa. Poor reflection on patent office and the "inventor". Yet another try with "Goosian soup", equilibrium and who knws what.

I have been foolling around with radio and searching and designing killer antennas for some 50 years. In the category of horizontal beam antennas I designed my Razor Beams, which I believe produce the highest gain per booml ength (or number of elements) and decent pattern and bandwidth. They were tested in the numerous contest and nailed bunch of world records demonstrating their performance over other designs. If Art's Goose can beat that, I will write a check for $1000 to him and apologize for doubting his superiority. Judging by his posts on other subjects, I doubt that I would ever need to do that.
So far it appears that it is just another Artroll and craving for arguments and attention. It is getting tiring and pathetic.

Feeding the dipole and telling it that the electrons or photons are purple Gausians, is not going to change it to far-out performance, unless really, for 100 years of antenna engineering we were dumbasses amateurs, including W8JK.

The glass is empty, time to ingore the drivell and gat back to real life and antennas.
Time for the fine cigaaaar!

73, Yuri da bada k3BU/m

2471. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 20:04:43 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1183061083.786038.105490@e16g2000pri.googlegroups.com>
Source record: 39528
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 28, 12:38 am, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Please don't be annoyed/offended by my question.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
> large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
> gigacycles is even more because a gigacycle is more than a cycle.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> Gigacycle = a billion cycles.
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.
>

> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
> Thanks,
>
> Radium

I guess you could have some real problems when the rise time of your
modulated envelope becomes faster than the speed of light.

2472. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 20:16:53 UTC
From: Sjouke Burry <burrynulnulfour@ppllaanneett.nnlll>
Message-ID: <46841735$0$25474$ba620dc5@text.nova.planet.nl>
Source record: 39530
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> Hi:
>
> Please don't be annoyed/offended by my question.
>

> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and

Ah our village idiot is back again.
Also crossposting like all welbehaving
village idiots.

2473. Re: CD's as director-reflector units?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 20:23:20 UTC
From: nm5k@wt.net
Message-ID: <1183062200.517813.303750@w5g2000hsg.googlegroups.com>
Source record: 39381

On Jun 27, 12:45 pm, "Ken S. Tucker" <dynam...@vianet.on.ca> wrote:
> Hi fella's
> Let me know if I should go to another group.
> We're doing experiments with UHF antennae,
> design.
> CD's have a conductive aluminum substrate,
> and diameter in UHF range.
> We got into experimenting with them and have
> unusual results, some very good, using them
> as reflectors and directors.
> Anyone else screwed around with these?
> Regards
> Ken S. Tucker

I've never messed with them, but I used to have a microwave TV
antenna that used disks as the directors, or whatever..
That portion of the antenna was a long rod that stuck out of
the housing which held the driven element I assume.
The rod was filled with tube spacers and small aluminum disks,
one after another. So it's been used, but like I say I've never
messed with one, or even used the TV version I had. It was just
an antenna I picked up out of a bunch of other junk..
Just find one of those old TV microwave antennas that they
used to mount on houses, and you will see "disk" elements.
I don't see why the CD's couldn't do the same, but of course
they are tuned to one, or at least a fairly narrow range of
frequencies if they use the stock disc size without trimming.
I'm not sure of any advantages.. Maybe one.. The elements
are naturally good to go with either polarization. Seems you
would only need to change the driven element polarity to
change from one to the other. BTW, the one I had, all the
disks were the same size.. And they were much smaller
than a CD.. Maybe 2 inches dia max?
MK

2474. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 20:23:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <zNUgi.14006$XH5.3267@trndny02>
Source record: 39382

"art" <aunwin@insightbb.com> wrote in message
news:1183061420.081686.11600@g4g2000hsf.googlegroups.com...
> On 28 Jun, 12:42, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1182985879.282184.268680@q69g2000hsb.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 27 Jun, 15:28, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>
>> >> >>news:1182981629.699650.270990@c77g2000hse.googlegroups.com...
>> >>
>> >> > On 27 Jun, 14:24, "Dave" <n...@nowhere.com> wrote:
>> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >>
>> >> >> >>news:1182978801.020398.318990@n2g2000hse.googlegroups.com...
>> >> >>
>> >> >> >> > On 27 Jun, 14:02, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >>
>> >> >> >> >> >>news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
>> >> >> >> >>
>> >> >> >> >> >> > On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >>
>> >> >> >> >> >> >> >>news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
>> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> >> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >> >> >> >> >>

>> >> >> >> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>>
>> >> >> >> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> Ok, lets try it this way... step by step, inch
>> >> >> >> >> >> >> >> >> by
>> >> >> >> >> >> >> >> >> inch,
>> >> >> >> >> >> >> >> >> we
>> >> >> >> >> >> >> >> >> may
>> >> >> >> >> >> >> >> >> yet
>> >> >> >> >> >> >> >> >> figure
>> >> >> >> >> >> >> >> >> out what this antenna is.
>>
>> >> >> >> >> >> >> >> >> First question:
>> >> >> >> >> >> >> >> >> What is the least number of wires needed to build
>> >> >> >> >> >> >> >> >> a
>> >> >> >> >> >> >> >> >> gaussian
>> >> >> >> >> >> >> >> >> antenna?
>>
>> >> >> >> >> >> >> >> > Not necessary Dave. Richard is very familiar with
>> >> >> >> >> >> >> >> > the
>> >> >> >> >> >> >> >> > subject
>> >> >> >> >> >> >> >> > at
>> >> >> >> >> >> >> >> > hand
>> >> >> >> >> >> >> >> > as well as its underpinnings that can be
>> >> >> >> >> >> >> >> > understood
>> >> >> >> >> >> >> >> > by
>> >> >> >> >> >> >> >> > EEs
>> >> >> >> >> >> >> >> > and is providing a reference that will make all
>> >> >> >> >> >> >> >> > things
>> >> >> >> >> >> >> >> > clear.
>> >> >> >> >> >> >> >> > You asked for it and your wish is going to be
>> >> >> >> >> >> >> >> > granted
>> >> >> >> >> >> >> >> > in
>> >> >> >> >> >> >> >> > a
>> >> >> >> >> >> >> >> > clear
>> >> >> >> >> >> >> >> > and precise manner that you and the group have
>> >> >> >> >> >> >> >> > requested.
>> >> >> >> >> >> >> >> > You should now be able to build it yourself with
>> >> >> >> >> >> >> >> > out
>> >> >> >> >> >> >> >> > mumbo
>> >> >> >> >> >> >> >> > jumbo
>> >> >> >> >> >> >> >> > from me to confuse you.
>> >> >> >> >> >> >> >> > No need for me anymore, you now have an expert at
>> >> >> >> >> >> >> >> > your
>> >> >> >> >> >> >> >> > call.
>> >> >> >> >> >> >> >> > Don't forget Poyntings input.
>> >> >> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> >> >> whats a 'Richard'??
>>

>> >> >> >> >> >> >> >> I want to hear it straight from the source. I have
>> >> >> >> >> >> >> >> asked
>> >> >> >> >> >> >> >> over
>> >> >> >> >> >> >> >> and
>> >> >> >> >> >> >> >> over
>> >> >> >> >> >> >> >> for
>> >> >> >> >> >> >> >> you to define the terms and you can't put it into
>> >> >> >> >> >> >> >> words
>> >> >> >> >> >> >> >> this
>> >> >> >> >> >> >> >> poor
>> >> >> >> >> >> >> >> engineer
>> >> >> >> >> >> >> >> can understand, so i thought we would try to build
>> >> >> >> >> >> >> >> an
>> >> >> >> >> >> >> >> example
>> >> >> >> >> >> >> >> from
>> >> >> >> >> >> >> >> the
>> >> >> >> >> >> >> >> bottom up. but if you can't help with that then
>> >> >> >> >> >> >> >> maybe
>> >> >> >> >> >> >> >> the
>> >> >> >> >> >> >> >> whole
>> >> >> >> >> >> >> >> thing
>> >> >> >> >> >> >> >> is
>> >> >> >> >> >> >> >> just out of my reach and i should go back to good
>> >> >> >> >> >> >> >> old
>> >> >> >> >> >> >> >> yagis
>> >> >> >> >> >> >> >> and
>> >> >> >> >> >> >> >> phased
>> >> >> >> >> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> >> >> > Sounds reasonable
>>
>> >> >> >> >> >> >> >> if it sounds so reasonable, how many wires does it
>> >> >> >> >> >> >> >> take?-
>> >> >> >> >> >> >> >> Hide
>> >> >> >> >> >> >> >> quoted
>> >> >> >> >> >> >> >> text -
>>
>> >> >> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> >> >> > As many as you want and have fun.
>> >> >> >> >> >> >> > The subject is dead. Let it go
>> >> >> >> >> >> >> > Join the boiling water saga that
>> >> >> >> >> >> >> > is where the action is
>> >> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> >> >> no, this is my subject so i'll say when it's dead... i
>> >> >> >> >> >> >> >> don't
>> >> >> >> >> >> >> >> want

>> >> >> >> >> >> to
>> >> >> >> >> >> know
>> >> >> >> >> >> how many i can use, i want to know the minimum number
>> >> >> >> >> >> necessary.-
>> >> >> >> >> >> Hide
>> >> >> >> >> >> quoted text -
>>
>> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> > One
>>
>> >> >> >> >> ok, thats a start.
>>
>> >> >> >> >> assuming i want to operate on 14195khz, how long should the
>> >> >> >> >> wire
>> >> >> >> >> be?-
>> >> >> >> >> Hide quoted text -
>>
>> >> >> >> >> - Show quoted text -
>>
>> >> >> >> > Whatever wire you have throw it away and get a longer one
>>
>> >> >> >> ok, random length... can do. now how do i connect it to a piece
>> >> >> >> of
>> >> >> >> coax?- Hide quoted text -
>>
>> >> >> >> - Show quoted text -
>>
>> >> >> > O.K. For the last time I will go along until such time
>> >> >> > it is obvious you have other intentions.So I start again.
>>
>> >> >> > Make a dipole of random shapes and heights that is resonant
>> >> >> > at your design frequency. Note the radiator can be any length
>> >> >> > as long as it is resonant. For the sake of this discussion
>> >> >> > or interrogation let us use a plain half wave dipole.
>> >> >> > The feed coax feeds the dipole at it's center in the normal way.
>> >> >> > Art KB9MZ......XG
>>
>> >> >> ok, so its a plain half wave dipole, fed with normal coax in the
>> >> >> normal
>> >> >> way.
>> >> >> so what makes it 'gaussian'?- Hide quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > Because it's resonant at the desired frequency. This is the
>> >> > basic form of a Gaussian antenna which is also the starting
>> >> > point of a Yagi antenna if viewed as a single radiator
>> >> > Art
>>

>> >> so 'gaussian' == 'resonant'
>> >> why didn't you say so in the first place?
>> >> so a properly tuned yagi-uda array is a 'gaussian' antenna?- Hide
>> >> quoted
>> >> text -
>>
>> >> - Show quoted text -
>>
>> > First David before I go on others may jump in
>> > and take the thread away from you. If that occurres
>> > we can talk via E mail so that you are not penalised
>> > They can use another thread in parallel which
>> > I will respond to. This thread will remain a
>> > civil and academic interrogation as you have requested.
>> > ....
>> > No, I would not stretch things that far based on
>> > just one element or one piece of a jigsaw puzzle
>> > A Yagi array is based on an array of elements
>> > not just one. You wanted to procede in small steps
>> > as provided by you, specific and to the point.
>> > For starters a Yagi array is planar and a Gaussian
>> > array antenna can be and usually , from my
>> > research, is otherwise. Note the Gaussian element
>> > is of random shape and height but always resonant
>> > and not necessarily tied to a 1/2 wl.
>> > Art
>>
>> no, the interrogation isn't over... it was just my bedtime.
>>
>> ok, so ignore the yagi for now. you classify a resonant random length
>> wire
>> as a gaussian element. is there any other essential characteristic
>> besides
>> resonance? How does 'equilibrium' fit into the description?- Hide quoted
>> text -
>>
>> - Show quoted text -
>
> First of all we are talking about arrays and not just a
> single element . Now one must consider where to put the
> next element. If we are space concious it would seem that
> putting both elements close to each other but not as close
> as the wire dia compared to the spacing. This element has the
> same confines as the first element so one must attain
> resonance of both elements at the same time while in
> the proximetry of each other which allows for a descision
> loater as to which element/s is going to be driven.
> Ofcourse you will notice that major differences occurs
> to the norm because of the close proximetry of the elements.
> Since I suggested that we use 1/2 wave elements it would

> also be advisable at this time all elements straight
> but at different heights and angles to each other
> so that multishaped elements,which can be used, do not
> complicate the theme of what I am describing.
>
> (The following side note goes beyond what the question
> is but I am sure it will help the further you travel down the road.)
>
> What we are now simulating is a Gaussian field with
> its normal pill box. Normally one only sees static
> particles in equilibrium but I have taken the liberty
> of adding the array elements upon which the static
> particles are resting upon and inside the arbitary border.
>

whoa! too fast! lets talk about the minimum antenna, the 1/2 wave (or there abouts) resonant element. You said that was all i needed to make a gaussian antenna. So it doesn't have to be a classic dipole or any other specific shape, as long as it is resonant. But is resonance alone enough to classify it as a gaussian antenna?

2475. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 21:08:08 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f618enftl1@news.service.uci.edu>
Source record: 39383

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> It was my contention then that the IEEE did not support such a view,
>> and that remains my view.
>
>
> Do you support the IEEE's contention that
> "power propagates in a wave"? It's a simple
> yes/no question, Jim.

Your question is based on an incorrect assumption, Cecil. As you are well aware, a correct answer cannot be given to such a question. As far as I know, you're the only one who derives that particular meaning from that particular IEEE definition. So unless you can get the person who wrote the definition to confirm your belief, the dispute at this point would appear to be between you and him. A more reasonable point of view would be that IEEE is simply defining the Poynting Vector. If that puts me between a rock and a hard place then I guess that's something I'll just have to bear. :-)

73, AC6XG

2476. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 21:21:20 UTC
From: m II <c@in.the.hat>
Message-ID: <kDVgi.14587$tB5.5934@edtnps90>
Source record: 39384
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> They don't know how to tie strings together?

When some of them have only one end, it becomes bothersome. thankfully
my shoelaces were spared this metaphysical ambiguity.

mike

2477. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 22:19:13 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <BtWgi.22965$C96.5663@newssvr23.news.prodigy.net>
Source record: 39385

Jim Kelley wrote:
> Cecil Moore wrote:
>> Do you support the IEEE's contention that
>> "power propagates in a wave"? It's a simple
>> yes/no question, Jim.
>
> Your question is based on an incorrect assumption, Cecil. As you are
> well aware, a correct answer cannot be given to such a question. As far
> as I know, you're the only one who derives that particular meaning from
> that particular IEEE definition.

It's not based on any assumption at all, Jim.
It is a *direct quote* in plain English from the
IEEE Dictionary. Your response reminds me of
Bill Clinton.
--
73, Cecil http://www.w5dxp.com

2478. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 22:42:19 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183070539.719615.60340@c77g2000hse.googlegroups.com>
Source record: 39386

On Jun 27, 4:43 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Do you support the IEEE's contention that
> "power propagates in a wave"? It's a simple
> yes/no question, Jim.

Of course, the IEEE makes no such contention. Only by careful selection of the words you choose to see can this claim be made.

The IEEE definition of "power-flow vector", from IEEE 100, "The Authoritative Dictionary of IEEE Standards Terms", Seventh Edition, opens with:

"Vector-characterizing energy propagation caused by a wave"

Seems like they pretty much have it right. The definition continues with:

"and giving magnitude and direction"

Yes, it is a vector. And the definition concludes with:

"of power per unit-area propagating in the wave (i.e., analogous to Poynting vector)."

Yes, they could have substituted "energy per unit-time" for "power", but, given the complete context, clarity would not be enhanced and the sentence would be much more awkward.

Only someone skilled in the use of sentence fragments would claim that the IEEE contends that "power propagates in a wave".

Methinks you owe the IEEE an apology.

...Keith

2479. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 22:48:58 UTC
From: Deek <Deek@comcast.net>
Message-ID: <dpednSz8XtVKpxnbnZ2dnUVZ_jadnZ2d@comcast.com>
Source record: 39387

Cecil Moore wrote:
> Jim Kelley wrote:
>
>> Cecil Moore wrote:
>>
>>> Do you support the IEEE's contention that
>>> "power propagates in a wave"? It's a simple
>>> yes/no question, Jim.
>>
>>
>> Your question is based on an incorrect assumption, Cecil. As you are
>> well aware, a correct answer cannot be given to such a question. As
>> far as I know, you're the only one who derives that particular meaning
>> from that particular IEEE definition.
>
>
> It's not based on any assumption at all, Jim.
> It is a *direct quote* in plain English from the
> IEEE Dictionary. Your response reminds me of
> Bill Clinton.

Let's see now ... P = integral of watts/steradian^2 or watts/square wavelength,
over the surface of integration.

I'm late to this question. Radiated power is an EM wave propagating outward from
a radiating source. The units of the surface power density are watts per square
[you provide the units].

YES!

2480. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 22:54:09 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46843c11$0$4699$4c368faf@roadrunner.com>
Source record: 39388

"Yuri Blanarovich" <K3BU@optonline.net> wrote in message
news:f614bpqop1@aioe.org...
> After poring myself mango margarita and energizing my dead brain cells, I
> am cocluding that:
>
> We see all kinds of dormant "geniouses" coming up with antenna designs
> that defy the laws of physics and 100 some years of antenna developments.
> Claims to various miraculous new principles and patent applications aimed
> at those who have no clues about antennas, but are a potential suckers for
> commercialization.
>
> We know how the dipole or vertical work, their designs and factors
> affecting reduced size were beaten to death over 100 years and basic
> principles are known regardles if someone claims to have purple electrons
> skirting the laws of physics. Freaken fractals outdoing the full size
> radiators, EH splitting the atom and E - H fields, UofRI storing the
> energy in a coil, yadayadayada etc.
>
> Art's mumbo-jumbo troll and superiority of XG mechanical engineer over
> dumb amateurs is another pathetic example of trying to mirror his "patent"
> immortalizing his "invention" that director is a reflector and vice versa.
> Poor reflection on patent office and the "inventor". Yet another try with
> "Goosian soup", equilibrium and who knws what.
>
> I have been foolling around with radio and searching and designing killer
> antennas for some 50 years. In the category of horizontal beam antennas I
> designed my Razor Beams, which I believe produce the highest gain per
> booml ength (or number of elements) and decent pattern and bandwidth. They
> were tested in the numerous contest and nailed bunch of world records
> demonstrating their performance over other designs. If Art's Goose can
> beat that, I will write a check for $1000 to him and apologize for
> doubting his superiority. Judging by his posts on other subjects, I doubt
> that I would ever need to do that.
> So far it appears that it is just another Artroll and craving for
> arguments and attention. It is getting tiring and pathetic.
>
> Feeding the dipole and telling it that the electrons or photons are purple
> Gausians, is not going to change it to far-out performance, unless really,
> for 100 years of antenna engineering we were dumbasses amateurs, including
> W8JK.
>
> The glass is empty, time to ingore the drivell and gat back to real life
> and antennas.
> Time for the fine cigaaaar!

>
> 73, Yuri da bada k3BU/m
>

He may not know crap about antennas but I think he may be the greatest troll artist of all times.

Jimmie

2481. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 23:04:38 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f61eqsodn1@nnrp.linuxfan.it>
Source record: 39389

Jimmie D wrote:

> ...
> He may not know crap about antennas but I think he may be the greatest troll
> artist of all times.
> Jimmie

Without doubt, the first antenna "was" before the theory/math was
invented to define it ...

Without a doubt, this WILL occur again, and if it already has, only if
you do the construction will you know. The math/models have been
defined within too narrow of parameters, indeed, it is easy to prove
some of this math is based on sheer fallacy. The
permeability/permittivity of "nothing" being involved demonstrates, at
the very least, some things need redefining!

nothing = 0 permeability = 0 permittivity; end of story.

Now, let's find the real math ...

JS

2482. HT antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 23:08:51 UTC
From: Norman Patrick <normanpatrick@sbcglobal.net>
Message-ID: <5cXgi.8019$bP5.1141@newssvr19.news.prodigy.net>
Source record: 39397

I have an ICOM W32A HT. Whenever I try to connect an external antenna (such as an Arrow Satellite Antenna) I get no TX or RX. It seems to work fine with the rubber duck. Anyone else had this problem? Do you think the radio needs repair? Thanks! This is my FIRST post on this newsgroup. KE5IQM

2483. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 23:39:49 UTC
From: KCX-4130
Message-ID: <46843b2e$0$16381$88260bb3@free.teranews.com>
Source record: 39390
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

"<SLUGO> The Meanie-Hammie" <ham@tripe.org> wrote in message
news:468430b4$0$16364$88260bb3@free.teranews.com...
> take it from the slim balls (HAMS) and give it to the cb/freeband
> ops.............only then it will be used to its full potential.
>

The key word is TAKE!
WTF could those handi-ham freak types do about it? NOT A DAM THING!!
> --
> Posted via a free Usenet account from http://www.teranews.com
>

--
Posted via a free Usenet account from http://www.teranews.com

2484. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 23:45:32 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <tig883h5hs980bdhep9r6jrol8ceunf0r7@4ax.com>
Source record: 39391
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 28 Jun 2007 19:09:37 GMT, Larry Finger
<Larry.Finger@lwfinger.net> wrote:

>Doesn't the space collapse so that we end up with $1...?

Space does not collapse except in the vicinity of a black hole. Space
also tends to collapse during department reorganizations, where
there's never enough space left.

There's also the problem of accounting for the missing nulls. Where
did they go and what was the exchange rate?

Such things are fairly important. For example, did you ever notice
that Roman Numerals do not have a zero or a null? There was a half
hearted attempt at inventing zero or null (nulla), but fortunately
that failed for many centuries. Rome survived much decadence and some
really weird Emperors without much difficulty.
<http://en.wikipedia.org/wiki/Roman_numerals>
However, no sooner than the Romans adopted the bad habits of their
conquered neighbors, which included zero and null, did their
civilzation falter and eventually die. At the least, this should be
an obvious clue that messing with zero and null should not be taken
lightly.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558 jeffl@comix.santa-cruz.ca.us
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

2485. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-28 23:59:14 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <tkh883pk0dai5smrc5ljbod32017l9cjsd@4ax.com>
Source record: 39392
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Wed, 27 Jun 2007 21:38:01 -0700, Radium <glucegen1@gmail.com>
wrote:

>Hi:
>
>Please don't be annoyed/offended by my question.
>
>I have a very weird question about electromagnetic radiation,
>carriers, and modulators.
>
>Is it mathematically-possible to carry a modulator signal with a
>frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
>every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
>an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
>frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
>nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
>eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
>power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
>power-10^1,000,000,000) nanosecond?
>
>If it is not mathematically-possible, then please explain why.
>
>10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
>extremely short amount of time. 10^-(1,000,000,000-to-the-
>power-10^1,000,000,000) nanosecond is even shorter because a
>nanosecond is shorter than a second.
>
>10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
>large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
>gigacycles is even more because a gigacycle is more than a cycle.
>
>Giga-eon = a billion eons
>
>Eon = a billion years
>
>Gigacycle = a billion cycles.
>
>*nanocycle = billionth of a cycle
>
>Gigaphoton = a billion photons
>
>10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one

>large large number.
>
>10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
>So you get:
>
>(10-to-the-power-1,000,000,000) to the power (10-to-the-
>power-1,000,000,000)
>
>10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
>power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
>10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
>power-1,000,000,000) is an extremely small number at it equals 10-to-
>the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
>to-the-power-1,000,000,000)]
>
>No offense but please respond with reasonable answers & keep out the
>jokes, off-topic nonsense, taunts, insults, and trivializations. I am
>really interested in this.

No offense but all you're really interested in is getting
unsuspecting people with good hearts to respond to your inane
trolls.

It's painfully obvious that you're not even a neophyte when it comes
to science, so your persistence in wasting everyone's time with your
foolishness indicates that you're not looking for answers, only
attention.

--
JF

2486. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 00:00:05 UTC
From: Dave <noone@nowhere.com>
Message-ID: <9YXgi.7610$G85.4135@trndny08>
Source record: 39393

"art" <aunwin@insightbb.com> wrote in message
news:1183065010.226826.152310@k29g2000hsd.googlegroups.com...
> On 28 Jun, 13:23, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1183061420.081686.11600@g4g2000hsf.googlegroups.com...
>>
>> > On 28 Jun, 12:42, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>
>> >>news:1182985879.282184.268680@q69g2000hsb.googlegroups.com...
>> >>
>> >> > On 27 Jun, 15:28, "Dave" <n...@nowhere.com> wrote:
>> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >>
>> >> >>news:1182981629.699650.270990@c77g2000hse.googlegroups.com...
>> >> >>
>> >> >> > On 27 Jun, 14:24, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >>
>> >> >> >>news:1182978801.020398.318990@n2g2000hse.googlegroups.com...
>> >> >> >>
>> >> >> >> > On 27 Jun, 14:02, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >>
>> >> >> >> >>news:1182901236.657408.167740@g4g2000hsf.googlegroups.com...
>> >> >> >> >>
>> >> >> >> >> > On 26 Jun, 16:36, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >>
>> >> >> >> >> >>news:1182899710.589846.306780@k79g2000hse.googlegroups.com...
>> >> >> >> >> >>
>> >> >> >> >> >> > On 26 Jun, 16:09, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >>
>> >> >> >> >> >> >>news:1182899123.652503.195350@q69g2000hsb.googlegroups.com...
>> >> >> >> >> >> >>
>> >> >> >> >> >> >> > On 26 Jun, 15:17, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >>news:1182895304.736949.233350@k79g2000hse.googlegroups.com...
>> >> >> >> >> >> >> >>
>> >> >> >> >> >> >> >> > On 26 Jun, 14:21, "Dave" <n...@nowhere.com> wrote:
>> >> >> >> >> >> >> >> >> "art" <aun...@insightbb.com> wrote in message

>>
>> >> >> >> >> >> >> >> >>news:1182817719.410483.188100@m36g2000hse.googlegroups.com...
>>
>> >> >> >> >> >> >> >> >> > On 25 Jun, 13:10, "Dave" <n...@nowhere.com>
>> >> >> >> >> >> >> >> >> > wrote:
>> >> >> >> >> >> >> >> >> >> Ok, lets try it this way... step by step,
>> >> >> >> >> >> >> >> >> >> inch
>> >> >> >> >> >> >> >> >> >> by
>> >> >> >> >> >> >> >> >> >> inch,
>> >> >> >> >> >> >> >> >> >> we
>> >> >> >> >> >> >> >> >> >> may
>> >> >> >> >> >> >> >> >> >> yet
>> >> >> >> >> >> >> >> >> >> figure
>> >> >> >> >> >> >> >> >> >> out what this antenna is.
>>
>> >> >> >> >> >> >> >> >> >> First question:
>> >> >> >> >> >> >> >> >> >> What is the least number of wires needed to
>> >> >> >> >> >> >> >> >> >> build
>> >> >> >> >> >> >> >> >> >> a
>> >> >> >> >> >> >> >> >> >> gaussian
>> >> >> >> >> >> >> >> >> >> antenna?
>>
>> >> >> >> >> >> >> >> >> > Not necessary Dave. Richard is very familiar
>> >> >> >> >> >> >> >> >> > with
>> >> >> >> >> >> >> >> >> > the
>> >> >> >> >> >> >> >> >> > subject
>> >> >> >> >> >> >> >> >> > at
>> >> >> >> >> >> >> >> >> > hand
>> >> >> >> >> >> >> >> >> > as well as its underpinnings that can be
>> >> >> >> >> >> >> >> >> > understood
>> >> >> >> >> >> >> >> >> > by
>> >> >> >> >> >> >> >> >> > EEs
>> >> >> >> >> >> >> >> >> > and is providing a reference that will make all
>> >> >> >> >> >> >> >> >> > things
>> >> >> >> >> >> >> >> >> > clear.
>> >> >> >> >> >> >> >> >> > You asked for it and your wish is going to be
>> >> >> >> >> >> >> >> >> > granted
>> >> >> >> >> >> >> >> >> > in
>> >> >> >> >> >> >> >> >> > a
>> >> >> >> >> >> >> >> >> > clear
>> >> >> >> >> >> >> >> >> > and precise manner that you and the group have
>> >> >> >> >> >> >> >> >> > requested.
>> >> >> >> >> >> >> >> >> > You should now be able to build it yourself
>> >> >> >> >> >> >> >> >> > with
>> >> >> >> >> >> >> >> >> > out
>> >> >> >> >> >> >> >> >> > mumbo
>> >> >> >> >> >> >> >> >> > jumbo
>> >> >> >> >> >> >> >> >> > from me to confuse you.
>> >> >> >> >> >> >> >> >> > No need for me anymore, you now have an expert
>> >> >> >> >> >> >> >> >> > at

>> >> >> >> >> >> >> >> >> > your
>> >> >> >> >> >> >> >> >> > call.
>> >> >> >> >> >> >> >> >> > Don't forget Poyntings input.
>> >> >> >> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> >> >> >> whats a 'Richard'??
>>
>> >> >> >> >> >> >> >> >> I want to hear it straight from the source. I
>> >> >> >> >> >> >> >> >> have
>> >> >> >> >> >> >> >> >> asked
>> >> >> >> >> >> >> >> >> over
>> >> >> >> >> >> >> >> >> and
>> >> >> >> >> >> >> >> >> over
>> >> >> >> >> >> >> >> >> for
>> >> >> >> >> >> >> >> >> you to define the terms and you can't put it into
>> >> >> >> >> >> >> >> >> words
>> >> >> >> >> >> >> >> >> this
>> >> >> >> >> >> >> >> >> poor
>> >> >> >> >> >> >> >> >> engineer
>> >> >> >> >> >> >> >> >> can understand, so i thought we would try to
>> >> >> >> >> >> >> >> >> build
>> >> >> >> >> >> >> >> >> an
>> >> >> >> >> >> >> >> >> example
>> >> >> >> >> >> >> >> >> from
>> >> >> >> >> >> >> >> >> the
>> >> >> >> >> >> >> >> >> bottom up. but if you can't help with that then
>> >> >> >> >> >> >> >> >> maybe
>> >> >> >> >> >> >> >> >> the
>> >> >> >> >> >> >> >> >> whole
>> >> >> >> >> >> >> >> >> thing
>> >> >> >> >> >> >> >> >> is
>> >> >> >> >> >> >> >> >> just out of my reach and i should go back to good
>> >> >> >> >> >> >> >> >> old
>> >> >> >> >> >> >> >> >> yagis
>> >> >> >> >> >> >> >> >> and
>> >> >> >> >> >> >> >> >> phased
>> >> >> >> >> >> >> >> >> arrays.- Hide quoted text -
>>
>> >> >> >> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> >> >> >> > Sounds reasonable
>>
>> >> >> >> >> >> >> >> if it sounds so reasonable, how many wires does it
>> >> >> >> >> >> >> >> take?-
>> >> >> >> >> >> >> >> Hide
>> >> >> >> >> >> >> >> quoted
>> >> >> >> >> >> >> >> text -
>>
>> >> >> >> >> >> >> >> - Show quoted text -
>>

>> >> >> >> >> >> >> > As many as you want and have fun.
>> >> >> >> >> >> >> > The subject is dead. Let it go
>> >> >> >> >> >> >> > Join the boiling water saga that
>> >> >> >> >> >> >> > is where the action is
>> >> >> >> >> >> >> > Art
>>
>> >> >> >> >> >> >> no, this is my subject so i'll say when it's dead... i
>> >> >> >> >> >> >> don't
>> >> >> >> >> >> >> want
>> >> >> >> >> >> >> to
>> >> >> >> >> >> >> know
>> >> >> >> >> >> >> how many i can use, i want to know the minimum number
>> >> >> >> >> >> >> necessary.-
>> >> >> >> >> >> >> Hide
>> >> >> >> >> >> >> quoted text -
>>
>> >> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> >> > One
>>
>> >> >> >> >> >> ok, thats a start.
>>
>> >> >> >> >> >> assuming i want to operate on 14195khz, how long should
>> >> >> >> >> >> the
>> >> >> >> >> >> wire
>> >> >> >> >> >> be?-
>> >> >> >> >> >> Hide quoted text -
>>
>> >> >> >> >> >> - Show quoted text -
>>
>> >> >> >> >> > Whatever wire you have throw it away and get a longer one
>>
>> >> >> >> >> ok, random length... can do. now how do i connect it to a
>> >> >> >> >> piece
>> >> >> >> >> of
>> >> >> >> >> coax?- Hide quoted text -
>>
>> >> >> >> >> - Show quoted text -
>>
>> >> >> >> > O.K. For the last time I will go along until such time
>> >> >> >> > it is obvious you have other intentions.So I start again.
>>
>> >> >> >> > Make a dipole of random shapes and heights that is resonant
>> >> >> >> > at your design frequency. Note the radiator can be any length
>> >> >> >> > as long as it is resonant. For the sake of this discussion
>> >> >> >> > or interrogation let us use a plain half wave dipole.
>> >> >> >> > The feed coax feeds the dipole at it's center in the normal
>> >> >> >> > way.
>> >> >> >> > Art KB9MZ......XG
>>

>> >> >> >> ok, so its a plain half wave dipole, fed with normal coax in the
>> >> >> >> normal
>> >> >> >> way.
>> >> >> >> so what makes it 'gaussian'?- Hide quoted text -
>>
>> >> >> >> - Show quoted text -
>>
>> >> >> > Because it's resonant at the desired frequency. This is the
>> >> >> > basic form of a Gaussian antenna which is also the starting
>> >> >> > point of a Yagi antenna if viewed as a single radiator
>> >> >> > Art
>>
>> >> >> so 'gaussian' == 'resonant'
>> >> >> why didn't you say so in the first place?
>> >> >> so a properly tuned yagi-uda array is a 'gaussian' antenna?- Hide
>> >> >> quoted
>> >> >> text -
>>
>> >> >> - Show quoted text -
>>
>> >> > First David before I go on others may jump in
>> >> > and take the thread away from you. If that occurres
>> >> > we can talk via E mail so that you are not penalised
>> >> > They can use another thread in parallel which
>> >> > I will respond to. This thread will remain a
>> >> > civil and academic interrogation as you have requested.
>> >> > ....
>> >> > No, I would not stretch things that far based on
>> >> > just one element or one piece of a jigsaw puzzle
>> >> > A Yagi array is based on an array of elements
>> >> > not just one. You wanted to procede in small steps
>> >> > as provided by you, specific and to the point.
>> >> > For starters a Yagi array is planar and a Gaussian
>> >> > array antenna can be and usually , from my
>> >> > research, is otherwise. Note the Gaussian element
>> >> > is of random shape and height but always resonant
>> >> > and not necessarily tied to a 1/2 wl.
>> >> > Art
>>
>> >> no, the interrogation isn't over... it was just my bedtime.
>>
>> >> ok, so ignore the yagi for now. you classify a resonant random length
>> >> wire
>> >> as a gaussian element. is there any other essential characteristic
>> >> besides
>> >> resonance? How does 'equilibrium' fit into the description?- Hide
>> >> quoted
>> >> text -
>>
>> >> - Show quoted text -

>>
>> > First of all we are talking about arrays and not just a
>> > single element . Now one must consider where to put the
>> > next element. If we are space concious it would seem that
>> > putting both elements close to each other but not as close
>> > as the wire dia compared to the spacing. This element has the
>> > same confines as the first element so one must attain
>> > resonance of both elements at the same time while in
>> > the proximetry of each other which allows for a descision
>> > loater as to which element/s is going to be driven.
>> > Ofcourse you will notice that major differences occurs
>> > to the norm because of the close proximetry of the elements.
>> > Since I suggested that we use 1/2 wave elements it would
>> > also be advisable at this time all elements straight
>> > but at different heights and angles to each other
>> > so that multishaped elements,which can be used, do not
>> > complicate the theme of what I am describing.
>>
>> > (The following side note goes beyond what the question
>> > is but I am sure it will help the further you travel down the road.)
>>
>> > What we are now simulating is a Gaussian field with
>> > its normal pill box. Normally one only sees static
>> > particles in equilibrium but I have taken the liberty
>> > of adding the array elements upon which the static
>> > particles are resting upon and inside the arbitary border.
>>
>> whoa! too fast! lets talk about the minimum antenna, the 1/2 wave (or
>> there abouts) resonant element. You said that was all i needed to make a
>> gaussian antenna. So it doesn't have to be a classic dipole or any other
>> specific shape, as long as it is resonant. But is resonance alone enough
>> to
>> classify it as a gaussian antenna?
>
> Yes, if it is in place where it is determined to be
> resonant because that takes consideration of it's surroundings.
> If one takes the surroundings into account one is taking
> into account equilibrium
> I say this because this interrogation could then
> decide to move it and still call it a Gaussian antenna
> and say they have a gottcha!
> Please excuse me if I am a bit wary of how the questions
> are placed and for what reasons. But I don't want
> to be part of a word game where things can be misconstrued.
> Civility must be kept without being underhand if your
> intent is to be pure.
> Art KB9MZ....XG
>

equilibrium between what?

2487. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 00:07:59 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <z3Ygi.3873$RZ1.2306@trnddc05>
Source record: 39394

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:1183060631.177305.187830@d30g2000prg.googlegroups.com...
> On Jun 28, 1:06 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
>>
>> news:1183042458.347229.316570@e9g2000prf.googlegroups.com...
>>
>>
>>
>>
>>
>> > On Jun 28, 10:36 am, Richard Clark <kb7...@comcast.net> wrote:
>> >> On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE...@YAHOO.COM>
>> >> wrote:
>>
>> >> >While pondering the design of a broadband antenna that would cover
>> >> >from 50 to 450 Mhz I considered a log periodic array. This would
>> >> >serve
>> >> >my purpose but the size would be inconvienent. Then I had a thought,
>> >> >Could I remove the elements that are not required for amateur band
>> >> >coverage? In my case I am only interested in 50, 144,and 432 MHz
>> >> >bands, Would this allow me to shorten the boom by an amout equal to
>> >> >the space occupied by the removed elements and have a gain of 7Dbd.
>> >> >Could I cover all 3 bands with just the elements for 6 and 2m?
>> >> >Any thoughts on this would be greatly appreciaated.
>>
>> >> Hi Jimmie,
>>
>> >> What you are then asking for is NOT a broadband antenna; but rather a
>> >> multiband antenna, or even three, interlaced single band antennas.
>> >> Don't try this at home with a gaussian bundle.
>>
>> >> To answer your question more directly, yes you can remove those
>> >> elements that do not contribute to the three bands. Unfortunately, to
>> >> maintain its LDPA aspects, you still have to maintain some outliers
>> >> for each band. This doesn't necessarily shorten it, because an LPDA's
>> >> length is driven by many other considerations such as bandwidth and
>> >> gain, not just simply extremes (yes, that too is part of the mix,
>> >> simply a complex part of the mix).
>>
>> >> No to your last question. The matter of resonance is still a first
>> >> principle. However, the 2M band is loosely related to the 70cM band,
>> >> and if you are building an LPDA (and sweep the elements, chevron
>> >> style) there may be a chance of it performing there too.

>>
>> >> All-in-all, don't expect remarkable gain after having gone through all
>> >> these exceptions.
>>
>> >> 73's
>> >> Richard Clark, KB7QHC
>>
>> > Thanks this is what I was expecting but I think I am going to try it
>> > anyway.
>> <SNIP>
>> > Jimmie
>>
>> Hi Jimmie
>>
>> Have you figured out which elements to remove and which will remain?
>>
>> Jerry- Hide quoted text -
>>
>> - Show quoted text -
>
> In reality it will probably be designed as if it were 2 or 3 single
> band lpda antennas. Cebik has a couple of designs like that and I will
> just put them on one boom trying them spead out and with the space
> removed. For now I am thinking four four element cells for each band.
>
> Im also curious to find out how a swept element 2m antenna will work
> on 70cm.
>
>
> Jimmie

Hi Jimmie

I dont mean to discourage you from studdying LPDA, but, the "LP" aspect will be completely lost when the antenna is redesigned to operate on only your 3 bands.
Correct me if I am wrong. It is my uinderstanding that a Log Periodic Dipole Array is designed to generate a null in the dirrection *away from* where you want to communicate. That means that you want to minimize the radiation in the dirrection from the short elements toward the longer elements. It is also my understanding that the dipoles that do the majority of the radiating are choosen by their ability to match the Zo of the line connecting successive dipoles.

The "V" aspect of the LPV is an attempt to take advantage of the fact that the dipoles will have impedances appropriate for matching the line when they are 1 1/2 wave long as well as when they are 1/2 wave long. Each of the V'd, one and a half wave long dipoles will have a radiation pattern that is far different from the halfwave dipole. But, when the "V" angle is correct that resultant pattern is appropriate for this application.

It might be, as Richard Clark has pointed out, that you could build a 6 meter band antenna that outperforms the redisigned LPDA. It seems almost certain that antennas for the 2 meter and 70 cm bands can made using *other* design concepts.

Jerry

2488. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 00:22:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fhYgi.18529$RX.8398@newssvr11.news.prodigy.net>
Source record: 39395

Keith Dysart wrote:
> "of power per unit-area propagating in the wave
> (i.e., analogous to Poynting vector)."
>
> Yes, they could have substituted "energy per
> unit-time" for "power", ...

But they didn't - I rest my case.
--
73, Cecil http://www.w5dxp.com

2489. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 00:26:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CkYgi.18531$RX.18312@newssvr11.news.prodigy.net>
Source record: 39396

Dave wrote:
> equilibrium between what?

Equilibrium between an antenna element, of course.
--
73, Cecil http://www.w5dxp.com

2490. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 01:26:05 UTC
From: m II <c@in.the.hat>
Message-ID: <NcZgi.14727$tB5.10834@edtnps90>
Source record: 39398
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:

> Such things are fairly important. For example, did you ever notice
> that Roman Numerals do not have a zero or a null? There was a half
> hearted attempt at inventing zero or null (nulla), but fortunately
> that failed for many centuries. Rome survived much decadence and some
> really weird Emperors without much difficulty.

There's the troubling rumour that Zero fiddled while Rome burned. It's
simply not rue.

mike

2491. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 01:34:23 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4684619f$0$3189$4c368faf@roadrunner.com>
Source record: 39400

```
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:z3Ygi.3873$RZ1.2306@trnddc05...
>
> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
> news:1183060631.177305.187830@d30g2000prg.googlegroups.com...
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>>>
>>>
>>>
>>> > On Jun 28, 10:36 am, Richard Clark <kb7...@comcast.net> wrote:
>>> >> On Thu, 28 Jun 2007 06:19:44 -0700, JIMMIE <JIMMIEDEE...@YAHOO.COM>
>>> >> wrote:
>>>
>>> >> >While pondering the design of a broadband antenna that would cover
>>> >> >from 50 to 450 Mhz I considered a log periodic array. This would
>>> >> >serve
>>> >> >my purpose but the size would be inconvienent. Then I had a thought,
>>> >> >Could I remove the elements that are not required for amateur band
>>> >> >coverage? In my case I am only interested in 50, 144,and 432 MHz
>>> >> >bands, Would this allow me to shorten the boom by an amout equal to
>>> >> >the space occupied by the removed elements and have a gain of 7Dbd.
>>> >> >Could I cover all 3 bands with just the elements for 6 and 2m?
>>> >> >Any thoughts on this would be greatly appreciaated.
>>>
>>> >> Hi Jimmie,
>>>
>>> >> What you are then asking for is NOT a broadband antenna; but rather a
>>> >> multiband antenna, or even three, interlaced single band antennas.
>>> >> Don't try this at home with a gaussian bundle.
>>>
>>> >> To answer your question more directly, yes you can remove those
>>> >> elements that do not contribute to the three bands. Unfortunately,
>>> >> to
>>> >> maintain its LDPA aspects, you still have to maintain some outliers
>>> >> for each band. This doesn't necessarily shorten it, because an
>>> >> LPDA's
>>> >> length is driven by many other considerations such as bandwidth and
>>> >> gain, not just simply extremes (yes, that too is part of the mix,
>>> >> simply a complex part of the mix).
```

>>>
>>> >> No to your last question. The matter of resonance is still a first
>>> >> principle. However, the 2M band is loosely related to the 70cM band,
>>> >> and if you are building an LPDA (and sweep the elements, chevron
>>> >> style) there may be a chance of it performing there too.
>>>
>>> >> All-in-all, don't expect remarkable gain after having gone through
>>> >> all
>>> >> these exceptions.
>>>
>>> >> 73's
>>> >> Richard Clark, KB7QHC
>>>
>>> > Thanks this is what I was expecting but I think I am going to try it
>>> > anyway.
>>> <SNIP>
>>> > Jimmie
>>>
>>> Hi Jimmie
>>>
>>> Have you figured out which elements to remove and which will remain?
>>>
>>> Jerry- Hide quoted text -
>>>
>>> - Show quoted text -
>>
>> In reality it will probably be designed as if it were 2 or 3 single
>> band lpda antennas. Cebik has a couple of designs like that and I will
>> just put them on one boom trying them spead out and with the space
>> removed. For now I am thinking four four element cells for each band.
>>
>> Im also curious to find out how a swept element 2m antenna will work
>> on 70cm.
>>
>>
>> Jimmie
>
> Hi Jimmie
>
> I dont mean to discourage you from studdying LPDA, but, the "LP" aspect
> will be completely lost when the antenna is redesigned to operate on only
> your 3 bands.
> Correct me if I am wrong. It is my uinderstanding that a Log Periodic
> Dipole Array is designed to generate a null in the dirrection *away from*
> where you want to communicate. That means that you want to minimize the
> radiation in the dirrection from the short elements toward the longer
> elements. It is also my understanding that the dipoles that do the
> majority of the radiating are choosen by their ability to match the Zo of
> the line connecting successive dipoles.
>

> The "V" aspect of the LPV is an attempt to take advantage of the fact
> that the dipoles will have impedances appropriate for matching the line
> when they are 1 1/2 wave long as well as when they are 1/2 wave long.
> Each of the V'd, one and a half wave long dipoles will have a radiation
> pattern that is far different from the halfwave dipole. But, when the
> "V" angle is correct that resultant pattern is appropriate for this
> application.
>
> It might be, as Richard Clark has pointed out, that you could build a 6
> meter band antenna that outperforms the redisigned LPDA. It seems almost
> certain that antennas for the 2 meter and 70 cm bands can made using
> *other* design concepts.
>
> Jerry
>

I absolutely agree, building a 4 element Yagi for each band of interest would be the most resonable thing to do but I came across a couple of old LPDA TV antennas and I am itching to do something with them. They are both a little beat up but firstI am going to try to make repairs to them and sweep them with my antenna analyzer and graph their impedance.

Jimmie

2492. Re: HT antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 01:38:08 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <O8qdnbuF46bt_xnbnZ2dnUVZ_r6vnZ2d@comcast.com>
Source record: 39401

Sounds like the connector on you ant cable is bad, or is shorting out the
center conductor to the shield. Did you install the connector yourself or
did it come already installed when you bought the external antenna?
If you installed the connector - you need to take it off of the radio and
OHM it out.. if you purchased the antenna and the connector was already
installed - I would send it back and get another one..
73's de Howard W3CQH

"Norman Patrick" <normanpatrick@sbcglobal.net> wrote in message
news:5cXgi.8019$bP5.1141@newssvr19.news.prodigy.net...
>I have an ICOM W32A HT. Whenever I try to connect an external antenna (such
>as an Arrow Satellite Antenna) I get no TX or RX. It seems to work fine
>with the rubber duck. Anyone else had this problem? Do you think the radio
>needs repair? Thanks! This is my FIRST post on this newsgroup. KE5IQM
>

2493. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 01:40:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0oo883t2k89hl0bb25dt7bbjm7dd0doplg@4ax.com>
Source record: 39402

On Thu, 28 Jun 2007 21:34:23 -0400, "Jimmie D"
<GFENDER@carolina.rr.com> wrote:

> I came across a couple of old
>LPDA TV antennas and I am itching to do something with them. They are both a
>little beat up but firstI am going to try to make repairs to them and sweep
>them with my antenna analyzer and graph their impedance.

Hi Jimmie,

Give us the results when you've done that, would you?

73's
Richard Clark, KB7QHC

2494. Re: HT antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 02:27:36 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <46846072$0$30595$4c368faf@roadrunner.com>
Source record: 39399

I would check the antenna, coax and the connector going into your Ht.

It may be as simple as a bad connector/ adaptor.

"Norman Patrick" <normanpatrick@sbcglobal.net> wrote in message
news:5cXgi.8019$bP5.1141@newssvr19.news.prodigy.net...
> I have an ICOM W32A HT. Whenever I try to connect an external antenna
(such
> as an Arrow Satellite Antenna) I get no TX or RX. It seems to work fine
with
> the rubber duck. Anyone else had this problem? Do you think the radio
needs
> repair? Thanks! This is my FIRST post on this newsgroup. KE5IQM
>
>

2495. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 04:33:44 UTC
From: antennafreak@gmail.com
Message-ID: <1183091624.324275.278850@o11g2000prd.googlegroups.com>
Source record: 39403

Hi Guys

I just noticed you guys talking about impedance of yagi and LPDA tv antennas, I've used a program QY4, I found on the web, and designed a 5 director uhf-band yagi around a center frequency of 636mhz. i used 1/2" copper tubing for the directors, driver and reflector, attached on a 1/4" threaded rod, ofcourse the driver is split to allow the terminals, then i added 4 copper 90s to complete a folded dipole.

I am interested in figuring out the impedance as well bridging a 1 director vhf-band yagi around 168mhz also using a folded dipole driver?
Would a multimeter or a 20khz oscilliscope help in tweaking the antenna's impedance?

Also we have had very interesting results using a paper towel roll and a peice of 22awg wire as a folded dipole.

2496. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 11:27:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <V06hi.7315$Rw1.5364@newssvr25.news.prodigy.net>
Source record: 39404

Keith Dysart wrote:
> "of power per unit-area propagating in the wave"
>
> Yes, they could have substituted "energy per
> unit-time" for "power", ...

Does "energy per unit-time" propagate?
--
73, Cecil http://www.w5dxp.com

2497. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 11:35:17 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <qLOdnblzv9XzcxnbnZ2dnUVZ8v2vnZ2d@bt.com>
Source record: 39405

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:V06hi.7315$Rw1.5364@newssvr25.news.prodigy.net...
> Keith Dysart wrote:
> > "of power per unit-area propagating in the wave"
> >
> > Yes, they could have substituted "energy per
> > unit-time" for "power", ...
>
> Does "energy per unit-time" propagate?
> --
> 73, Cecil http://www.w5dxp.com

Looking at my energy bills, it just dissipates! :-(

Mike G0ULI

2498. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 13:19:25 UTC
From: Vito <vito@xxcrosslink.net>
Message-ID: <468506ea$0$24749$4c368faf@roadrunner.com>
Source record: 39406
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

<KCX-4130> wrote
: WTF could those handi-ham freak types do about it? NOT A DAM THING!!

Really? Check out http://www.arrl.org/FandES/field/org/oo.html . Illegal users of the ham bands get a nice letter from FCC asking them to stop and telling them where to mail the $10,000 fine. They prolly only catch one in ten, but it could be you!

2499. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 14:24:04 UTC
From: richardharrison@webtv.net
Message-ID: <16948-46851604-387@storefull-3256.bay.webtv.net>
Source record: 39407

Mike, G0ULI wrote:
"Looking at my energy bills, it just dissipates."

Mike was responding to Cecil`s question:
"Does energy per unit time propagate?"

Of course it does. Energy at point A flows to point B where it does work. The rate at which energy flows is power.

My ultimate authority for radio and electronics is Terman, and his 4th edition of "Radio and Electronic Engineering" published in 1955. It is my technical bible. On page 904 Terman discusses the Sommerfeld analysis of ground-wave propagation. Terman says:

"The field strength at unit distance in Eq. (22-1) depends on power radiated by the transmitting antenna, and the directivity of the antenna in the vertical and horizontal planes."

The IEEE dictionary won`t dispute Terman. If it does, it needs correction.

Best regards, Richard Harrison, KB5WZI

2500. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 14:55:00 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183128900.358034.239420@k29g2000hsd.googlegroups.com>
Source record: 39408

On Jun 29, 10:24 am, richardharri...@webtv.net (Richard Harrison)
wrote:
> The IEEE dictionary won`t dispute Terman. If it does, it needs
> correction.

The IEEE and Terman are both reputable sources and
it seems unlikely that they would have substantive
disagreements.

But it is always possible, for those with the desire,
to manufacture dispute by the careful selection of
sentence fragments.

The defense is to be very cautious about trusting
the veracity of quotes from sources with questionable
reputations and motives.

...Keith

2501. Re: Log periodic antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 16:14:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <osba83daf8gr4e6sogcj35bfgh3i3mksp9@4ax.com>
Source record: 39409

On Fri, 29 Jun 2007 04:33:44 -0000, antennafreak@gmail.com wrote:

>Would a multimeter or a 20khz oscilliscope help in tweaking the
>antenna's impedance?

Only as a remote detector for a Field Strength Meter, or as an
indicator for SWR measurement.

73's
Richard Clark, KB7QHC

2502. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 16:35:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f63cdi$ha8$1@nnrp.linuxfan.it>
Source record: 39410

Keith Dysart wrote:

> ...
> The defense is to be very cautious about trusting
> the veracity of quotes from sources with questionable
> reputations and motives.
>
> ...Keith

I don't believe Terman would have minded being "questioned" at all. I think he did the best which could have been done for his time, and given what was available then. I believe he would have loved to set any errors in accepted principals correct--I don't believe he ever stopped looking. He just couldn't do everything, as especially not all at once!

However, the shallow minded who follow in his shadow, who set up a religion around his work. Who canonize his book, who memorize equations and formulas which only apply to narrow applications of very specific physical arrangements ... they can do little better than defend what he left, they certainly are unable to add to it, and probably lack the where-will-all to even question it logically!

JS

2503. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 16:52:57 UTC
From: richardharrison@webtv.net
Message-ID: <10836-468538E9-50@storefull-3251.bay.webtv.net>
Source record: 39411

Art invoked the name of Issac Newton to support Art`s claim of equlibrium defining a Gaussian antenna.

OK, Newton`s apple was in equilibrium until its support released the apple to the force of the earth`s gravity (more properly the mutual attraction between the apple and the earth but due to inertia the earth`s motion was insignificant). The apple fell at an acceleration of 32 feet per second per second if my recollection is correct.

Gravitational force and electrical attraction force are different phenomena with vastly differing strengths so I don`t see a necessary correlation between the mass of an antenna and its electrical properties and performance.

Best regards, Richard Harrison, KB5WZI

2504. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 17:36:42 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183138602.185792.322930@d30g2000prg.googlegroups.com>
Source record: 39412
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 28, 6:26 pm, m II <c...@in.the.hat> wrote:
> Jeff Liebermann wrote:
> > Such things are fairly important. For example, did you ever notice
> > that Roman Numerals do not have a zero or a null? There was a half
> > hearted attempt at inventing zero or null (nulla), but fortunately
> > that failed for many centuries. Rome survived much decadence and some
> > really weird Emperors without much difficulty.
>
> There's the troubling rumour that Zero fiddled while Rome burned. It's
> simply not rue.
>
> mike

.
```

2505. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 17:37:12 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183138632.371849.301230@i13g2000prf.googlegroups.com>
Source record: 39413
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 28, 2:21 pm, m II <c...@in.the.hat> wrote:
> Don Bowey wrote:
> > They don't know how to tie strings together?
>
> When some of them have only one end, it becomes bothersome. thankfully
> my shoelaces were spared this metaphysical ambiguity.
>
> mike

.
```

2506. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 17:44:54 UTC
From: richardharrison@webtv.net
Message-ID: <19574-46854516-420@storefull-3252.bay.webtv.net>
Source record: 39414

John Smith just called me shallow minded. I don`t deny it. I questioned Terman when I was much younger but gave it up when I was always wrong. Now I`m more likely to check someone else`s idea against Terman to determune its errors. The only error I ever detected in Terman`s 4th edition was a typo which was obvious so I was surprised to see it. Mc was substituted for Kc or vice versa. I just looked but could not find it again among 1000 pages.

Best regards, Richard Harrison, KB5WZI

2507. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 18:03:56 UTC
From: clifto <clifto@gmail.com>
Message-ID: <c5ufl4-kok.ln1@remote.clifto.com>
Source record: 39415
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?

No.

> If it is not mathematically-possible, then please explain why.

No.

--
We can't possibly imprison 300 million Americans for not paying their
taxes, so let's grant all of them amnesty NOW!

2508. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 18:50:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <nwchi.27$wu5.5@trndny03>
Source record: 39416

"art" <aunwin@insightbb.com> wrote in message
news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
> On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
>> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>>
>> > Ok, lets try it this way... step by step, inch by inch, we may yet
>> > figure
>> > out what this antenna is.
>>
>> > First question:
>> > What is the least number of wires needed to build a gaussian antenna?
>>
>> Posting check
>> Art
>
> Isaac Newton like scientist before him observed the World and the
> Universe
> for clues about what it was all about. He determined that each
> particle, each object,
> each planet all had their own gravitational centers. And where each
> minute particle
> was made of atoms etc all orbiting around each other in a state where
> these orbiting
> partcles were able to move in isolation with respect to other
> particles in orbit
> because all forces became balanced with respect to each other. This
> theory was
> based on observations on the make up of the universe around us. This
> balancing of
> parts and particles is called being in a state of equilibrium. If an
> exterior
> force was applied the Universe has a whole would rearrange itself to
> retain
> equilibrium by accomodation
> Thus we can see an element as something held together by equilibrium
> and where
> its constituent parts is a densily packed swarm of particles shaped
> in longitudinal
> physical form and where the surface of this entity has its surface
> completely covered
> by errant particles called electrons. This collection of particles are
> so densly packed
> that it appears to be a solid and where the make up of its constituent
> particls and atoms

> provide a distingtive appearance which allows identification with
> respect to other combinations
> of densly packed swarms of particles and atoms via weight, reflective
> qualities e.t c
> I have stated the above in a very generalistic way purely to give an
> understanding of the
> meaning of the word "equilibrium" which in a generalistic way can be
> seen as a somewhat stable
> existance of parts in concert with other parts in a three dimensional
> existance where its "stable"
> existance is created because of the totalility of all forces involved
> equals the sum of ZERO.
> Art Unwin KB9MZ....XG
>

but an antenna is by necessity a dynamic thing. it is meant to be radiating or absorbing energy which to me means it can not be in equilibrium. it also must have rapidly varying currents and voltages such that even along the length of the wire there is no equilibrium, electrons pack up tighter in one area and less in another forcing currents to flow continually. even a wire that is not directly fed from a transmitter has currents and voltages based on how close it is to a wire driven from a transmitter, it's orientation, and it's length. electrically if all the fields from a wire summed up to zero there could be no power flowing and hence no antenna.

2509. Re: Water burns!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 20:08:42 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f63ost$h9v$1@nnrp.linuxfan.it>
Source record: 39417

Richard Harrison wrote:
> John Smith just called me shallow minded. ...

> Best regards, Richard Harrison, KB5WZI

Richard:

I did NO such thing, if you need an enemy, pick another, I make a better co-explorer ...

If I were to set about a list of "Old Dogs Who Can't Learn New Tricks", you'd be way down on it ... I have no idea what you do in your spare time; I will give you the benefit of the doubt and believe you examine the new closely--and certainly do so before throwing out the old!

Regards,
JS

2510. W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 20:56:52 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com>
Source record: 39418

Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital following major
spinal surgery. The surgery was successful, but I contracted hideous intestinal infection C Diff, or colitis,
in the hospital. Forty nine days were required to clear the infection, after which I could begin physical
therapy. I'm still recuperating very slowly, learning to regain my balance and walk again. Have you ever
wondered what it would feel like to stand up, but needing to hang onto something stationary to avoid falling
down? And have you ever wondered what it would feel like to stand up, but unable to move a foot to start
walking? I'm still learning how to walk, with the aid of both a walker and a cane. Long and tough, but I'm
making it.

Hope to join you great guys again occasionally as I continue to recover.

73 to All,

Walt, W2DU

2511. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 21:18:04 UTC
From: Dave <noone@nowhere.com>
Message-ID: <gGehi.22$pa5.15@trndny05>
Source record: 39419

```
"art" <aunwin@insightbb.com> wrote in message
news:1183150540.916510.28720@n60g2000hse.googlegroups.com...
> On 29 Jun, 12:11, art <aun...@insightbb.com> wrote:
>> On 29 Jun, 11:50, "Dave" <n...@nowhere.com> wrote:
>>
>>
>>
>>
>>
>> > "art" <aun...@insightbb.com> wrote in message
>>
>> >news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
>>
>> > > On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
>> > >> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>>
>> > >> > Ok, lets try it this way... step by step, inch by inch, we may
>> > >> > yet
>> > >> > figure
>> > >> > out what this antenna is.
>>
>> > >> > First question:
>> > >> > What is the least number of wires needed to build a gaussian
>> > >> > antenna?
>>
>> > >> Posting check
>> > >> Art
>>
>> > > Isaac Newton like scientist before him observed the World and the
>> > > Universe
>> > > for clues about what it was all about. He determined that each
>> > > particle, each object,
>> > > each planet all had their own gravitational centers. And where each
>> > > minute particle
>> > > was made of atoms etc all orbiting around each other in a state where
>> > > these orbiting
>> > > partcles were able to move in isolation with respect to other
>> > > particles in orbit
>> > > because all forces became balanced with respect to each other. This
>> > > theory was
>> > > based on observations on the make up of the universe around us. This
>> > > balancing of
>> > > parts and particles is called being in a state of equilibrium. If an
>> > > exterior
```

>> > > force was applied the Universe has a whole would rearrange itself to
>> > > retain
>> > > equilibrium by accomodation
>> > > Thus we can see an element as something held together by equilibrium
>> > > and where
>> > > its constituent parts is a densily packed swarm of particles shaped
>> > > in longitudinal
>> > > physical form and where the surface of this entity has its surface
>> > > completely covered
>> > > by errant particles called electrons. This collection of particles
>> > > are
>> > > so densly packed
>> > > that it appears to be a solid and where the make up of its
>> > > constituent
>> > > particls and atoms
>> > > provide a distingtive appearance which allows identification with
>> > > respect to other combinations
>> > > of densly packed swarms of particles and atoms via weight, reflective
>> > > qualities e.t c
>> > > I have stated the above in a very generalistic way purely to give an
>> > > understanding of the
>> > > meaning of the word "equilibrium" which in a generalistic way can be
>> > > seen as a somewhat stable
>> > > existance of parts in concert with other parts in a three dimensional
>> > > existance where its "stable"
>> > > existance is created because of the totalility of all forces involved
>> > > equals the sum of ZERO.
>> > > Art Unwin KB9MZ....XG
>>
>> > but an antenna is by necessity a dynamic thing. it is meant to be
>> > radiating
>> > or absorbing energy which to me means it can not be in equilibrium. it
>> > also
>> > must have rapidly varying currents and voltages such that even along
>> > the
>> > length of the wire there is no equilibrium, electrons pack up tighter
>> > in one
>> > area and less in another forcing currents to flow continually. even a
>> > wire
>> > that is not directly fed from a transmitter has currents and voltages
>> > based
>> > on how close it is to a wire driven from a transmitter, it's
>> > orientation,
>> > and it's length. electrically if all the fields from a wire summed up
>> > to
>> > zero there could be no power flowing and hence no antenna.- Hide quoted
>> > text -
>>
>> > - Show quoted text -
>>

>> I fully understand your quandry David because with your knoweledge
>> despite
>> what you say is trying to jump ahead of the story to get at the
>> desired end.
>> Just relax and follow my story without resistance as a child without
>> prior knoweledge
>> would when he is sitting down and listening to an orator describing a
>> story.
>> The point of the story is at a point of arranging two pieces of metal
>> that has no external forces exacted upon them and where each piece of
>> metal
>> can be seen as a static part of the earth even tho it is made of
>> zillions of gyroscopes spinning in a comppressed area and that because
>> of the
>> balanced rotation of parts are staying together as a swarm of parts
>> without disintergration to dust. You have to understand the nature
>> of mass or energy of things so you can anticipate the reaction to
>> an external force that impinges on its equilibrium . Until that
>> happens
>> we are reffering to an arrangement that is not dynamic but static
>> Art Unwin KB9MZ...XG- Hide quoted text -
>>
>> - Show quoted text -
>
> David, let me talk about equilibrium a little bit more as the lessons
> learned
> from many years on this newsgroup shows this to be a real stumbling
> block.
> For someone with a learned background there is a great emphasis on
> the
> mathematical side of proving concepts that were origional derived by
> observation
> of the universe where the student of the day concentrates more on the
> mathematical
> aspect which is required for a non oral examination. Thus it is
> natural for
> such a student to equate the "equal" term in mathematics to the word
> "equilibrium"
> Equilibrium can be used as an "equal" sign but certainly not always
> and again the
> "equilibrium" term cannot be interchanged easily with the term
> "equilibrium"
> As the Russian has pointed out that we have altered the path of
> science by being
> led by mechanical machines in number crunching style where numbers are
> placed
> into a grinder and where we examine the mix to see if anything usefull
> comes out
> and where the computor is used to magnify possible paths where the
> resulting

> mix in general goes no where. You now have to put another hat on and
> rely on
> that bit by bit observations becomes a story and where bits are
> missing you use
> intuition to bridge the gap that is consistent with the theme. It is
> later
> that mathematics comes into the picture where we check to see if there
> is a
> common realistic theme. Maxwell did this by collecting different
> stories
> and connected them by trails of a story into numbers and though he saw
> a
> connection between a static sbject and a dynamic subject he never
> accumulated
> enough clues to develop a story to match the mathematics. What we are
> doing now
> is going back in time using observations of the universe to form a
> story even
> tho the mathematical links are some what preknown as individual parts
> as those
> observers of the past would do by deduction and without the use of a
> computor
> Hope that helps rather than confused you but we are retracing the step
> in the
> past taken by Gauss.
> Art Unwin KB9MZ......XG
> Back to mowing the grass or.....coooo dee graaaar
>

but what is in equilibrium when this single resonant gaussian element is fed
with rf and is radiating?

2512. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 21:26:11 UTC
From: Henry <wa0goz@arrl.net>
Message-ID: <ocqdnc-tpstt5RjbnZ2dnUVZ_trinZ2d@comcast.com>
Source record: 39420

Good luck and God Speed. My prayers are with you.

Henry WA0GOZ

Walter Maxwell wrote:

> Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection, after which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and a cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU
>

2513. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 22:11:07 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6402e$6o5$1@nnrp.linuxfan.it>
Source record: 39421

Walter Maxwell wrote:

> ...
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU

Walter:

Welcome home!

Any day which finds us still "sucking air" is a good one, such as today ...

Warm regards,
JS

2514. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 23:00:33 UTC
From: Scott in Baltimore <sDcOoNtTtS_PuAnMiMtE_69@yahoo.com>
Message-ID: <eIWdnWiDZvxvExjbnZ2dnUVZ_szinZ2d@comcast.com>
Source record: 39422
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

Wrong link!

violation notices
http://www.fcc.gov/eb/FieldNotices/

pay the uncle notices
http://www.fcc.gov/eb/Orders/Welcome.html

and the dumb hams that did it until they got in trouble notices
http://www.fcc.gov/eb/AmateurActions/Welcome.html

2515. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-29 23:05:50 UTC
From: Scott in Baltimore <sDcOoNtTtS_PuAnMiMtE_69@yahoo.com>
Message-ID: <neednXQN56eyDRjbnZ2dnUVZ_t7inZ2d@comcast.com>
Source record: 39423
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

> and the dumb hams that did it until they got in trouble notices
> http://www.fcc.gov/eb/AmateurActions/Welcome.html

and the first link must be Jerry's doing!!
http://www.fcc.gov/eb/AmateurActions/files/unlic07_06_29_1097.html

2516. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 00:12:51 UTC
From: Dave <noone@nowhere.com>
Message-ID: <7ehhi.953$Nw5.804@trndny04>
Source record: 39424

"art" <aunwin@insightbb.com> wrote in message
news:1183155695.787862.123920@k29g2000hsd.googlegroups.com...
> On 29 Jun, 14:18, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1183150540.916510.28720@n60g2000hse.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 29 Jun, 12:11, art <aun...@insightbb.com> wrote:
>> >> On 29 Jun, 11:50, "Dave" <n...@nowhere.com> wrote:
>> >>
>> >> > "art" <aun...@insightbb.com> wrote in message
>> >>
>> >> >news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
>> >>
>> >> > > On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
>> >> > >> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>> >>
>> >> > >> > Ok, lets try it this way... step by step, inch by inch, we may
>> >> > >> > yet
>> >> > >> > figure
>> >> > >> > out what this antenna is.
>> >>
>> >> > >> > First question:
>> >> > >> > What is the least number of wires needed to build a gaussian
>> >> > >> > antenna?
>> >>
>> >> > >> Posting check
>> >> > >> Art
>> >>
>> >> > > Isaac Newton like scientist before him observed the World and the
>> >> > > Universe
>> >> > > for clues about what it was all about. He determined that each
>> >> > > particle, each object,
>> >> > > each planet all had their own gravitational centers. And where
>> >> > > each
>> >> > > minute particle
>> >> > > was made of atoms etc all orbiting around each other in a state
>> >> > > where
>> >> > > these orbiting
>> >> > > partcles were able to move in isolation with respect to other

>> >> > > particles in orbit
>> >> > > because all forces became balanced with respect to each other.
>> >> > > This
>> >> > > theory was
>> >> > > based on observations on the make up of the universe around us.
>> >> > > This
>> >> > > balancing of
>> >> > > parts and particles is called being in a state of equilibrium. If
>> >> > > an
>> >> > > exterior
>> >> > > force was applied the Universe has a whole would rearrange itself
>> >> > > to
>> >> > > retain
>> >> > > equilibrium by accomodation
>> >> > > Thus we can see an element as something held together by
>> >> > > equilibrium
>> >> > > and where
>> >> > > its constituent parts is a densily packed swarm of particles
>> >> > > shaped
>> >> > > in longitudinal
>> >> > > physical form and where the surface of this entity has its surface
>> >> > > completely covered
>> >> > > by errant particles called electrons. This collection of particles
>> >> > > are
>> >> > > so densly packed
>> >> > > that it appears to be a solid and where the make up of its
>> >> > > constituent
>> >> > > particls and atoms
>> >> > > provide a distingtive appearance which allows identification with
>> >> > > respect to other combinations
>> >> > > of densly packed swarms of particles and atoms via weight,
>> >> > > reflective
>> >> > > qualities e.t c
>> >> > > I have stated the above in a very generalistic way purely to give
>> >> > > an
>> >> > > understanding of the
>> >> > > meaning of the word "equilibrium" which in a generalistic way can
>> >> > > be
>> >> > > seen as a somewhat stable
>> >> > > existance of parts in concert with other parts in a three
>> >> > > dimensional
>> >> > > existance where its "stable"
>> >> > > existance is created because of the totalility of all forces
>> >> > > involved
>> >> > > equals the sum of ZERO.
>> >> > > Art Unwin KB9MZ....XG
>> >>
>> >> > but an antenna is by necessity a dynamic thing. it is meant to be
>> >> > radiating
>> >> > or absorbing energy which to me means it can not be in equilibrium.

>> >> > it
>> >> > also
>> >> > must have rapidly varying currents and voltages such that even along
>> >> > the
>> >> > length of the wire there is no equilibrium, electrons pack up
>> >> > tighter
>> >> > in one
>> >> > area and less in another forcing currents to flow continually. even
>> >> > a
>> >> > wire
>> >> > that is not directly fed from a transmitter has currents and
>> >> > voltages
>> >> > based
>> >> > on how close it is to a wire driven from a transmitter, it's
>> >> > orientation,
>> >> > and it's length. electrically if all the fields from a wire summed
>> >> > up
>> >> > to
>> >> > zero there could be no power flowing and hence no antenna.- Hide
>> >> > quoted
>> >> > text -
>>
>> >> > - Show quoted text -
>>
>> >> I fully understand your quandry David because with your knoweledge
>> >> despite
>> >> what you say is trying to jump ahead of the story to get at the
>> >> desired end.
>> >> Just relax and follow my story without resistance as a child without
>> >> prior knoweledge
>> >> would when he is sitting down and listening to an orator describing a
>> >> story.
>> >> The point of the story is at a point of arranging two pieces of metal
>> >> that has no external forces exacted upon them and where each piece of
>> >> metal
>> >> can be seen as a static part of the earth even tho it is made of
>> >> zillions of gyroscopes spinning in a compppressed area and that because
>> >> of the
>> >> balanced rotation of parts are staying together as a swarm of parts
>> >> without disintergration to dust. You have to understand the nature
>> >> of mass or energy of things so you can anticipate the reaction to
>> >> an external force that impinges on its equilibrium . Until that
>> >> happens
>> >> we are reffering to an arrangement that is not dynamic but static
>> >> Art Unwin KB9MZ...XG- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > David, let me talk about equilibrium a little bit more as the lessons
>> > learned

>> > from many years on this newsgroup shows this to be a real stumbling
>> > block.
>> > For someone with a learned background there is a great emphasis on
>> > the
>> > mathematical side of proving concepts that were origional derived by
>> > observation
>> > of the universe where the student of the day concentrates more on the
>> > mathematical
>> > aspect which is required for a non oral examination. Thus it is
>> > natural for
>> > such a student to equate the "equal" term in mathematics to the word
>> > "equilibrium"
>> > Equilibrium can be used as an "equal" sign but certainly not always
>> > and again the
>> > "equilibrium" term cannot be interchanged easily with the term
>> > "equilibrium"
>> > As the Russian has pointed out that we have altered the path of
>> > science by being
>> > led by mechanical machines in number crunching style where numbers are
>> > placed
>> > into a grinder and where we examine the mix to see if anything usefull
>> > comes out
>> > and where the computor is used to magnify possible paths where the
>> > resulting
>> > mix in general goes no where. You now have to put another hat on and
>> > rely on
>> > that bit by bit observations becomes a story and where bits are
>> > missing you use
>> > intuition to bridge the gap that is consistent with the theme. It is
>> > later
>> > that mathematics comes into the picture where we check to see if there
>> > is a
>> > common realistic theme. Maxwell did this by collecting different
>> > stories
>> > and connected them by trails of a story into numbers and though he saw
>> > a
>> > connection between a static sbject and a dynamic subject he never
>> > accumulated
>> > enough clues to develop a story to match the mathematics. What we are
>> > doing now
>> > is going back in time using observations of the universe to form a
>> > story even
>> > tho the mathematical links are some what preknown as individual parts
>> > as those
>> > observers of the past would do by deduction and without the use of a
>> > computor
>> > Hope that helps rather than confused you but we are retracing the step
>> > in the
>> > past taken by Gauss.
>> > Art Unwin KB9MZ......XG

>> > Back to mowing the grass or.....coooo dee graaaar
>>
>> but what is in equilibrium when this single resonant gaussian element is
>> fed
>> with rf and is radiating?- Hide quoted text -
>>
>> - Show quoted text -
>
> David, Now it is you that is jumping to fast.
> Let us go back to the last place where you said not to fast.
> We were looking at what is termed a Gaussian field with the standard
> "pillbox"
> where inside are located some statitic particles. Pick up a book
> and bone up just in this area since this drawing is commonplace but
> add to the drawing
> an outline of two elements where the surface of which have the static
> particle resting.
> Gauss talks about this picture a lot but he was not aware of such
> things as antennas
> only static particles where we know better than that because elements
> have static particles
> that rest on the surface of conductive items on this earth and we will
> want to deduce how these particles react when given an electrical
> shock
> since we know that most people jump when they come into contact with
> it.
> Bone up on Gausses law of staics and the pill box picture that one
> associated with that law.
> Don't forget that the elements that we are adding to this drawing is
> in effect a bunch of gyroscopes
> covered with static particles or what is called electrons at rest.
>
> Art Unwin KB9MZ....XG
>

but on radiating antennas the electrons are not at rest. a static case
doesn't do me any good when i want to get a signal out to the world. so
when the electrons are being pushed and pulled back and forth on the
resonant elements, what is in equilibrium?

2517. Re: HT antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 00:17:31 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <vihhi.27463$YL5.21976@newssvr29.news.prodigy.net>
Source record: 39425

Connector type?? IF bnc, they have a habit of
breaking the center pin in the females. also, make
sure you have a center pin , in your EXTERNAL
antenna. Also, happens in "F" connectors, and
can have connection problems with stud mounts!
If have, try a Field Strength meter, near your
antenna, with it connected to the radio. Might
be surprised! Jim NN7K

Norman Patrick wrote:
> I have an ICOM W32A HT. Whenever I try to connect an external antenna (such
> as an Arrow Satellite Antenna) I get no TX or RX. It seems to work fine with
> the rubber duck. Anyone else had this problem? Do you think the radio needs
> repair? Thanks! This is my FIRST post on this newsgroup. KE5IQM
>
>

2518. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 01:36:12 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <Nrihi.6473$09.3062@bignews8.bellsouth.net>
Source record: 39426

"Walter Maxwell" <walt@w2du.com> wrote in message
news:fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com...
> I'm still learning how to walk, with the aid of both a walker and a cane.
> Long and tough, but I'm
> making it.
>

welcome back
Now, in the meantime, we need dimensions on that cane and the walker
so you can make antennas out of them when your recovery is complete.
:-)

2519. AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 02:41:22 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183171282.335634.129040@a26g2000pre.googlegroups.com>
Source record: 39427
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hi:

Please don't be annoyed/offended by my question as I decreased the modulation frequency to where it would actually be realistic.

I have a very weird question about electromagnetic radiation, carriers, and modulators.

Is it mathematically-possible to carry a modulator signal [in this case, a pure-sine-wave-tone] with a frequency of 20 KHz and an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond?

If it is not mathematically-possible, then please explain why.

10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an extremely short amount of time. 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond is even shorter because a nanosecond is shorter than a second.

Giga-eon = a billion eons

Eon = a billion years

*nanocycle = billionth of a cycle

Gigaphoton = a billion photons

10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one large large number.

10^1,000,000,000 = 10-to-the-power-1,000,000,000

So you get:

(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000)

10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)

10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000) is an extremely small number at it equals 10-to-

the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000)]

No offense but please respond with reasonable answers & keep out the jokes, off-topic nonsense, taunts, insults, and trivializations. I am really interested in this.

Thanks,

Radium

2520. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 03:08:32 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f64hg5$d3j$1@nnrp.linuxfan.it>
Source record: 39428
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

> ...
> Is it mathematically-possible to carry a modulator signal [in this
> case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared on a AM carrier signal whose

The 20 Khz is obviously NOT an audio tone, but exists as VLF, what you are terming "modulation" is actually a mixing of carriers then ... and the problem with your question ONLY BEGINS there!

JS

2521. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:03:24 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183176204.844262.56940@e16g2000pri.googlegroups.com>
Source record: 39429
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 8:08 pm, John Smith I <assemblywiz...@gmail.com> wrote:

> The 20 Khz is obviously NOT an audio tone,

Yes it is. 20 KHz is the highest audible frequency. Humans hear from
20 to 20,000 Hz. No offense but WTF are you thinking??

> but exists as VLF, what you
> are terming "modulation" is actually a mixing of carriers then ... and
> the problem with your question ONLY BEGINS there!

A carrier wave is modulated by the modulator wave. On most AM
stations, the modulator wave consists of the voice of someone
speaking.

Most AM stations have carrier frequencies in the medium wave band - in
the range of 520,000 to 1,160,000 cycles every 1 second.

In the case I am describing, the modulator wave is a 20 KHz pure sine-
wave tone on a carrier frequency of 10^-(1,000,000,000-to-the-
power-10^1,000,000,000) nanocycle every 10^1,000,000,000-to-the-
power-10^1,000,000,000 giga-eons. Is this scenario mathematically-
possible? If not, then why??

2522. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:15:55 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f64leg$d3j$2@nnrp.linuxfan.it>
Source record: 39430
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

WTF are you thinking when you describe the 20 Khz signal as, "a
pure-sine-wave-tone] with a frequency of 20 KHz and an
amplitude of 1-watt-per-meter-squared"

One square meter of copper wire squared, a squared meter of modulation
xfrmr ... ?

Your question sounds like one of a high school physics student
attempting to ask a seemingly logical--yet complex question, and of no
real world value.

Your ability at obfuscation is only mundane ...

If what you say is true, you have an interest, what is the purpose of
your question?

JS

2523. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:24:31 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AB290F.6CABA%dbowey@comcast.net>
Source record: 39331
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/29/07 9:03 PM, in article
1183176204.844262.56940@e16g2000pri.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 29, 8:08 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
>> The 20 Khz is obviously NOT an audio tone,
>
> Yes it is. 20 KHz is the highest audible frequency. Humans hear from
> 20 to 20,000 Hz. No offense but WTF are you thinking??
>
>> but exists as VLF, what you
>> are terming "modulation" is actually a mixing of carriers then ... and
>> the problem with your question ONLY BEGINS there!
>
> A carrier wave is modulated by the modulator wave. On most AM
> stations, the modulator wave consists of the voice of someone
> speaking.
>
> Most AM stations have carrier frequencies in the medium wave band - in
> the range of 520,000 to 1,160,000 cycles every 1 second.
>
> In the case I am describing, the modulator wave is a 20 KHz pure sine-
> wave tone on a carrier frequency of 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanocycle every 10^1,000,000,000-to-the-
> power-10^1,000,000,000 giga-eons. Is this scenario mathematically-
> possible? If not, then why??
>

No, it's not possible. No planetary system will exist for that span of
time.

Now will you go away?

2524. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:30:31 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183177831.152287.69850@j4g2000prf.googlegroups.com>
Source record: 39332
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:

> Radium wrote:
>
> WTF are you thinking when you describe the 20 Khz signal as, "a
> pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared"
>
> One square meter of copper wire squared, a squared meter of modulation
> xfrmr ... ?

Sorry that should be 1 X [10^-6] Watts-per-m^2

http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/sound/u11l2b.html

1 X [10^-6] Watts-per-m^2 is about the loudness of a "normal
conversation" according to the above link.

F-------------------king typos!!!!!!!!!!

>
> Your question sounds like one of a high school physics student
> attempting to ask a seemingly logical--yet complex question, and of no
> real world value.
>
> Your ability at obfuscation is only mundane ...
>
> If what you say is true, you have an interest, what is the purpose of
> your question?

My basic question is if I have an AM receiver which receives signals
on a carrier frequency of Fc, is it mathematically-possible for me to
receive a modulator signal -- on that station -- of a frequency higher
than Fc? If not, then why? If not, then how are the submarines which
use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
perform voice communications?

I just stretched the question out to astronomical extremes. I have a
habit of doing that.

2525. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <fr2hl4-1pf.ln1@mail.specsol.com>
Source record: 39333
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> Hi:

> Please don't be annoyed/offended by my question as I decreased the
> modulation frequency to where it would actually be realistic.

> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.

> Is it mathematically-possible to carry a modulator signal [in this
> case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared on a AM carrier signal whose

The fact that you specified the modulation in W/M^2 immediately
says you don't know WTF you are talking about and the question
is meaningless.

You can AM modulate any frequency 0 < Fc < infinity with any other
frequency 0 < Fm < infinity.

Whether it's physically possible or results in massive distortion
is a separate issue.

<snip inane crap>

--
Jim Pennino

Remove .spam.sux to reply.

2526. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 04:52:58 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AB2FBA.6CAC1%dbowey@comcast.net>
Source record: 39334
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/29/07 9:30 PM, in article
1183177831.152287.69850@j4g2000prf.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:
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>> Radium wrote:
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>> WTF are you thinking when you describe the 20 Khz signal as, "a
>> pure-sine-wave-tone] with a frequency of 20 KHz and an
>> amplitude of 1-watt-per-meter-squared"
>>
>> One square meter of copper wire squared, a squared meter of modulation
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>
> Sorry that should be 1 X [10^-6] Watts-per-m^2
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> http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/sound/u11l2b.html
>
> 1 X [10^-6] Watts-per-m^2 is about the loudness of a "normal
> conversation" according to the above link.
>
> F------------------king typos!!!!!!!!!!
>
>>
>> Your question sounds like one of a high school physics student
>> attempting to ask a seemingly logical--yet complex question, and of no
>> real world value.
>>
>> Your ability at obfuscation is only mundane ...
>>
>> If what you say is true, you have an interest, what is the purpose of
>> your question?
>
> My basic question is if I have an AM receiver which receives signals
> on a carrier frequency of Fc, is it mathematically-possible for me to
> receive a modulator signal -- on that station -- of a frequency higher
> than Fc? If not, then why?

What is the design bandwidth of the "fixed frequency" receiver?

When you say "modulator signal" do you mean a sideband of the transmitted
signal, or do you mean at least one sideband and the Carrier, or do you mean

the Carrier and both of it's sidebands?

It would be good if you would attempt to understand AM modulation, and generally some of the factors of receiver design.

> If not, then how are the submarines which
> use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> perform voice communications?

Why do you believe they use voice communications on the ELF system?

>
> I just stretched the question out to astronomical extremes. I have a
> habit of doing that.

You have a habit of appearing to be an idiot each time you do it.

2527. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 05:10:47 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f64okm$fj7$1@usenet01.boi.hp.com>
Source record: 39335
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183177831.152287.69850@j4g2000prf.googlegroups.com...
> My basic question is if I have an AM receiver which receives signals
> on a carrier frequency of Fc, is it mathematically-possible for me to
> receive a modulator signal -- on that station -- of a frequency higher
> than Fc? If not, then why? If not, then how are the submarines which
> use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> perform voice communications?
>
> I just stretched the question out to astronomical extremes. I have a
> habit of doing that.

Why not simply ask the question you mean to ask, then, rather
than the absurd numbers you put in the original version of this
(and which you then expect everyone to work through, just to
see what the hell you might be talking about)?

The answer to the question you seem to be asking is obvious
if you simply work through the mathematics of what is going on
in amplitude modulation. So why not simply do that, and not
ask such incredibly obtuse questions?

One hint: the ELF submarine communications to which you refer
are NOT carrying voice communications, but very low-rate
CW ("Morse code," if you want to think of it that way) signalling.

Bob M.

2528. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 05:24:52 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183181092.744370.313670@o11g2000prd.googlegroups.com>
Source record: 39336
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 11:03 am, clifto <cli...@gmail.com> wrote:
> Radium wrote:
> > Is it mathematically-possible to carry a modulator signal with a
> > frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> > every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> > an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> > frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> > nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> > eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> > power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> > power-10^1,000,000,000) nanosecond?
>
> No.
>
> > If it is not mathematically-possible, then please explain why.
>
> No.
>
> --
> We can't possibly imprison 300 million Americans for not paying their
> taxes, so let's grant all of them amnesty NOW!

.
```

2529. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:23:24 UTC
From: HF706 <HF706@yahoo.com>
Message-ID: <1183184604.272666.97990@a26g2000pre.googlegroups.com>
Source record: 39337

On Jun 29, 2:56 pm, Walter Maxwell <w...@w2du.com> wrote:
> Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital following major...Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU

Walt:

Best wishes for a speedy recovery.

I've never met you, but when reading your Reflections articles from your web site and the ARRL's, it is as if "Professor Maxwell" is by my side making the a complex subject easier for non EE's to understand.

73. Lew, N9WL

2530. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:44:08 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183185848.396105.60530@z28g2000prd.googlegroups.com>
Source record: 39338
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 10:10 pm, "Bob Myers" <nospample...@address.invalid> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183177831.152287.69850@j4g2000prf.googlegroups.com...
>
> > My basic question is if I have an AM receiver which receives signals
> > on a carrier frequency of Fc, is it mathematically-possible for me to
> > receive a modulator signal -- on that station -- of a frequency higher
> > than Fc? If not, then why? If not, then how are the submarines which
> > use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> > perform voice communications?
>
> > I just stretched the question out to astronomical extremes. I have a
> > habit of doing that.
>
> Why not simply ask the question you mean to ask, then, rather
> than the absurd numbers you put in the original version of this
> (and which you then expect everyone to work through, just to
> see what the hell you might be talking about)?
>
> The answer to the question you seem to be asking is obvious
> if you simply work through the mathematics of what is going on
> in amplitude modulation. So why not simply do that, and not
> ask such incredibly obtuse questions?
>
> One hint: the ELF submarine communications to which you refer
> are NOT carrying voice communications, but very low-rate
> CW ("Morse code," if you want to think of it that way) signalling.
>
> Bob M.

.

2531. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:44:29 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183185869.773721.60710@z28g2000prd.googlegroups.com>
Source record: 39339
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 9:52 pm, Don Bowey <dbo...@comcast.net> wrote:
> On 6/29/07 9:30 PM, in article
> 1183177831.152287.69...@j4g2000prf.googlegroups.com, "Radium"
>
>
>
>
>
> <gluceg...@gmail.com> wrote:
> > On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
> >> Radium wrote:
>
> >> WTF are you thinking when you describe the 20 Khz signal as, "a
> >> pure-sine-wave-tone] with a frequency of 20 KHz and an
> >> amplitude of 1-watt-per-meter-squared"
>
> >> One square meter of copper wire squared, a squared meter of modulation
> >> xfrmr ... ?
>
> > Sorry that should be 1 X [10^-6] Watts-per-m^2
>
> >http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/sound/u11l2b.html
>
> > 1 X [10^-6] Watts-per-m^2 is about the loudness of a "normal
> > conversation" according to the above link.
>
> > F------------------king typos!!!!!!!!!!
>
> >> Your question sounds like one of a high school physics student
> >> attempting to ask a seemingly logical--yet complex question, and of no
> >> real world value.
>
> >> Your ability at obfuscation is only mundane ...
>
> >> If what you say is true, you have an interest, what is the purpose of
> >> your question?
>
> > My basic question is if I have an AM receiver which receives signals
> > on a carrier frequency of Fc, is it mathematically-possible for me to
> > receive a modulator signal -- on that station -- of a frequency higher
> > than Fc? If not, then why?

>
> What is the design bandwidth of the "fixed frequency" receiver?
>
> When you say "modulator signal" do you mean a sideband of the transmitted
> signal, or do you mean at least one sideband and the Carrier, or do you mean
> the Carrier and both of it's sidebands?
>
> It would be good if you would attempt to understand AM modulation, and
> generally some of the factors of receiver design.
>
> > If not, then how are the submarines which
> > use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> > perform voice communications?
>
> Why do you believe they use voice communications on the ELF system?
>
>
>
> > I just stretched the question out to astronomical extremes. I have a
> > habit of doing that.
>
> You have a habit of appearing to be an idiot each time you do it.- Hide quoted text -
>
> - Show quoted text -

.

2532. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:45:01 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183185901.571953.95770@o11g2000prd.googlegroups.com>
Source record: 39340
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 9:35 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Radium <gluceg...@gmail.com> wrote:
>
> > Hi:
> > Please don't be annoyed/offended by my question as I decreased the
> > modulation frequency to where it would actually be realistic.
> > I have a very weird question about electromagnetic radiation,
> > carriers, and modulators.
> > Is it mathematically-possible to carry a modulator signal [in this
> > case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> > amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
>
> The fact that you specified the modulation in W/M^2 immediately
> says you don't know WTF you are talking about and the question
> is meaningless.
>
> You can AM modulate any frequency 0 < Fc < infinity with any other
> frequency 0 < Fm < infinity.
>
> Whether it's physically possible or results in massive distortion
> is a separate issue.
>
> <snip inane crap>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

.
```

2533. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:45:52 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183185952.449377.318700@g37g2000prf.googlegroups.com>
Source record: 39341
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 9:35 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Radium <gluceg...@gmail.com> wrote:
>
> > Hi:
> > Please don't be annoyed/offended by my question as I decreased the
> > modulation frequency to where it would actually be realistic.
> > I have a very weird question about electromagnetic radiation,
> > carriers, and modulators.
> > Is it mathematically-possible to carry a modulator signal [in this
> > case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> > amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
>
> The fact that you specified the modulation in W/M^2 immediately
> says you don't know WTF you are talking about and the question
> is meaningless.
>
> You can AM modulate any frequency 0 < Fc < infinity with any other
> frequency 0 < Fm < infinity.
>
> Whether it's physically possible or results in massive distortion
> is a separate issue.
>
> <snip inane crap>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

.
```

2534. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:46:27 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183185987.957727.319260@g37g2000prf.googlegroups.com>
Source record: 39342
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 9:24 pm, Don Bowey <dbo...@comcast.net> wrote:
> On 6/29/07 9:03 PM, in article
> 1183176204.844262.56...@e16g2000pri.googlegroups.com, "Radium"
>
>
>
>
>
> <gluceg...@gmail.com> wrote:
> > On Jun 29, 8:08 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
> >> The 20 Khz is obviously NOT an audio tone,
>
> > Yes it is. 20 KHz is the highest audible frequency. Humans hear from
> > 20 to 20,000 Hz. No offense but WTF are you thinking??
>
> >> but exists as VLF, what you
> >> are terming "modulation" is actually a mixing of carriers then ... and
> >> the problem with your question ONLY BEGINS there!
>
> > A carrier wave is modulated by the modulator wave. On most AM
> > stations, the modulator wave consists of the voice of someone
> > speaking.
>
> > Most AM stations have carrier frequencies in the medium wave band - in
> > the range of 520,000 to 1,160,000 cycles every 1 second.
>
> > In the case I am describing, the modulator wave is a 20 KHz pure sine-
> > wave tone on a carrier frequency of 10^-(1,000,000,000-to-the-
> > power-10^1,000,000,000) nanocycle every 10^1,000,000,000-to-the-
> > power-10^1,000,000,000 giga-eons. Is this scenario mathematically-
> > possible? If not, then why??
>
> No, it's not possible. No planetary system will exist for that span of
> time.
>
> Now will you go away?- Hide quoted text -
>
> - Show quoted text -

.

2535. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:46:45 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183186005.980101.102710@i13g2000prf.googlegroups.com>
Source record: 39343
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Radium wrote:
>
> WTF are you thinking when you describe the 20 Khz signal as, "a
> pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared"
>
> One square meter of copper wire squared, a squared meter of modulation
> xfrmr ... ?
>
> Your question sounds like one of a high school physics student
> attempting to ask a seemingly logical--yet complex question, and of no
> real world value.
>
> Your ability at obfuscation is only mundane ...
>
> If what you say is true, you have an interest, what is the purpose of
> your question?
>
> JS

.
```

2536. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:47:03 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183186023.640094.64960@z28g2000prd.googlegroups.com>
Source record: 39344
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 9:03 pm, Radium <gluceg...@gmail.com> wrote:
> On Jun 29, 8:08 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > The 20 Khz is obviously NOT an audio tone,
>
> Yes it is. 20 KHz is the highest audible frequency. Humans hear from
> 20 to 20,000 Hz. No offense but WTF are you thinking??
>
> > but exists as VLF, what you
> > are terming "modulation" is actually a mixing of carriers then ... and
> > the problem with your question ONLY BEGINS there!
>
> A carrier wave is modulated by the modulator wave. On most AM
> stations, the modulator wave consists of the voice of someone
> speaking.
>
> Most AM stations have carrier frequencies in the medium wave band - in
> the range of 520,000 to 1,160,000 cycles every 1 second.
>
> In the case I am describing, the modulator wave is a 20 KHz pure sine-
> wave tone on a carrier frequency of 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanocycle every 10^1,000,000,000-to-the-
> power-10^1,000,000,000 giga-eons. Is this scenario mathematically-
> possible? If not, then why??

.
```

2537. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:47:20 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183186040.383251.245030@j4g2000prf.googlegroups.com>
Source record: 39345
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 29, 8:08 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Radium wrote:
>
> > ...
>
> > Is it mathematically-possible to carry a modulator signal [in this
> > case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> > amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
>
> The 20 Khz is obviously NOT an audio tone, but exists as VLF, what you
> are terming "modulation" is actually a mixing of carriers then ... and
> the problem with your question ONLY BEGINS there!
>
> JS

.
```

2538. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 06:47:38 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183186058.724733.245330@j4g2000prf.googlegroups.com>
Source record: 39346
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 7:41 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Please don't be annoyed/offended by my question as I decreased the
> modulation frequency to where it would actually be realistic.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal [in this
> case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.
>
> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)

>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
> Thanks,
>
> Radium

.

2539. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 10:04:03 UTC
From: Dave <noone@nowhere.com>
Message-ID: <nUphi.626$4e5.308@trndny07>
Source record: 39347

```
"art" <aunwin@insightbb.com> wrote in message
news:1183165340.019855.8190@q69g2000hsb.googlegroups.com...
> On 29 Jun, 17:12, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1183155695.787862.123920@k29g2000hsd.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 29 Jun, 14:18, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>>
>> >>news:1183150540.916510.28720@n60g2000hse.googlegroups.com...
>>
>> >> > On 29 Jun, 12:11, art <aun...@insightbb.com> wrote:
>> >> >> On 29 Jun, 11:50, "Dave" <n...@nowhere.com> wrote:
>>
>> >> >> > "art" <aun...@insightbb.com> wrote in message
>>
>> >> >> >news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
>>
>> >> >> > > On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
>> >> >> > >> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>>
>> >> >> > >> > Ok, lets try it this way... step by step, inch by inch, we
>> >> >> > >> > may
>> >> >> > >> > yet
>> >> >> > >> > figure
>> >> >> > >> > out what this antenna is.
>>
>> >> >> > >> > First question:
>> >> >> > >> > What is the least number of wires needed to build a gaussian
>> >> >> > >> > antenna?
>>
>> >> >> > >> Posting check
>> >> >> > >> Art
>>
>> >> >> > > Isaac Newton like scientist before him observed the World and
>> >> >> > > the
>> >> >> > > Universe
>> >> >> > > for clues about what it was all about. He determined that each
>> >> >> > > particle, each object,
```

>> >> >> > > each planet all had their own gravitational centers. And where
>> >> >> > > each
>> >> >> > > minute particle
>> >> >> > > was made of atoms etc all orbiting around each other in a state
>> >> >> > > where
>> >> >> > > these orbiting
>> >> >> > > partcles were able to move in isolation with respect to other
>> >> >> > > particles in orbit
>> >> >> > > because all forces became balanced with respect to each other.
>> >> >> > > This
>> >> >> > > theory was
>> >> >> > > based on observations on the make up of the universe around us.
>> >> >> > > This
>> >> >> > > balancing of
>> >> >> > > parts and particles is called being in a state of equilibrium.
>> >> >> > > If
>> >> >> > > an
>> >> >> > > exterior
>> >> >> > > force was applied the Universe has a whole would rearrange
>> >> >> > > itself
>> >> >> > > to
>> >> >> > > retain
>> >> >> > > equilibrium by accomodation
>> >> >> > > Thus we can see an element as something held together by
>> >> >> > > equilibrium
>> >> >> > > and where
>> >> >> > > its constituent parts is a densily packed swarm of particles
>> >> >> > > shaped
>> >> >> > > in longitudinal
>> >> >> > > physical form and where the surface of this entity has its
>> >> >> > > surface
>> >> >> > > completely covered
>> >> >> > > by errant particles called electrons. This collection of
>> >> >> > > particles
>> >> >> > > are
>> >> >> > > so densly packed
>> >> >> > > that it appears to be a solid and where the make up of its
>> >> >> > > constituent
>> >> >> > > particls and atoms
>> >> >> > > provide a distingtive appearance which allows identification
>> >> >> > > with
>> >> >> > > respect to other combinations
>> >> >> > > of densly packed swarms of particles and atoms via weight,
>> >> >> > > reflective
>> >> >> > > qualities e.t c
>> >> >> > > I have stated the above in a very generalistic way purely to
>> >> >> > > give
>> >> >> > > an
>> >> >> > > understanding of the
>> >> >> > > meaning of the word "equilibrium" which in a generalistic way

>> >> >> > > can
>> >> >> > > be
>> >> >> > > seen as a somewhat stable
>> >> >> > > existance of parts in concert with other parts in a three
>> >> >> > > dimensional
>> >> >> > > existance where its "stable"
>> >> >> > > existance is created because of the totalility of all forces
>> >> >> > > involved
>> >> >> > > equals the sum of ZERO.
>> >> >> > > Art Unwin KB9MZ....XG
>>
>> >> >> > but an antenna is by necessity a dynamic thing. it is meant to
>> >> >> > be
>> >> >> > radiating
>> >> >> > or absorbing energy which to me means it can not be in
>> >> >> > equilibrium.
>> >> >> > it
>> >> >> > also
>> >> >> > must have rapidly varying currents and voltages such that even
>> >> >> > along
>> >> >> > the
>> >> >> > length of the wire there is no equilibrium, electrons pack up
>> >> >> > tighter
>> >> >> > in one
>> >> >> > area and less in another forcing currents to flow continually.
>> >> >> > even
>> >> >> > a
>> >> >> > wire
>> >> >> > that is not directly fed from a transmitter has currents and
>> >> >> > voltages
>> >> >> > based
>> >> >> > on how close it is to a wire driven from a transmitter, it's
>> >> >> > orientation,
>> >> >> > and it's length. electrically if all the fields from a wire
>> >> >> > summed
>> >> >> > up
>> >> >> > to
>> >> >> > zero there could be no power flowing and hence no antenna.- Hide
>> >> >> > quoted
>> >> >> > text -
>>
>> >> >> > - Show quoted text -
>>
>> >> >> I fully understand your quandry David because with your knoweledge
>> >> >> despite
>> >> >> what you say is trying to jump ahead of the story to get at the
>> >> >> desired end.
>> >> >> Just relax and follow my story without resistance as a child
>> >> >> without
>> >> >> prior knoweledge

>> >> >> would when he is sitting down and listening to an orator describing
>> >> >> a
>> >> >> story.
>> >> >> The point of the story is at a point of arranging two pieces of
>> >> >> metal
>> >> >> that has no external forces exacted upon them and where each piece
>> >> >> of
>> >> >> metal
>> >> >> can be seen as a static part of the earth even tho it is made of
>> >> >> zillions of gyroscopes spinning in a comppressed area and that
>> >> >> because
>> >> >> of the
>> >> >> balanced rotation of parts are staying together as a swarm of parts
>> >> >> without disintergration to dust. You have to understand the nature
>> >> >> of mass or energy of things so you can anticipate the reaction to
>> >> >> an external force that impinges on its equilibrium . Until that
>> >> >> happens
>> >> >> we are reffering to an arrangement that is not dynamic but static
>> >> >> Art Unwin KB9MZ...XG- Hide quoted text -
>>
>> >> >> - Show quoted text -
>>
>> >> > David, let me talk about equilibrium a little bit more as the
>> >> > lessons
>> >> > learned
>> >> > from many years on this newsgroup shows this to be a real stumbling
>> >> > block.
>> >> > For someone with a learned background there is a great emphasis on
>> >> > the
>> >> > mathematical side of proving concepts that were origional derived by
>> >> > observation
>> >> > of the universe where the student of the day concentrates more on
>> >> > the
>> >> > mathematical
>> >> > aspect which is required for a non oral examination. Thus it is
>> >> > natural for
>> >> > such a student to equate the "equal" term in mathematics to the word
>> >> > "equilibrium"
>> >> > Equilibrium can be used as an "equal" sign but certainly not always
>> >> > and again the
>> >> > "equilibrium" term cannot be interchanged easily with the term
>> >> > "equilibrium"
>> >> > As the Russian has pointed out that we have altered the path of
>> >> > science by being
>> >> > led by mechanical machines in number crunching style where numbers
>> >> > are
>> >> > placed
>> >> > into a grinder and where we examine the mix to see if anything
>> >> > usefull
>> >> > comes out

>> >> > and where the computor is used to magnify possible paths where the
>> >> > resulting
>> >> > mix in general goes no where. You now have to put another hat on and
>> >> > rely on
>> >> > that bit by bit observations becomes a story and where bits are
>> >> > missing you use
>> >> > intuition to bridge the gap that is consistent with the theme. It is
>> >> > later
>> >> > that mathematics comes into the picture where we check to see if
>> >> > there
>> >> > is a
>> >> > common realistic theme. Maxwell did this by collecting different
>> >> > stories
>> >> > and connected them by trails of a story into numbers and though he
>> >> > saw
>> >> > a
>> >> > connection between a static sbject and a dynamic subject he never
>> >> > accumulated
>> >> > enough clues to develop a story to match the mathematics. What we
>> >> > are
>> >> > doing now
>> >> > is going back in time using observations of the universe to form a
>> >> > story even
>> >> > tho the mathematical links are some what preknown as individual
>> >> > parts
>> >> > as those
>> >> > observers of the past would do by deduction and without the use of a
>> >> > computor
>> >> > Hope that helps rather than confused you but we are retracing the
>> >> > step
>> >> > in the
>> >> > past taken by Gauss.
>> >> > Art Unwin KB9MZ......XG
>> >> > Back to mowing the grass or.....coooo dee graaaar
>> >>
>> >> but what is in equilibrium when this single resonant gaussian element
>> >> is
>> >> fed
>> >> with rf and is radiating?- Hide quoted text -
>> >>
>> >> - Show quoted text -
>> >>
>> > David, Now it is you that is jumping to fast.
>> > Let us go back to the last place where you said not to fast.
>> > We were looking at what is termed a Gaussian field with the standard
>> > "pillbox"
>> > where inside are located some statitic particles. Pick up a book
>> > and bone up just in this area since this drawing is commonplace but
>> > add to the drawing
>> > an outline of two elements where the surface of which have the static

>> > particle resting.
>> > Gauss talks about this picture a lot but he was not aware of such
>> > things as antennas
>> > only static particles where we know better than that because elements
>> > have static particles
>> > that rest on the surface of conductive items on this earth and we will
>> > want to deduce how these particles react when given an electrical
>> > shock
>> > since we know that most people jump when they come into contact with
>> > it.
>> > Bone up on Gausses law of staics and the pill box picture that one
>> > associated with that law.
>> > Don't forget that the elements that we are adding to this drawing is
>> > in effect a bunch of gyroscopes
>> > covered with static particles or what is called electrons at rest.
>>
>> > Art Unwin KB9MZ....XG
>>
>> but on radiating antennas the electrons are not at rest. a static case
>> doesn't do me any good when i want to get a signal out to the world. so
>> when the electrons are being pushed and pulled back and forth on the
>> resonant elements, what is in equilibrium?- Hide quoted text -
>>
>> - Show quoted text -
>
> True. But we have set up two elements in a state of equilibrium with a
> static partical
> resting on their surface He stated that all within the circle must be
> in equilibrium.
> We know the elements are resonant and in equilibrium together with the
> static particles.
> So now we are set to do exactly what Gauss did in formulating the
> Gaussian law.
> He projected two vectors from each element on to the pillbox and then
> applied a jolt of electricity
> to one of the elements and since both elements were in equilibrium
> with each other one
> can say in effect that a jolt was applied to the assembly as a whole.
> Now we can use some more information that we have come across which is
> that a jolt of electricity
> produces two vectors per element.The jolt provides a vector force
> along the length of each element at the same time and a vector at
> right angles to the line of theelement. Both of these vectors provide
> their own fields. With some sort of engineering background we can add
> vectors to provide a single vector aimed somewhere in the middle of
> the two vectors and at an angle to the element. Immediately we see
> that if a jolt was applied to an element it will not be at right
> angles to both elements as one would see if two elements were coupled
> as per a Yagi so we will be looking at a different arrangement of
> vectors that one would reasonably occur in terms of radiation as we

> know it. This a deduction that we deduced from the vector direction
> only since each vector is of zero length because the time length of
> the jolt was less than nothing i.e.dt. So we have learned that when
> power is applied to the assembly or array that the vector sum
> of the both field vectors will be somewhere in between both vectors of
> some magnitude depending on the time allotted for power to be applied
> together with type of wave of the same power supply.
> O.K. David. If I had placed a yagi inside the circle we would have
> expected some sort of vector at right angles to the element to
> represent coupling but for some reason this did not occurr
> The reasons why there is a difference is that a yagi needs more time
> for each element to react with others
> even after the jolt stopped because it needs time to react with other
> elements before the radiation journey begins . The other reason is
> that we do know that a radiation vector is at right angles to the
> radiating elements via coupling for a yagi. From this we know that we
> are going to produce radiation in a different
> radiation pattern to a yagi. Also a yagi cannot be used in this
> instance because only the driven element
> is resonant at the frequency in use and the entire array cannot be in
> a state of equilibrium which is a requirement for proceding along the
> lines of Gaussian law of statics.
> Depending on your next question we are going to apply a jolt of power
> to the array we have made of a specific length of time where the power
> is of a specific wave for to look at how the fields are made.
> Forgot to mention another observable and that is when the jolt of
> power was supplied the race to the end of
> each element created by the jolt resulted in a tie!
> Art Unwin KB9MZ....XG
>

you are jumping ahead to far again and this results in misunderstanding of what you are saying. please go back to the single element and apply a jolt to it and explain how it is in equilibrium. with 2 elements like you try to explain it still doesn't make sense.

2540. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 10:32:59 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Uv-dnQ0ub_DKrBvbnZ2dnUVZ8q2dnZ2d@bt.com>
Source record: 39348
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183177831.152287.69850@j4g2000prf.googlegroups.com...
> On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > Radium wrote:
> >
> > WTF are you thinking when you describe the 20 Khz signal as, "a
> > pure-sine-wave-tone] with a frequency of 20 KHz and an
> > amplitude of 1-watt-per-meter-squared"
> >
> > One square meter of copper wire squared, a squared meter of modulation
> > xfrmr ... ?
>
> Sorry that should be 1 X [10^-6] Watts-per-m^2
>
> http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/sound/u11l2b.html
>
> 1 X [10^-6] Watts-per-m^2 is about the loudness of a "normal
> conversation" according to the above link.
>
> F-------------------king typos!!!!!!!!!!
>
> >
> > Your question sounds like one of a high school physics student
> > attempting to ask a seemingly logical--yet complex question, and of no
> > real world value.
> >
> > Your ability at obfuscation is only mundane ...
> >
> > If what you say is true, you have an interest, what is the purpose of
> > your question?
>
> My basic question is if I have an AM receiver which receives signals
> on a carrier frequency of Fc, is it mathematically-possible for me to
> receive a modulator signal -- on that station -- of a frequency higher
> than Fc? If not, then why? If not, then how are the submarines which
> use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> perform voice communications?
>
> I just stretched the question out to astronomical extremes. I have a
> habit of doing that.
>

Radium

It is not possible to modulate a carrier frequency at a frequency higher than the carrier frequency. It wouldn't be a carrier frequency then, the higher frequency would become the carrier frequency by default.

ELF communications are carried out at very slow data rates, only a few characters per hour at best. Normal demodulation techniques are useless at these frequencies and messages are received by what amounts to comparing the noise levels on a given very narrow frequency band over long periods. Computers are easily capable of performing this task. Messages are generally sent as 3 character codes which are then looked up in a code book to read the full text of the message. Each message can take half an hour or more to send. Only a very limited set of pre arranged messages can be passed but this is enough to tell a sub to approach the surface and establish line of sight comms direct to a satellite, when more detailed messages can be passed securely and at high speeds on higher frequencies (i.e voice and data communications). Voice comms cannot be passed at VLF or ELF frequencies.

Nuclear subs are extremely autonomous. There is no quick way to establish communications once they have left port and submerged.

It is possible to communicate at a base band frequency of 0Hz. This is what happens when you talk down a hard wired telephone or intercom. At a telephone exchange (switching centre), the signals from each line are modulated onto a higher frequency for onward transmission down a trunk wire cable or fibre optic cable. The multiplexed high frequency modulated signals are down converted back to audio frequencies once they reach the intended destination.

It is also possible to transmit this signal through the air (at incredibly low efficiencies and powers). The miles of cables snaking through the trenches in World War One were so long that messages could be intercepted by the enemy listening in without any direct connection to the system. A good ground connection and half a mile of wire rolled out across no mans land was sufficient to pick up the signals from the other side. Systems were also discovered which employed two widely separated ground connections and avoided the need to send men out on a suicide mission to carry wires towards the enemy trenches.

Mike G0ULI

2541. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 10:38:51 UTC
From: N7ZZT - Eric Oyen <n7zzt@127.0.0.1>
Message-ID: <2583460.7MCfgOTQjd@www.usenetzone.com>
Source record: 39349
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

the question begs..... HUH????????

Radium wrote:

> Hi:
>
> Please don't be annoyed/offended by my question.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal with a
> frequency of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigacycles
> every 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond and
> an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 cycles is an extremely
> large amount of cycles. 10^1,000,000,000-to-the-power-10^1,000,000,000
> gigacycles is even more because a gigacycle is more than a cycle.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> Gigacycle = a billion cycles.
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one

> large large number.
>
> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
>
> Thanks,
>
> Radium

2542. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 12:08:05 UTC
From: w9gb <spam_protect@arrl.net>
Message-ID: <qqGdnYF5J8Qu2hvbnZ2dnUVZ_vumnZ2d@comcast.com>
Source record: 39350

Walt -

Glad to hear that you are back "on the mend".
Remember that rehabilitation is one day at a time - each with its own victory!

Greg
w9gb

"Walter Maxwell" <walt@w2du.com> wrote in message
news:fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com...
> Hello to all my antenna friends. I've just now returned home after nine
> weeks in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous
> intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection,
> after which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance
> and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto
> something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but
> unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and
> a cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU
>

2543. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 12:14:32 UTC
From: Jasen <jasen@free.net.nz>
Message-ID: <f65hf8$46k$1@jasen.is-a-geek.org>
Source record: 39352
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

["Followup-To:" header set to sci.electronics.basics.]
On 2007-06-30, John Smith I <assemblywizard@gmail.com> wrote:
> Radium wrote:
>
> WTF are you thinking when you describe the 20 Khz signal as, "a
> pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared"

Candela

Admittedly an odd unit to use for radiation at that frequency.

Bye.
Jasen

2544. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 12:22:24 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f65hu1gkl1@aioe.org>
Source record: 39351

Hi Walt,

Speedy recovery and prayers for complete regaining of equilibrium!!!

Yep, hospitals great place to catch something. Friend's father wasn't so lucky, operation of the knee was successful but he was finished by the infection.

Welcome back and have fun with antenna mumbo-jumbo!

Yuri, K3BU

"Walter Maxwell" <walt@w2du.com> wrote in message news:fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com...
> Hello to all my antenna friends. I've just now returned home after nine
> weeks in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous
> intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection,
> after which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance
> and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto
> something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but
> unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and
> a cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU
>

2545. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 17:14:59 UTC
From: Porgy Tirebiter <biteme@gmail.com>
Message-ID: <ncwhi.16445$2v1.8197@newssvr14.news.prodigy.net>
Source record: 39353
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" is a well known "Troll".
When he runs low/out of meds and tin foil he will post this techo-babble
crap all over usenet.
Just add him to your killfile list.
"Radium" is a "Throw-away"....a complete waste of time......

2546. MA5B Newby's misunderstand of Beams?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 19:08:14 UTC
From: mike <kyw1060@verizon.net>
Message-ID: <1183230494.290917.311230@n60g2000hse.googlegroups.com>
Source record: 39354

Please e-mail me directly if you think you know what my problem is and how to resolve it. I have just installed an MA5B Cushcraft Mini-Beam and all seems fine. SWR's are normal, Coils are installed correctly...all is well except a major noise increase that rides along with the signal received. Like hearing a weak station and switching on a receive amplifier (Bringing noise with the signal) I believe in my heart I have constructed the Beam IAW the Cushcraft manual. Coax is new and connection are correct. Could this noise be because of the matching network being bad. I switch over to my Dipole on the ground and the signal changes from static voice to clear audio right down to absoloutly no noise when transmitter un-keys. Very frustrating. Help and hilfe bitte!
Mike KB3IUL

2547. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 19:33:36 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <keyhi.2568$tj6.754@newsread4.news.pas.earthlink.net>
Source record: 39355
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

m II wrote:
> There's the troubling rumour that Zero fiddled while Rome burned. It's
> simply not rue.

Correct...the fiddle wasn't invented for another thousand years.

[quote Wiki]

It was said by Suetonius and Cassius Dio that Nero sang the "Sack of Ilium"
in stage costume while the city burned. However, Tacitus' account has Nero
in Antium at the time of the fire. Tacitus said that Nero playing his lyre
and singing while the city burned was only rumor. Popular legend remembers
Nero fiddling-- that is, playing the fiddle-- while Rome burned, but this
is an anachronism as the instrument had not yet been invented, and would
not be for over 1,000 years.

2548. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 19:43:38 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183232618.853189.235230@i13g2000prf.googlegroups.com>
Source record: 39356
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 30, 12:33 pm, DTC <no_spam@move_along_folks.foob> wrote:
> m II wrote:
> > There's the troubling rumour that Zero fiddled while Rome burned. It's
> > simply not rue.
>
> Correct...the fiddle wasn't invented for another thousand years.
>
> [quote Wiki]
>
> It was said by Suetonius and Cassius Dio that Nero sang the "Sack of Ilium"
> in stage costume while the city burned. However, Tacitus' account has Nero
> in Antium at the time of the fire. Tacitus said that Nero playing his lyre
> and singing while the city burned was only rumor. Popular legend remembers
> Nero fiddling-- that is, playing the fiddle-- while Rome burned, but this
> is an anachronism as the instrument had not yet been invented, and would
> not be for over 1,000 years.

.
```

2549. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 19:46:14 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183232774.691111.287830@o11g2000prd.googlegroups.com>
Source record: 39357
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> It is not possible to modulate a carrier frequency at a frequency higher
> than the carrier frequency.

Why not?

I am getting conflicting answers. Some say it's possible to modulate a
carrier frequency at a frequency higher than the carrier frequency,
others say it isn't.

Who is right?

2550. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 19:55:47 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f66cgp$50r$1@nnrp.linuxfan.it>
Source record: 39358
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

> ...
> I am getting conflicting answers. Some say it's possible to modulate a
> carrier frequency at a frequency higher than the carrier frequency,
> others say it isn't.
>
> Who is right?

Radium:

Use simple logic, you can modulate a dc (0 Hz) with higher freq (voice),
(hint, your telephone line is an example) right?

However, when you get into RF--possible, usable, desirable are seperate
and distinct things.

Again, with simple logic, modulating a 30 CPS signal with limited voice
freq (say 5K wide) is going to create a LOT of harmonics and mixed
signals, ain't it? Suggesting a very wide band receiver would be needed
to begin with ... in my humble opinion, and for various reasons, NO, it
is NOT possible ...

Regards,
JS

2551. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:02:41 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183233761.204731.94450@g37g2000prf.googlegroups.com>
Source record: 39359
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183177831.152287.69850@j4g2000prf.googlegroups.com...
>
>
>
> > On Jun 29, 9:15 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>
> > > Radium wrote:
>
> > > > WTF are you thinking when you describe the 20 Khz signal as, "a
> > > > pure-sine-wave-tone] with a frequency of 20 KHz and an
> > > > amplitude of 1-watt-per-meter-squared"
>
> > > > One square meter of copper wire squared, a squared meter of modulation
> > > > xfrmr ... ?
>
> > > Sorry that should be 1 X [10^-6] Watts-per-m^2
>
> > >http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/sound/u11l2b.html
>
> > > 1 X [10^-6] Watts-per-m^2 is about the loudness of a "normal
> > > conversation" according to the above link.
>
> > > F------------------king typos!!!!!!!!!!
>
> > > > Your question sounds like one of a high school physics student
> > > > attempting to ask a seemingly logical--yet complex question, and of no
> > > > real world value.
>
> > > > Your ability at obfuscation is only mundane ...
>
> > > > If what you say is true, you have an interest, what is the purpose of
> > > > your question?
>
> > My basic question is if I have an AM receiver which receives signals
> > on a carrier frequency of Fc, is it mathematically-possible for me to
> > receive a modulator signal -- on that station -- of a frequency higher
> > than Fc? If not, then why? If not, then how are the submarines which
> > use ELFs [Extremely Low carrier Frequencies around 3 to 30 Hz] able to
> > perform voice communications?

>
> > I just stretched the question out to astronomical extremes. I have a
> > habit of doing that.
>
> Radium
>
> It is not possible to modulate a carrier frequency at a frequency higher
> than the carrier frequency. It wouldn't be a carrier frequency then, the
> higher frequency would become the carrier frequency by default.
>
> ELF communications are carried out at very slow data rates, only a few
> characters per hour at best. Normal demodulation techniques are useless at
> these frequencies and messages are received by what amounts to comparing the
> noise levels on a given very narrow frequency band over long periods.
> Computers are easily capable of performing this task. Messages are generally
> sent as 3 character codes which are then looked up in a code book to read
> the full text of the message. Each message can take half an hour or more to
> send. Only a very limited set of pre arranged messages can be passed but
> this is enough to tell a sub to approach the surface and establish line of
> sight comms direct to a satellite, when more detailed messages can be passed
> securely and at high speeds on higher frequencies (i.e voice and data
> communications). Voice comms cannot be passed at VLF or ELF frequencies.
>
> Nuclear subs are extremely autonomous. There is no quick way to establish
> communications once they have left port and submerged.
>
> It is possible to communicate at a base band frequency of 0Hz. This is what
> happens when you talk down a hard wired telephone or intercom. At a
> telephone exchange (switching centre), the signals from each line are
> modulated onto a higher frequency for onward transmission down a trunk wire
> cable or fibre optic cable. The multiplexed high frequency modulated signals
> are down converted back to audio frequencies once they reach the intended
> destination.
>
> It is also possible to transmit this signal through the air (at incredibly
> low efficiencies and powers). The miles of cables snaking through the
> trenches in World War One were so long that messages could be intercepted by
> the enemy listening in without any direct connection to the system. A good
> ground connection and half a mile of wire rolled out across no mans land was
> sufficient to pick up the signals from the other side. Systems were also
> discovered which employed two widely separated ground connections and
> avoided the need to send men out on a suicide mission to carry wires towards
> the enemy trenches.
>
> Mike G0ULI- Hide quoted text -
>
> - Show quoted text -

.

2552. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:02:59 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183233779.521367.182940@m37g2000prh.googlegroups.com>
Source record: 39360
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jun 30, 12:46 pm, Radium <gluceg...@gmail.com> wrote:
> On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > It is not possible to modulate a carrier frequency at a frequency higher
> > than the carrier frequency.
>
> Why not?
>
> I am getting conflicting answers. Some say it's possible to modulate a
> carrier frequency at a frequency higher than the carrier frequency,
> others say it isn't.
>
> Who is right?

.
```

2553. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:03:27 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183233807.247396.267600@e16g2000pri.googlegroups.com>
Source record: 39361
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 12:55 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Radium wrote:
>
> > ...
>
> > I am getting conflicting answers. Some say it's possible to modulate a
> > carrier frequency at a frequency higher than the carrier frequency,
> > others say it isn't.
>
> > Who is right?
>
> Radium:
>
> Use simple logic, you can modulate a dc (0 Hz) with higher freq (voice),
> (hint, your telephone line is an example) right?
>
> However, when you get into RF--possible, usable, desirable are seperate
> and distinct things.
>
> Again, with simple logic, modulating a 30 CPS signal with limited voice
> freq (say 5K wide) is going to create a LOT of harmonics and mixed
> signals, ain't it? Suggesting a very wide band receiver would be needed
> to begin with ... in my humble opinion, and for various reasons, NO, it
> is NOT possible ...
>
> Regards,
> JS

.

2554. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:16:13 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183234573.900931.11130@o11g2000prd.googlegroups.com>
Source record: 39362
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 10:14 am, "Porgy Tirebiter" <bit...@gmail.com> wrote:
- "Radium" is a well known "Troll".
- When he runs low/out of meds and tin foil he will
- post this techo-babble crap all over usenet.
- Just add him to your killfile list.
- "Radium" is a "Throw-away"....a complete waste of time......

PT - Then why waste your time replying to his posts ?

IMHO - In another life "Radium" would have made
a great High School Science Teacher :
Who's Students when on to do great things with
their lives :
Because "Radium" Touched Them With A Thirst
For Knowledge And A Quest For Answers.

-but- These NewsGroups are NOT a High School
Science Class -and- "Radium" is just being 'radium'.
http://en.wikipedia.org/wiki/Radium

-alas- Our "Radium's" Half-Life of Readable Interest
http://en.wikipedia.org/wiki/Half-life
is at best about 16.04 Seconds ~ RHF
.
.
. .

2555. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <pkqil4-2t5.ln1@mail.specsol.com>
Source record: 39363
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:

> > It is not possible to modulate a carrier frequency at a frequency higher
> > than the carrier frequency.

> Why not?

> I am getting conflicting answers. Some say it's possible to modulate a
> carrier frequency at a frequency higher than the carrier frequency,
> others say it isn't.

> Who is right?

The defining equations, you blithering idtiot.

Here they are for the last time:

http://ccrma.stanford.edu/~jos/mdft/Sinusoidal_Amplitude_Modulation_AM.html

--
Jim Pennino

Remove .spam.sux to reply.

2556. (OT) : Radium - In Another Life You Would Have Made A Great High School Science Teacher

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:25:08 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183235108.458237.323030@i38g2000prf.googlegroups.com>
Source record: 39364
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

RADIUM,

IMHO - In another life "Radium" you would have
made a great High School Science Teacher :
Who's Students when on to do great things with
their lives :
Because You "Radium" Touched Them With A
Thirst For Knowledge And A Quest For Answers.

-but- These NewsGroups are NOT a High School
Science Class -and- "Radium" you are just being
'radium'. => http://en.wikipedia.org/wiki/Radium
decaying into a gas and dispersing into nothingness.
http://en.wikipedia.org/wiki/Radon

-alas- "Radium" Your Half-Life of Readable Interest
http://en.wikipedia.org/wiki/Half-life
is at best about 16.04 Seconds ~ RHF
.
.
. .

2557. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:34:06 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f66eok$bh4$1@nnrp.linuxfan.it>
Source record: 39365
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

RHF wrote:

> ...
> Because "Radium" Touched Them With A Thirst
> For Knowledge And A Quest For Answers.
> ...

I don't know, according to any instructor I have ever had respect for:
"There are NO stupid questions, only stupid people who are afraid to ask
questions."

Depends ... I guess.

JS

2558. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:38:13 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC0D45.6CBD3%dbowey@comcast.net>
Source record: 39366
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 12:46 PM, in article
1183232774.691111.287830@o11g2000prd.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
>> It is not possible to modulate a carrier frequency at a frequency higher
>> than the carrier frequency.
>
> Why not?
>
> I am getting conflicting answers. Some say it's possible to modulate a
> carrier frequency at a frequency higher than the carrier frequency,
> others say it isn't.

Partly it's because you formulate piss poor questions.

>
> Who is right?
>

Neither if stated as an "absolute rule," a.k.a. a Universal Generalization.
It depends on what you want as a result. However, IMHO opinion, I believe
it is best to have the Carrier at a higher frequency than the modulating
frequency.

If you are amplitude modulating a Carrier with a voice band signal, then it
is mandatory, for a reasonable result, that the Carrier have a much higher
frequency than the modulating frequency.

If you are AM modulating (a.k.a. RF mixing or converting) two signals for
the purpose of creating sum and difference "Carriers" in, for example, a
synthesizer, you could use the low frequency to "modulate" the high
frequency frequency, but I donï¿½t recommend it unless some special effect is
desired.

Start with the question of what is it you wish to accomplish then ask real
questions, not some far-out hypothetical drivel.

2559. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:44:55 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183236295.355557.143660@g37g2000prf.googlegroups.com>
Source record: 39367
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 1:38 pm, Don Bowey <dbo...@comcast.net> wrote:
> On 6/30/07 12:46 PM, in article
> 1183232774.691111.287...@o11g2000prd.googlegroups.com, "Radium"
>
> <gluceg...@gmail.com> wrote:
> > On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> >> It is not possible to modulate a carrier frequency at a frequency higher
> >> than the carrier frequency.
>
> > Why not?
>
> > I am getting conflicting answers. Some say it's possible to modulate a
> > carrier frequency at a frequency higher than the carrier frequency,
> > others say it isn't.
>
> Partly it's because you formulate piss poor questions.
>
>
>
> > Who is right?
>
> Neither if stated as an "absolute rule," a.k.a. a Universal Generalization.
> It depends on what you want as a result. However, IMHO opinion, I believe
> it is best to have the Carrier at a higher frequency than the modulating
> frequency.
>
> If you are amplitude modulating a Carrier with a voice band signal, then it
> is mandatory, for a reasonable result, that the Carrier have a much higher
> frequency than the modulating frequency.
>
> If you are AM modulating (a.k.a. RF mixing or converting) two signals for
> the purpose of creating sum and difference "Carriers" in, for example, a
> synthesizer, you could use the low frequency to "modulate" the high
> frequency frequency, but I don¹t recommend it unless some special effect is
> desired.
>
> Start with the question of what is it you wish to accomplish then ask real
> questions, not some far-out hypothetical drivel.

.

2560. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 20:54:20 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <GpydnR0n4JNnXxvbnZ2dnUVZ8tGqnZ2d@bt.com>
Source record: 39368
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183232774.691111.287830@o11g2000prd.googlegroups.com...
> On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > It is not possible to modulate a carrier frequency at a frequency higher
> > than the carrier frequency.
>
> Why not?
>
> I am getting conflicting answers. Some say it's possible to modulate a
> carrier frequency at a frequency higher than the carrier frequency,
> others say it isn't.
>
> Who is right?
>
Radium

Me

Read my entire earlier reply. Then go to the library and spend several years reading through the electronics section with particular emphasis on the origins of electrical technology and early wireless. Then take a technical biased university course incorporating logic and critical analysis and all will become clear.

Without a basic knowledge of the subject, you are unable to make any form of critical judgement as to the accuracy or correctness of what people are telling you and all your questions become valueless because you do not have the nous to evaluate the answers you receive.

Start with the basics and then try working up from there. Many inadvisable things are technically possible, putting a dead short across the mains will generate a pretty good example of electromagnetic pulse, but it is far better to use a capacitive discharge circuit to do the same job. You could try modulating carriers at all different sorts of frequencies to generate harmonics, far better to use a square wave generator. You get the idea.

Regards

Mike G0ULI

2561. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 21:25:03 UTC
From: nm5k@wt.net
Message-ID: <1183238703.931297.120420@w5g2000hsg.googlegroups.com>
Source record: 39369

On Jun 30, 10:02 am, art <aun...@insightbb.com> wrote:
> Yuri, to say this is mumbo jumbo at this point puts you in a much
> smaller group
> than the large group following the thread from the beginning.

Maybe not as small as you think..

An example of mumbo...
"With some sort of engineering background we can add
vectors to provide a single vector aimed somewhere in the middle of
the two vectors and at an angle to the element. "

Well, let me see, what if one didn't have some sort of engineering
background? Would the antenna thusly be forever stunted and doomed
to a life residing inside a cheap cell phone?
All my antennas work the same no matter the education level of
the builder. Why are yours so special?

Art, I hate to break it to you, but the post that I yanked that quote
from had me rolling on the floor. It took me nearly two days to
recover
enough to be able to type this short friendly message.

I won't even venture into the many other areas of jumbo mumbo..
I'll leave that to Dave... It's his Q and A session...
You started out on the right track for maybe about 10 hours, but you
have reverted to your previous mumbo jumbo mode..Please reboot
yourself, and try again. If you have no reset button, have a family
member unplug, and then plug you back in... At least you haven't
been whining as much lately..That's a definite step in the right
direction. Discuss...
MK

2562. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 21:26:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f66hrplcn1@nnrp.linuxfan.it>
Source record: 39370

art wrote:

> ...

I am plonking this whole thread ... starting a whole thread to respond
to such is just too amazingly wasteful, trouble-some, annoying, etc ...

JS

2563. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 21:32:17 UTC
From: Dave <noone@nowhere.com>
Message-ID: <BZzhi.2330$pa5.1813@trndny05>
Source record: 39371

"art" <aunwin@insightbb.com> wrote in message
news:1183215391.657794.320710@q69g2000hsb.googlegroups.com...
On 30 Jun, 03:04, "Dave" <n...@nowhere.com> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1183165340.019855.8190@q69g2000hsb.googlegroups.com...
>
>
>
> > On 29 Jun, 17:12, "Dave" <n...@nowhere.com> wrote:
> >> "art" <aun...@insightbb.com> wrote in message
>
> >>news:1183155695.787862.123920@k29g2000hsd.googlegroups.com...
>
> >> > On 29 Jun, 14:18, "Dave" <n...@nowhere.com> wrote:
> >> >> "art" <aun...@insightbb.com> wrote in message
>
> >> >>news:1183150540.916510.28720@n60g2000hse.googlegroups.com...
>
> >> >> > On 29 Jun, 12:11, art <aun...@insightbb.com> wrote:
> >> >> >> On 29 Jun, 11:50, "Dave" <n...@nowhere.com> wrote:
>
> >> >> >> > "art" <aun...@insightbb.com> wrote in message
>
> >> >> >> >news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
>
> >> >> >> > > On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
> >> >> >> > >> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>
> >> >> >> > >> > Ok, lets try it this way... step by step, inch by inch,
> >> >> >> > >> > we
> >> >> >> > >> > may
> >> >> >> > >> > yet
> >> >> >> > >> > figure
> >> >> >> > >> > out what this antenna is.
>
> >> >> >> > >> > First question:
> >> >> >> > >> > What is the least number of wires needed to build a
> >> >> >> > >> > gaussian
> >> >> >> > >> > antenna?
>
> >> >> >> > >> Posting check
> >> >> >> > >> Art

>
> >> >> >> > > Isaac Newton like scientist before him observed the World and
> >> >> >> > > the
> >> >> >> > > Universe
> >> >> >> > > for clues about what it was all about. He determined that
> >> >> >> > > each
> >> >> >> > > particle, each object,
> >> >> >> > > each planet all had their own gravitational centers. And
> >> >> >> > > where
> >> >> >> > > each
> >> >> >> > > minute particle
> >> >> >> > > was made of atoms etc all orbiting around each other in a
> >> >> >> > > state
> >> >> >> > > where
> >> >> >> > > these orbiting
> >> >> >> > > partcles were able to move in isolation with respect to other
> >> >> >> > > particles in orbit
> >> >> >> > > because all forces became balanced with respect to each
> >> >> >> > > other.
> >> >> >> > > This
> >> >> >> > > theory was
> >> >> >> > > based on observations on the make up of the universe around
> >> >> >> > > us.
> >> >> >> > > This
> >> >> >> > > balancing of
> >> >> >> > > parts and particles is called being in a state of
> >> >> >> > > equilibrium.
> >> >> >> > > If
> >> >> >> > > an
> >> >> >> > > exterior
> >> >> >> > > force was applied the Universe has a whole would rearrange
> >> >> >> > > itself
> >> >> >> > > to
> >> >> >> > > retain
> >> >> >> > > equilibrium by accomodation
> >> >> >> > > Thus we can see an element as something held together by
> >> >> >> > > equilibrium
> >> >> >> > > and where
> >> >> >> > > its constituent parts is a densily packed swarm of particles
> >> >> >> > > shaped
> >> >> >> > > in longitudinal
> >> >> >> > > physical form and where the surface of this entity has its
> >> >> >> > > surface
> >> >> >> > > completely covered
> >> >> >> > > by errant particles called electrons. This collection of
> >> >> >> > > particles
> >> >> >> > > are
> >> >> >> > > so densly packed
> >> >> >> > > that it appears to be a solid and where the make up of its

> >> >> >> > > constituent
> >> >> >> > > particls and atoms
> >> >> >> > > provide a distingtive appearance which allows identification
> >> >> >> > > with
> >> >> >> > > respect to other combinations
> >> >> >> > > of densly packed swarms of particles and atoms via weight,
> >> >> >> > > reflective
> >> >> >> > > qualities e.t c
> >> >> >> > > I have stated the above in a very generalistic way purely to
> >> >> >> > > give
> >> >> >> > > an
> >> >> >> > > understanding of the
> >> >> >> > > meaning of the word "equilibrium" which in a generalistic way
> >> >> >> > > can
> >> >> >> > > be
> >> >> >> > > seen as a somewhat stable
> >> >> >> > > existance of parts in concert with other parts in a three
> >> >> >> > > dimensional
> >> >> >> > > existance where its "stable"
> >> >> >> > > existance is created because of the totalility of all forces
> >> >> >> > > involved
> >> >> >> > > equals the sum of ZERO.
> >> >> >> > > Art Unwin KB9MZ....XG
>
> >> >> >> > but an antenna is by necessity a dynamic thing. it is meant to
> >> >> >> > be
> >> >> >> > radiating
> >> >> >> > or absorbing energy which to me means it can not be in
> >> >> >> > equilibrium.
> >> >> >> > it
> >> >> >> > also
> >> >> >> > must have rapidly varying currents and voltages such that even
> >> >> >> > along
> >> >> >> > the
> >> >> >> > length of the wire there is no equilibrium, electrons pack up
> >> >> >> > tighter
> >> >> >> > in one
> >> >> >> > area and less in another forcing currents to flow continually.
> >> >> >> > even
> >> >> >> > a
> >> >> >> > wire
> >> >> >> > that is not directly fed from a transmitter has currents and
> >> >> >> > voltages
> >> >> >> > based
> >> >> >> > on how close it is to a wire driven from a transmitter, it's
> >> >> >> > orientation,
> >> >> >> > and it's length. electrically if all the fields from a wire
> >> >> >> > summed
> >> >> >> > up

> >> >> >> > to
> >> >> >> > zero there could be no power flowing and hence no antenna.-
> >> >> >> > Hide
> >> >> >> > quoted
> >> >> >> > text -
>
> >> >> >> > - Show quoted text -
>
> >> >> >> I fully understand your quandry David because with your
> >> >> >> knoweledge
> >> >> >> despite
> >> >> >> what you say is trying to jump ahead of the story to get at the
> >> >> >> desired end.
> >> >> >> Just relax and follow my story without resistance as a child
> >> >> >> without
> >> >> >> prior knoweledge
> >> >> >> would when he is sitting down and listening to an orator
> >> >> >> describing
> >> >> >> a
> >> >> >> story.
> >> >> >> The point of the story is at a point of arranging two pieces of
> >> >> >> metal
> >> >> >> that has no external forces exacted upon them and where each
> >> >> >> piece
> >> >> >> of
> >> >> >> metal
> >> >> >> can be seen as a static part of the earth even tho it is made of
> >> >> >> zillions of gyroscopes spinning in a comppressed area and that
> >> >> >> because
> >> >> >> of the
> >> >> >> balanced rotation of parts are staying together as a swarm of
> >> >> >> parts
> >> >> >> without disintergration to dust. You have to understand the
> >> >> >> nature
> >> >> >> of mass or energy of things so you can anticipate the reaction to
> >> >> >> an external force that impinges on its equilibrium . Until that
> >> >> >> happens
> >> >> >> we are reffering to an arrangement that is not dynamic but static
> >> >> >> Art Unwin KB9MZ...XG- Hide quoted text -
>
> >> >> >> - Show quoted text -
>
> >> >> > David, let me talk about equilibrium a little bit more as the
> >> >> > lessons
> >> >> > learned
> >> >> > from many years on this newsgroup shows this to be a real
> >> >> > stumbling
> >> >> > block.
> >> >> > For someone with a learned background there is a great emphasis on

> >> >> > the
> >> >> > mathematical side of proving concepts that were origional derived
> >> >> > by
> >> >> > observation
> >> >> > of the universe where the student of the day concentrates more on
> >> >> > the
> >> >> > mathematical
> >> >> > aspect which is required for a non oral examination. Thus it is
> >> >> > natural for
> >> >> > such a student to equate the "equal" term in mathematics to the
> >> >> > word
> >> >> > "equilibrium"
> >> >> > Equilibrium can be used as an "equal" sign but certainly not
> >> >> > always
> >> >> > and again the
> >> >> > "equilibrium" term cannot be interchanged easily with the term
> >> >> > "equilibrium"
> >> >> > As the Russian has pointed out that we have altered the path of
> >> >> > science by being
> >> >> > led by mechanical machines in number crunching style where numbers
> >> >> > are
> >> >> > placed
> >> >> > into a grinder and where we examine the mix to see if anything
> >> >> > usefull
> >> >> > comes out
> >> >> > and where the computor is used to magnify possible paths where the
> >> >> > resulting
> >> >> > mix in general goes no where. You now have to put another hat on
> >> >> > and
> >> >> > rely on
> >> >> > that bit by bit observations becomes a story and where bits are
> >> >> > missing you use
> >> >> > intuition to bridge the gap that is consistent with the theme. It
> >> >> > is
> >> >> > later
> >> >> > that mathematics comes into the picture where we check to see if
> >> >> > there
> >> >> > is a
> >> >> > common realistic theme. Maxwell did this by collecting different
> >> >> > stories
> >> >> > and connected them by trails of a story into numbers and though he
> >> >> > saw
> >> >> > a
> >> >> > connection between a static sbject and a dynamic subject he never
> >> >> > accumulated
> >> >> > enough clues to develop a story to match the mathematics. What we
> >> >> > are
> >> >> > doing now
> >> >> > is going back in time using observations of the universe to form a

> >> >> > story even
> >> >> > tho the mathematical links are some what preknown as individual
> >> >> > parts
> >> >> > as those
> >> >> > observers of the past would do by deduction and without the use of
> >> >> > a
> >> >> > computor
> >> >> > Hope that helps rather than confused you but we are retracing the
> >> >> > step
> >> >> > in the
> >> >> > past taken by Gauss.
> >> >> > Art Unwin KB9MZ.....XG
> >> >> > Back to mowing the grass or.....coooo dee graaaar
>
> >> >> but what is in equilibrium when this single resonant gaussian
> >> >> element
> >> >> is
> >> >> fed
> >> >> with rf and is radiating?- Hide quoted text -
>
> >> >> - Show quoted text -
>
> >> > David, Now it is you that is jumping to fast.
> >> > Let us go back to the last place where you said not to fast.
> >> > We were looking at what is termed a Gaussian field with the standard
> >> > "pillbox"
> >> > where inside are located some statitic particles. Pick up a book
> >> > and bone up just in this area since this drawing is commonplace but
> >> > add to the drawing
> >> > an outline of two elements where the surface of which have the static
> >> > particle resting.
> >> > Gauss talks about this picture a lot but he was not aware of such
> >> > things as antennas
> >> > only static particles where we know better than that because elements
> >> > have static particles
> >> > that rest on the surface of conductive items on this earth and we
> >> > will
> >> > want to deduce how these particles react when given an electrical
> >> > shock
> >> > since we know that most people jump when they come into contact with
> >> > it.
> >> > Bone up on Gausses law of staics and the pill box picture that one
> >> > associated with that law.
> >> > Don't forget that the elements that we are adding to this drawing is
> >> > in effect a bunch of- Hide quoted text -
>
> - Show quoted text -...
>
> read more &#65533;

O.K. Let us back up for simplicities sake and place only one element inside the Gaussian field with the static particle resting on it's surface.
Here we can see a similarity to Pointings Theorm which also has an element inside a circle and where Poynting introduced the energy in vs energy out equation to produce a mathematical equation of the concept
of energy applied to an element and equated it to energy out in the form of Radiation. Thus even tho we are pursuing the same thing using Gaussian
law of statics bothmethods ar pursueing the same final results. Thus Poyntings
vector gives us a mathematical standard which cannot be abused even though we are
proceding from a statics point of view. And we will point to this mathematical standard as we move along.
Back to the Gaussian field where we decided to apply a jolt of electricity
to the enclosed dipole. When this is done we know that two fields are produced
around the element, one in the direction parallel to the applied electrical
current and one at right angles to the flow of the electrical current.
We thus can add two vectors to the dipole as we know the directions that they take.
With respect to the length of the vector the length must be zero on all accounts
because what we are comparing to i.e. Poyntings theorem does not have the metric of time.
However we do now have a conservative field with its vectors tho of zero
length and if we take a step further we can use just one vector in the
region of 45 degrees as a summation of the original two vectors.
This provides a surprise.This is stating that the direction of radiation
is not at right angles to the radiating element in it's natural form!
>From this we can make our first deduction. When pursuing a given pure polarisation of a radiation field the radiator must be at an angle somewhere
between parallel and the right angle position to the radiator.
This is a very important observation .....It tells us that the idea of parallel elements for radiation as per a Yagi is really a distortion of natural radiation from a energised radiator . One needs to take time
and think about this implication.
Art Unwin KB9MZ.......XG

How do you get the 2 perpendicular fields??

2564. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 22:46:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <i9md83t2qq9qvp170sk6s3hua9ku8hds6e@4ax.com>
Source record: 39372
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>On Jun 30, 3:32 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
>> It is not possible to modulate a carrier frequency at a frequency higher
>> than the carrier frequency.
>
>Why not?

Unfortunately, this is a good question and literally the first and
probably only good question you've asked so far. Yes, it's possible,
but you won't get the results you're expecting. See below.

>I am getting conflicting answers. Some say it's possible to modulate a
>carrier frequency at a frequency higher than the carrier frequency,
>others say it isn't.
>
>Who is right?

What does my politics have to do with anything? For what it's worth,
I'm politically somewhat left of center on most of my views.

An AM modulator is just a simple multiplier (mixer). The modulator
takes two signals, multiplies (or mixes) them together, and produces
an amplitude modulated output. For one of about 10 assorted JAVA
applets Google found that illustrate the waveforms see:
<http://cnyack.homestead.com/files/modulation/modam.htm>
Lots more at:
<http://www.educypedia.be/electronics/javamodulation.htm>

Note that a simple multiplier (mixer) doesn't care which frequency is
the carrier and which is the modulation. The two input ports are
essentially identical. The carrier is always higher in fequency than
the modulation input. If your derranged experiment somehow causes the
modulation input frequency to exceed the carrier frequency, the
multiplier produces exactly the same output as if the frequencies were
reversed. The modulation frequency becomes the carrier, and the
carrier frequency becomes the modulation input. In other words, with
AM it doesn't matter which input is the higher frequency, the output
is exactly the same.

If you happen to own some audio test equipment, you can easily
demonstrate this with two audio oscillators, a mixer of some sorts,
and an oscilloscope. Setup the equipment with two different input

frequencies and look at the output waveform. Now, swap inputs and look again. It's the same. There's no question of which input is modulating which other input. With AM, it's ALWAYS the high frequency that acts as the carrier and the lower that acts as the modulation.

Now, please go back to your cave and read something on the basics of modulation. If words confuse you, see the above JAVA applets which will do it with pictures.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2565. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-06-30 22:59:13 UTC
From: Dave <noone@nowhere.com>
Message-ID: <5fBhi.699$wu5.63@trndny03>
Source record: 39373

"art" <aunwin@insightbb.com> wrote in message
news:1183240786.312601.265330@n60g2000hse.googlegroups.com...
On 30 Jun, 14:32, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>> When this is done we know that two fields are
>>> produced
>>> around the element, one in the direction parallel to the applied
>>> electrical
>>> current and one at right angles to the flow of the electrical current.
>>> We thus can add two vectors to the dipole as we know the directions
>>> that they take.
>>> With respect to the length of the vector the length must be zero on
>>> all accounts
>>> because what we are comparing to i.e. Poyntings theorem does not have
>>> the metric of time.
>>> However we do now have a conservative field with its vectors tho of
>>> zero
>>> length and if we take a step further we can use just one vector in
>>> the
>>> region of 45 degrees as a summation of the original two vectors.
>>> This provides a surprise.This is stating that the direction of
>>>radiation
>>> is not at right angles to the radiating element in it's natural
>>> form!>From this we can make our first deduction. >>>When pursuing a
>>> given pure
>>>
>> How do you get the 2 perpendicular fields??
>
>I don't know.
>Is it this posting or some other posting that you are refering to?
>Are you changing the subject?
>Art Unwin KB9MZ....XG

my news reader seemed to be unhappy with such a long and deeply quoted
message.... so i snipped lots of it.

i am refering to the two field vectors you specify above. where are the
parallel and perpendicular vectors developed?

2566. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 00:12:44 UTC
From: Dave <noone@nowhere.com>
Message-ID: <0kChi.1935$Nw5.730@trndny04>
Source record: 39374

"art" <aunwin@insightbb.com> wrote in message
news:1183247607.950184.301210@q69g2000hsb.googlegroups.com...
> On 30 Jun, 15:59, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1183240786.312601.265330@n60g2000hse.googlegroups.com...
>> On 30 Jun, 14:32, "Dave" <n...@nowhere.com> wrote:
>>
>>
>>
>>
>>
>> >> "art" <aun...@insightbb.com> wrote in message
>> >>> When this is done we know that two fields are
>> >>> produced
>> >>> around the element, one in the direction parallel to the applied
>> >>> electrical
>> >>> current and one at right angles to the flow of the electrical
>> >>> current.
>> >>> We thus can add two vectors to the dipole as we know the directions
>> >>> that they take.
>> >>> With respect to the length of the vector the length must be zero on
>> >>> all accounts
>> >>> because what we are comparing to i.e. Poyntings theorem does not have
>> >>> the metric of time.
>> >>> However we do now have a conservative field with its vectors tho of
>> >>> zero
>> >>> length and if we take a step further we can use just one vector in
>> >>> the
>> >>> region of 45 degrees as a summation of the original two vectors.
>> >>> This provides a surprise.This is stating that the direction of
>> >>>radiation
>> >>> is not at right angles to the radiating element in it's natural
>> >>> form!>From this we can make our first deduction. >>>When pursuing a
>> >>> given pure
>>
>> >> How do you get the 2 perpendicular fields??
>>
>> >I don't know.
>> >Is it this posting or some other posting that you are refering to?
>> >Are you changing the subject?
>> >Art Unwin KB9MZ....XG
>>
>> my news reader seemed to be unhappy with such a long and deeply quoted

>> message.... so i snipped lots of it.
>>
>> i am refering to the two field vectors you specify above. where are the
>> parallel and perpendicular vectors developed?- Hide quoted text -
>>
>> - Show quoted text -
>
> I do not have two perpendicular vectors
> I have one parallel to the radiator and one perpendicular
> to the radiator. One vector is developed by the current
> passing thru the radiator ie a electrical field.
> The electrical field produces a magnetic field at right angles to
> the electrical field . You can also see the vectors
> a different way since you mentioned movement within the radiator
> make up This provides a vector along the line of current flow.
> The electrons lying on the surface are also propelled outwards
> at right angles to the radiator because of the termoil
> created by the electrical jolt to the densly packed particles
> in equilibrium. Note the jolt is a electrical contact of an
> instant of time and thus the turmoil created by this jolt
> is not repetitive which because we are not adding the metric of time
> We can only see the direction of the vectors but not their
> values or length. These two vectors can be replaced by a single
> vector residing inbetween the original vectors but since the
> vectors are of zero length the exact angle of the replacement
> vector cannot be determined i.e. the metric of time must be added
> to the application to determine vector lengths.
>
> Next to come....
> The application of a time varing current to the conservative field
> that we have just illustrated to make it a non conservative field
> which creates a radiation field
> Art Unwin KB9MZ.....XG
>

you can not have an electric field parallel to the radiator, that is impossible. the electric field is perpendicular to the radiator. the magnetic field is around the radiator in accordance with the right hand rule from the current flow.

you can not replace the combination of the electric and magnetic fields with another single vector in a macro sense. you can do the ExH at each point as in the Poynting vector, but it will not be a single macro vector that you can point at and say it is in any particular direction over all. nor will either of them be zero length, since there is a current there is a magnetic field, and there is an electric field. they do not cancel, nor do they add to each other in any way. and we can indeed calculate exactly their magnitude and direction, that is what you get when you apply the full set of maxwell's equations... not just the single Gauss's equation, that is only one part of the picture. you really must include the effects of the other 3 equations that take into account the time varying part of the field.

has it been 20 questions yet? it doesn't really matter, i'm bored with this and don't feel like persuing it any further.

if anyone wants to take on the definitions of a 'conservative' field and see how it magically transforms to a 'non -conservative' one, have at it... personnally i don't fine definitions for that in my text books and don't really want to try to dig those out of art.

today was just too long working on clearing land for the new non-gaussian 80m 4-square here and i'm too tired to bother with this more tonight, so have fun.

2567. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 00:25:37 UTC
From: nm5k@wt.net
Message-ID: <1183249537.642229.190430@m36g2000hse.googlegroups.com>
Source record: 39375

On Jun 30, 6:22 am, "Yuri Blanarovich" <K...@optonline.net> wrote:
> Hi Walt,
>
> Speedy recovery and prayers for complete regaining of equilibrium!!!
>
> Yep, hospitals great place to catch something. Friend's father wasn't so
> lucky, operation of the knee was successful but he was finished by the
> infection.
>
> Welcome back and have fun with antenna mumbo-jumbo!
>
> Yuri, K3BU

That ain't no joke. And nursing homes are bad too.. My mother is in
one of those now after two strokes, and I have to watch them all the
time. They can get pretty sloppy if they think no one is watching.
So I sneak up on them fairly often, just to keep them on their
toes.
Welcome back Walt, and hope the recovery is quick.
MK

2568. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 00:51:06 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f66tqg$mb4$1@nnrp.linuxfan.it>
Source record: 39376

nm5k@wt.net wrote:

> ...
> That ain't no joke. And nursing homes are bad too.. My mother is in
> one of those now after two strokes, and I have to watch them all the
> time. They can get pretty sloppy if they think no one is watching.
> So I sneak up on them fairly often, just to keep them on their
> toes.
> Welcome back Walt, and hope the recovery is quick.
> MK
>

Here in the central valley of CA, they have imported a bunch of low wage filipinos, trained in the philippines, rest are most likely illegal aliens, latino mostly, all lazy and dumb as wood.

I wouldn't want 'em watchin' my dog why I was on vacation!

I don't know what we are going to do when our mom has to go into one--only thing us children are sure of--she ain't goin' in one!

Regards,
JS

2569. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 00:53:21 UTC
From: cledus <cledus@noemail.net>
Message-ID: <EXChi.23350$C96.1422@newssvr23.news.prodigy.net>
Source record: 39377
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> Hi:
>
> Please don't be annoyed/offended by my question as I decreased the
> modulation frequency to where it would actually be realistic.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal [in this
> case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.
>
> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000)

>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
>
> Thanks,
>
> Radium
>

The fundamental answer is no, it is not possible to generate AM where the baseband signal is a pure 20 kHz sinewave and Fc<20kHz. The reason is that the modulated waveform consists of the sum of a sinewave at Fc, a sinewave at Fc+20kHz, and a sinewave at Fc-20kHz. If Fc<20kHz then one of the components becomes a "negative" frequency. So the carrier must be greater than the baseband signal to prevent this.

It is conceivable that you could make Fc a miniscule number higher than 20kHz. However, if you want to radiate the signal efficiently, you will need an antenna that is miles long. That is why most radios operate with carrier frequencies much higher than the audio range. Antennas become much more practical at frequencies in the MHz range.

You might enjoy a good book that provides fundamentals of electronics and radio. Pick up a copy of the ARRL Handbook (www.arrl.org), for example. That should help you pick up some of these concepts.

2570. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 01:23:41 UTC
From: nm5k@wt.net
Message-ID: <1183253021.401991.111900@q69g2000hsb.googlegroups.com>
Source record: 39378

On Jun 30, 6:51 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> n...@wt.net wrote:
>
> > ...
>
> > That ain't no joke. And nursing homes are bad too.. My mother is in
> > one of those now after two strokes, and I have to watch them all the
> > time. They can get pretty sloppy if they think no one is watching.
> > So I sneak up on them fairly often, just to keep them on their
> > toes.
> > Welcome back Walt, and hope the recovery is quick.
> > MK
>
> Here in the central valley of CA, they have imported a bunch of low wage
> filipinos, trained in the philippines, rest are most likely illegal
> aliens, latino mostly, all lazy and dumb as wood.
>
> I wouldn't want 'em watchin' my dog why I was on vacation!
>
> I don't know what we are going to do when our mom has to go into
> one--only thing us children are sure of--she ain't goin' in one!
>
> Regards,
> JS

We didn't have much choice. She is pretty much immobile and
can't really do anything on her own, including going to the
bathroom, etc.. Insurance will not cover full time help at home,
only 1-2 hour visits. So that was out. The one she is at now
is outside of Houston a bit, in a smaller town setting.
Almost all the workers are from that area.
She is not crazy about nursing home life, but she realizes
she is really better off there, than trying to live at home.
There is no way I could take care of her by myself.
She's very hard to move, as pretty much just dead weight,
and she would end up falling and breaking a hip, or worse.
She has very little balance at all, even just sitting up in a
chair. She'll fall right over if nothing is there to stop her.
Besides that, she really needs a women to help her
go to the bathroom, shower, etc.. So there it is...
MK

2571. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 01:34:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f670b2$r1f$1@nnrp.linuxfan.it>
Source record: 39379

nm5k@wt.net wrote:

> We didn't have much choice. She is pretty much immobile and
> ...
> MK
>

Trust me, I have nothing but sympathy for you. I have friends in similar circumstances. It is hell to even have to know about fellow citizens in such places ... especially when I see the tax payers funding education, health care, etc. for illegals or immigrants who have not shared in the long labors to bring our standard of living to "what it used to be" and is now in rapid decline ...

I don't have any answers, I write my politicians (delusional rulers!) and get no response, no action and chat with many who find it the same ... I don't think it is even possible for the common public to touch these rulers anymore--and all I can wonder is how it all got this way.

I hope the best possible works out for you, I will say a prayer--it is about the best we have.

Regards,
JS

2572. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 02:01:39 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183255299.200569.150130@j4g2000prf.googlegroups.com>
Source record: 39380
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 3:46 pm, Jeff Liebermann <j...@cruzio.com> wrote:

>With AM, it's ALWAYS the high frequency
>that acts as the carrier
>and the lower that acts as the modulation.

In AM, isn't the carrier the signal which always maintains a constant
frequency and only varies by amplitude?

If a carrier signal varies by anything other than just amplitude, then
it isn't AM. Right?

2573. Re: MA5B Newby's misunderstand of Beams?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 02:21:26 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <acEhi.15736$p7.3203@bignews3.bellsouth.net>
Source record: 39281

"mike" <kyw1060@verizon.net> wrote in message
news:1183230494.290917.311230@n60g2000hse.googlegroups.com...
> Please e-mail me directly if you think you know what my problem is and
> how to resolve it. I have just installed an MA5B Cushcraft Mini-Beam
> and all seems fine. SWR's are normal, Coils are installed
> correctly...all is well except a major noise increase that rides along
> with the signal received. Like hearing a weak station and switching on
> a receive amplifier (Bringing noise with the signal) I believe in my
> heart I have constructed the Beam IAW the Cushcraft manual. Coax is
> new and connection are correct. Could this noise be because of the
> matching network being bad. I switch over to my Dipole on the ground
> and the signal changes from static voice to clear audio right down to
> absoloutly no noise when transmitter un-keys. Very frustrating. Help
> and hilfe bitte!
> Mike KB3IUL
>
May be a loose connection somewhere.
Just to find out - hose it with a water hose and see if any change occurs to
the good.
If the noise is reduced from a good soaking, then one of your connections
may benefit from from some penetrox where aluminum - to - aluminum joints
exists. A good rub with emery-cloth then the the penetrox / no-alox
(purchase in the electrical section at Lowes or Home Depot.

2574. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 02:31:07 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f673m1$9v1$1@nnrp.linuxfan.it>
Source record: 39282
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:

> ...
> If a carrier signal varies by anything other than just amplitude, then
> it isn't AM. Right?
>

Let logic be your guide, again. As was pointed out earlier, the voice freqs which modulate the carrier will cause a variance in freq (a small fm component.)

In fm, it is not unusual for a small "amplitude modulation" to be generated, as the varying/spanning of freq(s) is caused by the modulation, some changes in fm carrier can be generated.

In an imperfect world, nothing is "perfect."

Regards,
JS

2575. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 02:43:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cv3e8313dio3rso4a9st24thkrgam0761n@4ax.com>
Source record: 39283
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>On Jun 30, 3:46 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>
>>With AM, it's ALWAYS the high frequency
>>that acts as the carrier
>>and the lower that acts as the modulation.

>In AM, isn't the carrier the signal which always maintains a constant
>frequency and only varies by amplitude?

You really are clueless. The carrier does NOT vary in amplitude. If it did, that would be modulating the carrier, which is the job of the modulator, not whatever is producing the carrier. You could have two modulators in series, that would make the circuit overly complicated. Please re-read my highly simplified previous explanation about the symmetry of the AM multiplier (mixer) input ports until it's absorbed and understood by your porous brain.

Incidentally, the reason I keep using the term "multiplier (mixer)" is to avoid confusion with a harmonic multiplier. An AM modulator is a mixer, not a harmonic multiplier.

Also, the carrier might remain constant frequency, for a given FCC channel assignment, but the modulation is all over the place. For example, your voice goes from 300 to 3000Hz, all of which is fed to the modulator for digestion.

Conventional TV is VSB (visidual side band) which is a form of AM with one of the two side bands partially removed, usually by filtering. There's a carrier 1.25MHz offset for the video, another carrier 4.5Mhz offset for the audio, and whatever else they can throw in for low speed data. Two more more carriers are required for TV+audio.

If you want to get really high-techy, the new digital modes (DRM, iBiquity, HD Radio, etc) all have multiple carriers, each of which is modulated individually. Same with various OFDM modes, which have multiple carriers, individually modulated and positioned orthogonally from each other to prevent mutual interference from adjacent modulated carriers.

>If a carrier signal varies by anything other than just amplitude, then
>it isn't AM. Right?

Wrong. The carrier can also vary, such as in a sweep generator or jammer. It's not commonly done but it's possible. Want to obliterate the entire AM broadcast band? No problem. Just sweep the carrier from 530KHz to 1650KHz, while modulating the 300 to 3000Hz audio with a rendition of your incoherent ranting.

By the way, you're welcome.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2576. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 02:45:55 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <yLednZN0Jov-iBrbnZ2dnUVZ8qqlnZ2d@bt.com>
Source record: 39284
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183255299.200569.150130@j4g2000prf.googlegroups.com...
> On Jun 30, 3:46 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>
> >With AM, it's ALWAYS the high frequency
> >that acts as the carrier
> >and the lower that acts as the modulation.
>
> In AM, isn't the carrier the signal which always maintains a constant
> frequency and only varies by amplitude?
>
> If a carrier signal varies by anything other than just amplitude, then
> it isn't AM. Right?
>

Essentially correct. The sidebands either side of the central carrier wave
contain the modulation information.

If the carrier wave were to shift in frequency then that would be frequency
modulation.

Before you ask, yes it is possible to have an AM signal modulating an FM one
and several other wonderful combinations involving phase transformations,
variable pulse widths and sideband(s) only. It is all detailed in the ARRL
Handbook, RSGB Handbook and many other prestigious publications.

Mike G0ULI

2577. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:01:47 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183258907.121760.316050@g37g2000prf.googlegroups.com>
Source record: 39285
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 7:43 pm, Jeff Liebermann <j...@cruzio.com> wrote:

> The carrier does NOT vary in amplitude. If
> it did, that would be modulating the carrier, which is the job of the
> modulator, not whatever is producing the carrier.

Exactly. The modulator signal modulates the carrier wave. If there is no modulator signal, then the carrier does not vary by amplitude or by anything.

One poster stated that the signal with the higher-frequency is automatically the carrier wave while the signal with the lower-frequency is automatically the modulator wave. This is not true. What I was trying to say is that an AM radio carrier wave cannot vary significantly by anything other than its amplitude [though, as one poster pointed out, the AM carrier can experience extremely-negligible variations in frequency]. If an AM radio signal has that restriction, it is the carrier wave. If an AM radio signal does not have that restriction, then it is the modulator wave. This is true, even if the AM carrier wave is of a lower-frequency than the modulator wave. That's what I was trying to say.

In AM radio, determining which is the carrier wave and which is the modulator wave is not by which has the higher frequency but rather by which has the restriction that I stated.

If there is no modulator signal, then no carrier signal of any type [AM, FM, etc.] will vary by any quality [frequency, amplitude, phase, etc.]

2578. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:19:46 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC6B62.6CC98%dbowey@comcast.net>
Source record: 39286
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 7:01 PM, in article
1183255299.200569.150130@j4g2000prf.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 30, 3:46 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>
>> With AM, it's ALWAYS the high frequency
>> that acts as the carrier
>> and the lower that acts as the modulation.
>
> In AM, isn't the carrier the signal which always maintains a constant
> frequency and only varies by amplitude?

No! The Carrier amplitude is constant. Sidebands are generated in the
modulation process. At 100% modulation, each sideband has 25% as much power
as the Carrier. The sideband signals vary in amplitude, following the
modulation signal.

>
> If a carrier signal varies by anything other than just amplitude, then
> it isn't AM. Right?
>

You repeat yourself, and the answer is still no.

2579. New Ham Radio Website

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:20:51 UTC
From: lapdog <jeabwjw@yahoo.com>
Message-ID: <1183260051.637543.117440@n2g2000hse.googlegroups.com>
Source record: 39287

I just built a new ham radio website that has ebay listings of ham
equipment, the latest ham radio news from all over the world, some
articles about the big three and more.
Come and visit and use the contact page to contact me and tell me what
you think, suggestions or comments would be appreciated.
http://www.amateurradios.info

Thanks,
Bill
W5GRX

2580. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:21:50 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC6BDE.6CC99%dbowey@comcast.net>
Source record: 39288
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 7:31 PM, in article f673m1$9v1$1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Radium wrote:
>
>> ...
>> If a carrier signal varies by anything other than just amplitude, then
>> it isn't AM. Right?
>>
>
> Let logic be your guide, again. As was pointed out earlier, the voice
> freqs which modulate the carrier will cause a variance in freq (a small
> fm component.)

This will not happen in a properly designed transmitter. It is not a characteristic of AM.

> In fm, it is not unusual for a small "amplitude modulation" to be
> generated, as the varying/spanning of freq(s) is caused by the
> modulation, some changes in fm carrier can be generated.
>
> In an imperfect world, nothing is "perfect."
>
> Regards,
> JS

2581. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:25:47 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC6CCC.6CC9B%dbowey@comcast.net>
Source record: 39289
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 7:43 PM, in article cv3e8313dio3rso4a9st24thkrgam0761n@4ax.com,
"Jeff Liebermann" <jeffl@cruzio.com> wrote:

> Radium <glucegen1@gmail.com> hath wroth:
>
>> On Jun 30, 3:46 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>>
>>> With AM, it's ALWAYS the high frequency
>>> that acts as the carrier
>>> and the lower that acts as the modulation.
>
>> In AM, isn't the carrier the signal which always maintains a constant
>> frequency and only varies by amplitude?
>
> You really are clueless. The carrier does NOT vary in amplitude. If
> it did, that would be modulating the carrier, which is the job of the
> modulator, not whatever is producing the carrier. You could have two
> modulators in series, that would make the circuit overly complicated.
> Please re-read my highly simplified previous explanation about the
> symmetry of the AM multiplier (mixer) input ports until it's absorbed
> and understood by your porous brain.
>
> Incidentally, the reason I keep using the term "multiplier (mixer)" is
> to avoid confusion with a harmonic multiplier. An AM modulator is a
> mixer, not a harmonic multiplier.
>
> Also, the carrier might remain constant frequency, for a given FCC
> channel assignment, but the modulation is all over the place. For
> example, your voice goes from 300 to 3000Hz, all of which is fed to
> the modulator for digestion.
>
> Conventional TV is VSB (visidual side band) which is a form of AM with
> one of the two side bands partially removed, usually by filtering.
> There's a carrier 1.25MHz offset for the video, another carrier 4.5Mhz
> offset for the audio, and whatever else they can throw in for low
> speed data. Two more more carriers are required for TV+audio.
>
> If you want to get really high-techy, the new digital modes (DRM,
> iBiquity, HD Radio, etc) all have multiple carriers, each of which is
> modulated individually. Same with various OFDM modes, which have
> multiple carriers, individually modulated and positioned orthogonally
> from each other to prevent mutual interference from adjacent modulated

> carriers.
>
>> If a carrier signal varies by anything other than just amplitude, then
>> it isn't AM. Right?
>
> Wrong. The carrier can also vary, such as in a sweep generator or
> jammer. It's not commonly done but it's possible. Want to obliterate
> the entire AM broadcast band? No problem. Just sweep the carrier
> from 530KHz to 1650KHz, while modulating the 300 to 3000Hz audio with
> a rendition of your incoherent ranting.
>
> By the way, you're welcome.
>

You are getting far afield of classical AM, which is the subject of Radium's post. He is confused and you aren't helping.

2582. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:28:18 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC6D62.6CC9C%dbowey@comcast.net>
Source record: 39290
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 8:01 PM, in article
1183258907.121760.316050@g37g2000prf.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 30, 7:43 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>
>> The carrier does NOT vary in amplitude. If
>> it did, that would be modulating the carrier, which is the job of the
>> modulator, not whatever is producing the carrier.
>
> Exactly. The modulator signal modulates the carrier wave. If there is
> no modulator signal, then the carrier does not vary by amplitude or by
> anything.
>
> One poster stated that the signal with the higher-frequency is
> automatically the carrier wave while the signal with the lower-
> frequency is automatically the modulator wave. This is not true. What
> I was trying to say is that an AM radio carrier wave cannot vary
> significantly by anything other than its amplitude [though, as one
> poster pointed out, the AM carrier can experience extremely-negligible
> variations in frequency]. If an AM radio signal has that restriction,
> it is the carrier wave. If an AM radio signal does not have that
> restriction, then it is the modulator wave. This is true, even if the
> AM carrier wave is of a lower-frequency than the modulator wave.
> That's what I was trying to say.
>
> In AM radio, determining which is the carrier wave and which is the
> modulator wave is not by which has the higher frequency but rather by
> which has the restriction that I stated.
>
> If there is no modulator signal, then no carrier signal of any type
> [AM, FM, etc.] will vary by any quality [frequency, amplitude, phase,
> etc.]
>

You should just recall that post.

2583. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:29:08 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6772qaot1@nnrp.linuxfan.it>
Source record: 39291
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> ...
> This will not happen in a properly designed transmitter. It is not a
> characteristic of AM.
>> In fm, it is not unusual for a small "amplitude modulation" to be
>> generated, as the varying/spanning of freq(s) is caused by the
>> modulation, some changes in fm carrier can be generated.
>>
>> In an imperfect world, nothing is "perfect."
>>
>> Regards,
>> JS
>

Listen to a "strong--pure am signal" on an fm receiver, turn up the volume on the fm receiver, something is responsible for that ... repeat experiment with the reverse ... "imperfect world theory" proof!

In new equip (I started out decades ago, remember) voltage regulation, filters, suppressors have much improved ... digital processing is king and allows what analog never could achieve ...

Regards,
JS

2584. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:35:48 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC6F24.6CCA7%dbowey@comcast.net>
Source record: 39292
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 8:29 PM, in article f6772qaot1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> ...
>> This will not happen in a properly designed transmitter. It is not a
>> characteristic of AM.
>>> In fm, it is not unusual for a small "amplitude modulation" to be
>>> generated, as the varying/spanning of freq(s) is caused by the
>>> modulation, some changes in fm carrier can be generated.
>>>
>>> In an imperfect world, nothing is "perfect."
>>>
>>> Regards,
>>> JS
>>
>
> Listen to a "strong--pure am signal" on an fm receiver, turn up the
> volume on the fm receiver, something is responsible for that ... repeat
> experiment with the reverse ... "imperfect world theory" proof!

You are hearing the effects of the sidebands, not the Carrier.

>
> In new equip (I started out decades ago, remember) voltage regulation,
> filters, suppressors have much improved ... digital processing is king
> and allows what analog never could achieve ...
>
> Regards,
> JS

In a properly designed transmitter the Carrier amplitude does not change with modulation. I have better tools than FM receivers to prove that fact and theory agree for AM.

2585. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:46:46 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <tg7e83926l8pudme5v4tpbtq9o07qu8uci@4ax.com>
Source record: 39293
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>On Jun 30, 7:43 pm, Jeff Liebermann <j...@cruzio.com> wrote:
>
>> The carrier does NOT vary in amplitude. If
>> it did, that would be modulating the carrier, which is the job of the
>> modulator, not whatever is producing the carrier.
>
>Exactly. The modulator signal modulates the carrier wave. If there is
>no modulator signal, then the carrier does not vary by amplitude or by
>anything.

Brilliant. Yes, if there is no signal input, there's no change in
output.

Incidentally, in an AM system, the carrier does NOT change. You can
see that on a spectrum analyzer. Modulate all you want and the
carrier stays put at 50% of the total power output. The rest of the
power is split between the upper and lower side bands. If there is no
modulation input, then the side bands disappear, but the carrier just
stays there.

As someone mentioned, there is usually some residual FM on the carrier
usually caused by sloppy power supply regulation. Also, some
synthesizer noise. A well designed AM broadcast transmitter doesn't
have much of this junk present. The problem is that the FM that
appears on the carrier also appears on all the side bands. It doesn't
hurt if the carrier has a little residual FM, but any such junk on the
sidebands will result in a substantial increase in audible noise by
mixing with the audio.

>One poster stated that the signal with the higher-frequency is
>automatically the carrier wave while the signal with the lower-
>frequency is automatically the modulator wave.

That was me.

>This is not true.

Prove it. I explained how it works and why quite adequately. I
didn't even need to resort to formulas and calculations. The
multiplier (mixer) modulator inputs are symmetrical and identical.
Therefore the inputs are also symmetrical and indistinguishable. I
also provided a simple audio test you can do in your spare time to

demonstrate how it works.

Now, convince me that the multiplier (mixer) waveform would be
different depending on which input was the carrier or modulation.

>What
>I was trying to say is that an AM radio carrier wave cannot vary
>significantly by anything other than its amplitude [though, as one
>poster pointed out, the AM carrier can experience extremely-negligible
>variations in frequency]. If an AM radio signal has that restriction,
>it is the carrier wave. If an AM radio signal does not have that
>restriction, then it is the modulator wave. This is true, even if the
>AM carrier wave is of a lower-frequency than the modulator wave.
>That's what I was trying to say.

I give up. What you've done is created a word salad. That's where
you have a mess of buzzwords, shredded together, mixed with some
window dressing, and served in a manner to imply that you have a clue
what you're disgorging. Even the most basic concepts are not sinking
in. You've also ignored multiple suggestions to read some very fine
sources on how RF and modulation works. Open book, insert face, and
come back when you have a clue as to the basics.

>In AM radio, determining which is the carrier wave and which is the
>modulator wave is not by which has the higher frequency but rather by
>which has the restriction that I stated.

Wrong. With AM it's easy. The higher frequency is always the
carrier. Can you give me a diagram or a commonly used communications
system where the reverse might be true? I can't.

>If there is no modulator signal, then no carrier signal of any type
>[AM, FM, etc.] will vary by any quality [frequency, amplitude, phase,
>etc.]

Yawn...

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2586. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 03:50:51 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f678bi$n4b$1@nnrp.linuxfan.it>
Source record: 39294
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> ...
> You are hearing the effects of the sidebands, not the Carrier.

DUH! And, you only have the sidebands as a result of the
carrier/modulation ...

> In a properly designed transmitter the Carrier amplitude does not change
> with modulation. I have better tools than FM receivers to prove that fact
> and theory agree for AM.

And the time to argue the insignificant ... sharpen that razor blade,
you can then successfully split much narrower hairs ...

JS

2587. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 04:01:40 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183262500.867144.17640@o11g2000prd.googlegroups.com>
Source record: 39295
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 12:55 pm, John Smith I <assemblywiz...@gmail.com> wrote:

> Use simple logic, you can modulate a dc (0 Hz) with higher freq (voice),
> (hint, your telephone line is an example) right?

The telephone does not use either AM or FM. It is simply the
electrical equivalent of the sound that gets into the microphone. You
input a 1 KHz tone into the microphone, telephone lines will carry a 1
KHz AC current to the destination. The louder the sound into the
microphone, the stronger the amperage in the telephone lines.

2588. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 04:44:11 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC7F2B.6CCC3%dbowey@comcast.net>
Source record: 39296
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 8:50 PM, in article f678bi$n4b$1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> ...
>> You are hearing the effects of the sidebands, not the Carrier.
>
> DUH! And, you only have the sidebands as a result of the
> carrier/modulation ...

So what? You implied or inferred that what was heard from the FM radio was caused by the AM Carrier. Leave out the Carrier and you will hear the same thing.

>
>> In a properly designed transmitter the Carrier amplitude does not change
>> with modulation. I have better tools than FM receivers to prove that fact
>> and theory agree for AM.
>
> And the time to argue the insignificant ... sharpen that razor blade,
> you can then successfully split much narrower hairs ...

It is important that we not confuse a person new to electronics by the type of inane points you make. It doesn't matter a whit if someone's AM transmitter Carrier shifts on power peaks due to poor regulation. It has nothing to do with "AM" and everything to do with poor design.

Side issues don't help the new folks.

>
> JS
>
>

2589. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 04:48:10 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AC801A.6CCC4%dbowey@comcast.net>
Source record: 39297
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 9:01 PM, in article
1183262500.867144.17640@o11g2000prd.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jun 30, 12:55 pm, John Smith I <assemblywiz...@gmail.com> wrote:
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>> Use simple logic, you can modulate a dc (0 Hz) with higher freq (voice),
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> electrical equivalent of the sound that gets into the microphone. You
> input a 1 KHz tone into the microphone, telephone lines will carry a 1
> KHz AC current to the destination. The louder the sound into the
> microphone, the stronger the amperage in the telephone lines.
>

Good for you for catching that one. The effect of microphone current has
noting at all to do with AM.

2590. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 04:59:35 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <468734a5$0$21257$39cecf19@news.twtelecom.net>
Source record: 39298

Dave wrote:
> "art" <aunwin@insightbb.com> wrote in message
>>> - Show quoted text -
>> Because it's resonant at the desired frequency. This is the
>> basic form of a Gaussian antenna which is also the starting
>> point of a Yagi antenna if viewed as a single radiator
>> Art
>>
>
> so 'gaussian' == 'resonant'
> why didn't you say so in the first place?
> so a properly tuned yagi-uda array is a 'gaussian' antenna?

Art has obviously never designed or built a yagi. A yagi's driven
element is as likely to be resonant right at the design frequency when
seen as a separate element as a wet shoe. Sometimes it will be, but
don't bet on it.

tom
K0TAR

2591. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 05:04:23 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <468735c5$0$21257$39cecf19@news.twtelecom.net>
Source record: 39299

```
Dave wrote:
> "art" <aunwin@insightbb.com> wrote in message
> news:1183165340.019855.8190@q69g2000hsb.googlegroups.com...
>> On 29 Jun, 17:12, "Dave" <n...@nowhere.com> wrote:
>>> "art" <aun...@insightbb.com> wrote in message
>>>
>>> news:1183155695.787862.123920@k29g2000hsd.googlegroups.com...
>>>
>>>
>>>
>>>
>>>
>>>> On 29 Jun, 14:18, "Dave" <n...@nowhere.com> wrote:
>>>>> "art" <aun...@insightbb.com> wrote in message
>>>>> news:1183150540.916510.28720@n60g2000hse.googlegroups.com...
>>>>>> On 29 Jun, 12:11, art <aun...@insightbb.com> wrote:
>>>>>>> On 29 Jun, 11:50, "Dave" <n...@nowhere.com> wrote:
>>>>>>>> "art" <aun...@insightbb.com> wrote in message
>>>>>>>> news:1183127887.848881.117850@n2g2000hse.googlegroups.com...
>>>>>>>>> On 29 Jun, 07:02, art <aun...@insightbb.com> wrote:
>>>>>>>>>> On 25 Jun, 13:10, "Dave" <n...@nowhere.com> wrote:
>>>>>>>>>>> Ok, lets try it this way... step by step, inch by inch, we
>>>>>>>>>>> may
>>>>>>>>>>> yet
>>>>>>>>>>> figure
>>>>>>>>>>> out what this antenna is.
>>>>>>>>>>> First question:
>>>>>>>>>>> What is the least number of wires needed to build a gaussian
>>>>>>>>>>> antenna?
>>>>>>>>>> Posting check
>>>>>>>>>> Art
>>>>>>>>> Isaac Newton like scientist before him observed the World and
>>>>>>>>> the
>>>>>>>>> Universe
>>>>>>>>> for clues about what it was all about. He determined that each
>>>>>>>>> particle, each object,
>>>>>>>>> each planet all had their own gravitational centers. And where
>>>>>>>>> each
>>>>>>>>> minute particle
>>>>>>>>> was made of atoms etc all orbiting around each other in a state
>>>>>>>>> where
>>>>>>>>> these orbiting
>>>>>>>>> partcles were able to move in isolation with respect to other
>>>>>>>>> particles in orbit
```

>>>>>>>>> because all forces became balanced with respect to each other.
>>>>>>>>> This
>>>>>>>>> theory was
>>>>>>>>> based on observations on the make up of the universe around us.
>>>>>>>>> This
>>>>>>>>> balancing of
>>>>>>>>> parts and particles is called being in a state of equilibrium.
>>>>>>>>> If
>>>>>>>>> an
>>>>>>>>> exterior
>>>>>>>>> force was applied the Universe has a whole would rearrange
>>>>>>>>> itself
>>>>>>>>> to
>>>>>>>>> retain
>>>>>>>>> equilibrium by accomodation
>>>>>>>>> Thus we can see an element as something held together by
>>>>>>>>> equilibrium
>>>>>>>>> and where
>>>>>>>>> its constituent parts is a densily packed swarm of particles
>>>>>>>>> shaped
>>>>>>>>> in longitudinal
>>>>>>>>> physical form and where the surface of this entity has its
>>>>>>>>> surface
>>>>>>>>> completely covered
>>>>>>>>> by errant particles called electrons. This collection of
>>>>>>>>> particles
>>>>>>>>> are
>>>>>>>>> so densly packed
>>>>>>>>> that it appears to be a solid and where the make up of its
>>>>>>>>> constituent
>>>>>>>>> particls and atoms
>>>>>>>>> provide a distingtive appearance which allows identification
>>>>>>>>> with
>>>>>>>>> respect to other combinations
>>>>>>>>> of densly packed swarms of particles and atoms via weight,
>>>>>>>>> reflective
>>>>>>>>> qualities e.t c
>>>>>>>>> I have stated the above in a very generalistic way purely to
>>>>>>>>> give
>>>>>>>>> an
>>>>>>>>> understanding of the
>>>>>>>>> meaning of the word "equilibrium" which in a generalistic way
>>>>>>>>> can
>>>>>>>>> be
>>>>>>>>> seen as a somewhat stable
>>>>>>>>> existance of parts in concert with other parts in a three
>>>>>>>>> dimensional
>>>>>>>>> existance where its "stable"
>>>>>>>>> existance is created because of the totalility of all forces
>>>>>>>>> involved

>>>>>>>>> equals the sum of ZERO.
>>>>>>>>> Art Unwin KB9MZ....XG
>>>>>>>> but an antenna is by necessity a dynamic thing. it is meant to
>>>>>>>> be
>>>>>>>> radiating
>>>>>>>> or absorbing energy which to me means it can not be in
>>>>>>>> equilibrium.
>>>>>>>> it
>>>>>>>> also
>>>>>>>> must have rapidly varying currents and voltages such that even
>>>>>>>> along
>>>>>>>> the
>>>>>>>> length of the wire there is no equilibrium, electrons pack up
>>>>>>>> tighter
>>>>>>>> in one
>>>>>>>> area and less in another forcing currents to flow continually.
>>>>>>>> even
>>>>>>>> a
>>>>>>>> wire
>>>>>>>> that is not directly fed from a transmitter has currents and
>>>>>>>> voltages
>>>>>>>> based
>>>>>>>> on how close it is to a wire driven from a transmitter, it's
>>>>>>>> orientation,
>>>>>>>> and it's length. electrically if all the fields from a wire
>>>>>>>> summed
>>>>>>>> up
>>>>>>>> to
>>>>>>>> zero there could be no power flowing and hence no antenna.- Hide
>>>>>>>> quoted
>>>>>>>> text -
>>>>>>>> - Show quoted text -
>>>>>>> I fully understand your quandry David because with your knoweledge
>>>>>>> despite
>>>>>>> what you say is trying to jump ahead of the story to get at the
>>>>>>> desired end.
>>>>>>> Just relax and follow my story without resistance as a child
>>>>>>> without
>>>>>>> prior knoweledge
>>>>>>> would when he is sitting down and listening to an orator describing
>>>>>>> a
>>>>>>> story.
>>>>>>> The point of the story is at a point of arranging two pieces of
>>>>>>> metal
>>>>>>> that has no external forces exacted upon them and where each piece
>>>>>>> of
>>>>>>> metal
>>>>>>> can be seen as a static part of the earth even tho it is made of
>>>>>>> zillions of gyroscopes spinning in a compppressed area and that
>>>>>>> because

>>>>>>> of the
>>>>>>> balanced rotation of parts are staying together as a swarm of parts
>>>>>>> without disintergration to dust. You have to understand the nature
>>>>>>> of mass or energy of things so you can anticipate the reaction to
>>>>>>> an external force that impinges on its equilibrium . Until that
>>>>>>> happens
>>>>>>> we are reffering to an arrangement that is not dynamic but static
>>>>>>> Art Unwin KB9MZ...XG- Hide quoted text -
>>>>>>> - Show quoted text -
>>>>>> David, let me talk about equilibrium a little bit more as the
>>>>>> lessons
>>>>>> learned
>>>>>> from many years on this newsgroup shows this to be a real stumbling
>>>>>> block.
>>>>>> For someone with a learned background there is a great emphasis on
>>>>>> the
>>>>>> mathematical side of proving concepts that were origional derived by
>>>>>> observation
>>>>>> of the universe where the student of the day concentrates more on
>>>>>> the
>>>>>> mathematical
>>>>>> aspect which is required for a non oral examination. Thus it is
>>>>>> natural for
>>>>>> such a student to equate the "equal" term in mathematics to the word
>>>>>> "equilibrium"
>>>>>> Equilibrium can be used as an "equal" sign but certainly not always
>>>>>> and again the
>>>>>> "equilibrium" term cannot be interchanged easily with the term
>>>>>> "equilibrium"
>>>>>> As the Russian has pointed out that we have altered the path of
>>>>>> science by being
>>>>>> led by mechanical machines in number crunching style where numbers
>>>>>> are
>>>>>> placed
>>>>>> into a grinder and where we examine the mix to see if anything
>>>>>> usefull
>>>>>> comes out
>>>>>> and where the computor is used to magnify possible paths where the
>>>>>> resulting
>>>>>> mix in general goes no where. You now have to put another hat on and
>>>>>> rely on
>>>>>> that bit by bit observations becomes a story and where bits are
>>>>>> missing you use
>>>>>> intuition to bridge the gap that is consistent with the theme. It is
>>>>>> later
>>>>>> that mathematics comes into the picture where we check to see if
>>>>>> there
>>>>>> is a
>>>>>> common realistic theme. Maxwell did this by collecting different
>>>>>> stories

>>>>>> and connected them by trails of a story into numbers and though he
>>>>>> saw
>>>>>> a
>>>>>> connection between a static sbject and a dynamic subject he never
>>>>>> accumulated
>>>>>> enough clues to develop a story to match the mathematics. What we
>>>>>> are
>>>>>> doing now
>>>>>> is going back in time using observations of the universe to form a
>>>>>> story even
>>>>>> tho the mathematical links are some what preknown as individual
>>>>>> parts
>>>>>> as those
>>>>>> observers of the past would do by deduction and without the use of a
>>>>>> computor
>>>>>> Hope that helps rather than confused you but we are retracing the
>>>>>> step
>>>>>> in the
>>>>>> past taken by Gauss.
>>>>>> Art Unwin KB9MZ......XG
>>>>>> Back to mowing the grass or.....coooo dee graaaar
>>>>> but what is in equilibrium when this single resonant gaussian element
>>>>> is
>>>>> fed
>>>>> with rf and is radiating?- Hide quoted text -
>>>>> - Show quoted text -
>>>> David, Now it is you that is jumping to fast.
>>>> Let us go back to the last place where you said not to fast.
>>>> We were looking at what is termed a Gaussian field with the standard
>>>> "pillbox"
>>>> where inside are located some statitic particles. Pick up a book
>>>> and bone up just in this area since this drawing is commonplace but
>>>> add to the drawing
>>>> an outline of two elements where the surface of which have the static
>>>> particle resting.
>>>> Gauss talks about this picture a lot but he was not aware of such
>>>> things as antennas
>>>> only static particles where we know better than that because elements
>>>> have static particles
>>>> that rest on the surface of conductive items on this earth and we will
>>>> want to deduce how these particles react when given an electrical
>>>> shock
>>>> since we know that most people jump when they come into contact with
>>>> it.
>>>> Bone up on Gausses law of staics and the pill box picture that one
>>>> associated with that law.
>>>> Don't forget that the elements that we are adding to this drawing is
>>>> in effect a bunch of gyroscopes
>>>> covered with static particles or what is called electrons at rest.
>>>> Art Unwin KB9MZ....XG

>>> but on radiating antennas the electrons are not at rest. a static case
>>> doesn't do me any good when i want to get a signal out to the world. so
>>> when the electrons are being pushed and pulled back and forth on the
>>> resonant elements, what is in equilibrium?- Hide quoted text -
>>>
>>> - Show quoted text -
>> True. But we have set up two elements in a state of equilibrium with a
>> static partical
>> resting on their surface He stated that all within the circle must be
>> in equilibrium.
>> We know the elements are resonant and in equilibrium together with the
>> static particles.
>> So now we are set to do exactly what Gauss did in formulating the
>> Gaussian law.
>> He projected two vectors from each element on to the pillbox and then
>> applied a jolt of electricity
>> to one of the elements and since both elements were in equilibrium
>> with each other one
>> can say in effect that a jolt was applied to the assembly as a whole.
>> Now we can use some more information that we have come across which is
>> that a jolt of electricity
>> produces two vectors per element.The jolt provides a vector force
>> along the length of each element at the same time and a vector at
>> right angles to the line of theelement. Both of these vectors provide
>> their own fields. With some sort of engineering background we can add
>> vectors to provide a single vector aimed somewhere in the middle of
>> the two vectors and at an angle to the element. Immediately we see
>> that if a jolt was applied to an element it will not be at right
>> angles to both elements as one would see if two elements were coupled
>> as per a Yagi so we will be looking at a different arrangement of
>> vectors that one would reasonably occur in terms of radiation as we
>> know it. This a deduction that we deduced from the vector direction
>> only since each vector is of zero length because the time length of
>> the jolt was less than nothing i.e.dt. So we have learned that when
>> power is applied to the assembly or array that the vector sum
>> of the both field vectors will be somewhere in between both vectors of
>> some magnitude depending on the time allotted for power to be applied
>> together with type of wave of the same power supply.
>> O.K. David. If I had placed a yagi inside the circle we would have
>> expected some sort of vector at right angles to the element to
>> represent coupling but for some reason this did not occurr
>> The reasons why there is a difference is that a yagi needs more time
>> for each element to react with others
>> even after the jolt stopped because it needs time to react with other
>> elements before the radiation journey begins . The other reason is
>> that we do know that a radiation vector is at right angles to the
>> radiating elements via coupling for a yagi. From this we know that we
>> are going to produce radiation in a different
>> radiation pattern to a yagi. Also a yagi cannot be used in this
>> instance because only the driven element

>> is resonant at the frequency in use and the entire array cannot be in
>> a state of equilibrium which is a requirement for proceding along the
>> lines of Gaussian law of statics.
>> Depending on your next question we are going to apply a jolt of power
>> to the array we have made of a specific length of time where the power
>> is of a specific wave for to look at how the fields are made.
>> Forgot to mention another observable and that is when the jolt of
>> power was supplied the race to the end of
>> each element created by the jolt resulted in a tie!
>> Art Unwin KB9MZ....XG
>>
>
> you are jumping ahead to far again and this results in misunderstanding of
> what you are saying. please go back to the single element and apply a jolt
> to it and explain how it is in equilibrium. with 2 elements like you try to
> explain it still doesn't make sense.
>
>

Why don't you guys trim a bit of this BS so we just see the last 10 or
so responses?

tom
K0TAR

2592. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 05:44:36 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <8bHhi.2620$Od7.1551@newsread1.news.pas.earthlink.net>
Source record: 39300
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Mike Kaliski wrote:
> ELF communications are carried out at very slow data rates, only a few
> characters per hour at best.

Actually its on the order of several characters per minute using a 64 character "alphabet".

> It is possible to communicate at a base band frequency of 0Hz. This is what
> happens when you talk down a hard wired telephone or intercom. At a
> telephone exchange (switching centre), the signals from each line are
> modulated onto a higher frequency for onward transmission down a trunk wire
> cable or fibre optic cable. The multiplexed high frequency modulated signals
> are down converted back to audio frequencies once they reach the intended
> destination.

In the old T carrier (before 24 channel digital T1) carrier, each telephone conversation was modulated onto a low frequency radio frequency AM signal ranging from (and don't quote me as its been over thirty years since I worked T spans) 50 KC to 200 KC. Very similar in principle to the 5 kc wide AM radio station signals on the 530 kHz to 1700 kHz AM broadcast band.

2593. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 05:49:32 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <MfHhi.2621$Od7.1687@newsread1.news.pas.earthlink.net>
Source record: 39301
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> You
> input a 1 KHz tone into the microphone, telephone lines will carry a 1
> KHz AC current to the destination. The louder the sound into the
> microphone, the stronger the amperage in the telephone lines.

On a side note, its actually voltage modulation towards the subscribe and
current modulation back to the central office. The earpiece is a high
impedance (2,000 ohm) device that responds to voltage variations. The
carbon microphone element 220 to 200 ohms modulates the talk battery current.

2594. Antenna for Sony ST-JX220A

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 06:19:10 UTC
From: Leinad <macchilavel@gmail.com>
Message-ID: <1183270750.760247.172660@j4g2000prf.googlegroups.com>
Source record: 39302

Hello all, (apologies if this is a really obvious question) I'm a radio noob who's come into possession of a Sony ST-JX220A tuner sans antenna - any advice on what I should get, compatibility etc?

Thanks,

dl

2595. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 06:21:14 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lvge83dnf7mmjaphc25c5kksckrbij8cjr@4ax.com>
Source record: 39303
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>Mike Kaliski wrote:
>> ELF communications are carried out at very slow data rates, only a few
>> characters per hour at best.
>
>Actually its on the order of several characters per minute using a 64
>character "alphabet".
>
>> It is possible to communicate at a base band frequency of 0Hz. This is what
>> happens when you talk down a hard wired telephone or intercom. At a
>> telephone exchange (switching centre), the signals from each line are
>> modulated onto a higher frequency for onward transmission down a trunk wire
>> cable or fibre optic cable. The multiplexed high frequency modulated signals
>> are down converted back to audio frequencies once they reach the intended
>> destination.

>In the old T carrier (before 24 channel digital T1) carrier, each telephone
>conversation was modulated onto a low frequency radio frequency AM signal
>ranging from (and don't quote me as its been over thirty years since I
>worked T spans) 50 KC to 200 KC. Very similar in principle to the 5 kc wide
>AM radio station signals on the 530 kHz to 1700 kHz AM broadcast band.

Argh, that brings back fond nightmares of Ma Bell. 4Hz per voice
channel with FDM (frequency division mux). Most were FM systems, but
there were some AM implimentations (to avoid patent infringement).
Later, there were SSB systems that doubled the number of channels.

No voice Spectrum BW
channels KHz kHz AT&T ITU-T
12 60-108 48 Group Group
60 312-552 240 Supergroup Supergroup
300 812-2044 1232 Mastergroup
600 564-3084 2520 Mastergroup
3600 564-17548 16984 Jumbogroup

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2596. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 06:25:44 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f67hdv$j96$1@nnrp.linuxfan.it>
Source record: 39304
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
...

You miss the simple point, the dc is the carrier ... instead of dc, you could put a 1 hz signal on the line and modulate it with your voice, indeed, you can put a 30 hz signal on the line and modulate it with your voice--if you can tollerate a bad 30 hz hum! But, who knows, perhaps you are tone deaf to the 30 hz hum and would like it ...

JS

2597. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 06:27:55 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f67hi1$j96$2@nnrp.linuxfan.it>
Source record: 39305
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> ...

You are an idiot ... bother some one who has the time to take you to
task ...

JS

2598. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 08:41:03 UTC
From: kev <invalid@invalid.invalid>
Message-ID: <LdydnRJR2pgJ9RrbnZ2dnUVZ8turnZ2d@bt.com>
Source record: 39306
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> DTC <no_spam@move_along_folks.foob> hath wroth:
>
>> Mike Kaliski wrote:
>>> ELF communications are carried out at very slow data rates, only a few
>>> characters per hour at best.
>> Actually its on the order of several characters per minute using a 64
>> character "alphabet".
>>
>>> It is possible to communicate at a base band frequency of 0Hz. This is what
>>> happens when you talk down a hard wired telephone or intercom. At a
>>> telephone exchange (switching centre), the signals from each line are
>>> modulated onto a higher frequency for onward transmission down a trunk wire
>>> cable or fibre optic cable. The multiplexed high frequency modulated signals
>>> are down converted back to audio frequencies once they reach the intended
>>> destination.
>
>> In the old T carrier (before 24 channel digital T1) carrier, each telephone
>> conversation was modulated onto a low frequency radio frequency AM signal
>> ranging from (and don't quote me as its been over thirty years since I
>> worked T spans) 50 KC to 200 KC. Very similar in principle to the 5 kc wide
>> AM radio station signals on the 530 kHz to 1700 kHz AM broadcast band.
>
> Argh, that brings back fond nightmares of Ma Bell. 4Hz per voice
> channel with FDM (frequency division mux). Most were FM systems, but
> there were some AM implimentations (to avoid patent infringement).
> Later, there were SSB systems that doubled the number of channels.
>
> No voice Spectrum BW
> channels KHz kHz AT&T ITU-T
> 12 60-108 48 Group Group
> 60 312-552 240 Supergroup Supergroup
> 300 812-2044 1232 Mastergroup
> 600 564-3084 2520 Mastergroup
> 3600 564-17548 16984 Jumbogroup
>
>
That does bring back memories. I worked on STC built systems that used
AM modulation using Double-Balanced Modulators and depending on "Group"
classification used either the lower or upper sideband. Up to the 60
"voice" Ch's, we had some low Baud rate Modems on as well with the
signalling frequency disabled, the spectrum usage was the the same

however the next step up was 16 Supergroups using 60-4028KHz with Supergroup 2 not being translated. We also had a 30 Ch PCM link which worked very well apart from the "Regenerators" being susceptible to lightning.

2599. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 08:57:03 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <3s9WZMIfx2hGFwvm@g3ohx.demon.co.uk>
Source record: 39307
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In message <EXChi.23350$C96.1422@newssvr23.news.prodigy.net>, cledus
<cledus@noemail.net> writes
>Radium wrote:
>> Hi:
>> Please don't be annoyed/offended by my question as I decreased the
>> modulation frequency to where it would actually be realistic.
>> I have a very weird question about electromagnetic radiation,
>> carriers, and modulators.
>>
>>
>>
>>
>>
>> No offense but please respond with reasonable answers & keep out the
>> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
>> really interested in this.
>> Thanks,
>> Radium
>>
>
>
>The fundamental answer is no, it is not possible to generate AM where
>the baseband signal is a pure 20 kHz sinewave and Fc<20kHz. The reason
>is that the modulated waveform consists of the sum of a sinewave at Fc,
>a sinewave at Fc+20kHz, and a sinewave at Fc-20kHz. If Fc<20kHz then
>one of the components becomes a "negative" frequency. So the carrier
>must be greater than the baseband signal to prevent this.
>
I'm afraid that this is not correct. The 'laws of physics' don't
suddenly stop working if the carrier is lower than the modulating
frequency. However, there's no need to get into complicated mathematics
to illustrate this. Here is a simple example:

(a) If you modulate a 10MHz carrier with a 1MHz signal, you will produce
two new signals (the sidebands) at the difference frequency of 10 minus
1 = 9MHz, and the sum frequency of 10 plus 1 = 11MHz. So you have the
original carrier at 10MHz, and sideband signals at 9 and 11MHz (with a
balanced modulator - no carrier - only 9 and 11MHz).

(b) If you modulate a 1MHz carrier with a 10MHz signal, you will produce
two new signals (the sidebands) at the difference frequency of 1 minus
10 = minus 9MHz, and the sum frequency of 1 plus 10 = 11MHz. The
implication of the negative 'minus 9' MHz signal is that the phase of

the 9MHz signal is inverted, ie 180 degrees out-of-phase from 9MHz produced in (a). So you have the original carrier at 1MHz, and sidebands at 9 and 11MHz (again, with a balanced modulator - no carrier - only 9 and 11MHz).

The waveforms of the full composite AM signals of (a) and (b) will look quite different. The carriers are at different frequencies, and the phase of the 9MHz signal is inverted. However, with a double-balanced modulator, you will only have the 9 and 11MHz signal so, surprisingly, the resulting signals of (a) and (b) will look the same.

[Note that, in practice, many double-balanced modulators/mixers put loads of unwanted signals - mainly due the effects of harmonic mixing. However, the basic 'laws of physics' still apply.]

Finally, although I have spoken with great authority, when I get a chance I WILL be doing at test with a tobacco-tin double-balanced mixer, a couple of signal generators and a spectrum analyser - just to make sure that I'm not talking rubbish. In the meantime, I'm sure that some will correct me if I'm wrong.

Ian.
--

2600. Re: 20 gaussian questions for art

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 10:04:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <K_Khi.585$105.536@trndny08>
Source record: 39308

```
"art" <aunwin@insightbb.com> wrote in message
news:1183255072.484352.306090@k29g2000hsd.googlegroups.com...
> On 30 Jun, 17:12, "Dave" <n...@nowhere.com> wrote:
>> "art" <aun...@insightbb.com> wrote in message
>>
>> news:1183247607.950184.301210@q69g2000hsb.googlegroups.com...
>>
>>
>>
>>
>>
>> > On 30 Jun, 15:59, "Dave" <n...@nowhere.com> wrote:
>> >> "art" <aun...@insightbb.com> wrote in message
>>
>> >>news:1183240786.312601.265330@n60g2000hse.googlegroups.com...
>> >> On 30 Jun, 14:32, "Dave" <n...@nowhere.com> wrote:
>>
>> >> >> "art" <aun...@insightbb.com> wrote in message
>> >> >>> When this is done we know that two fields are
>> >> >>> produced
>> >> >>> around the element, one in the direction parallel to the applied
>> >> >>> electrical
>> >> >>> current and one at right angles to the flow of the electrical
>> >> >>> current.
>> >> >>> We thus can add two vectors to the dipole as we know the
>> >> >>> directions
>> >> >>> that they take.
>> >> >>> With respect to the length of the vector the length must be zero
>> >> >>> on
>> >> >>> all accounts
>> >> >>> because what we are comparing to i.e. Poyntings theorem does not
>> >> >>> have
>> >> >>> the metric of time.
>> >> >>> However we do now have a conservative field with its vectors tho
>> >> >>> of
>> >> >>> zero
>> >> >>> length and if we take a step further we can use just one vector in
>> >> >>> the
>> >> >>> region of 45 degrees as a summation of the original two vectors.
>> >> >>> This provides a surprise.This is stating that the direction of
>> >> >>>radiation
>> >> >>> is not at right angles to the radiating element in it's natural
>> >> >>> form!>From this we can make our first deduction. >>>When pursuing
>> >> >>> a
```

>> >> >>> given pure
>>
>> >> >> How do you get the 2 perpendicular fields??
>>
>> >> >I don't know.
>> >> >Is it this posting or some other posting that you are refering to?
>> >> >Are you changing the subject?
>> >> >Art Unwin KB9MZ....XG
>>
>> >> my news reader seemed to be unhappy with such a long and deeply quoted
>> >> message.... so i snipped lots of it.
>>
>> >> i am refering to the two field vectors you specify above. where are
>> >> the
>> >> parallel and perpendicular vectors developed?- Hide quoted text -
>>
>> >> - Show quoted text -
>>
>> > I do not have two perpendicular vectors
>> > I have one parallel to the radiator and one perpendicular
>> > to the radiator. One vector is developed by the current
>> > passing thru the radiator ie a electrical field.
>> > The electrical field produces a magnetic field at right angles to
>> > the electrical field . You can also see the vectors
>> > a different way since you mentioned movement within the radiator
>> > make up This provides a vector along the line of current flow.
>> > The electrons lying on the surface are also propelled outwards
>> > at right angles to the radiator because of the termoil
>> > created by the electrical jolt to the densly packed particles
>> > in equilibrium. Note the jolt is a electrical contact of an
>> > instant of time and thus the turmoil created by this jolt
>> > is not repetitive which because we are not adding the metric of time
>> > We can only see the direction of the vectors but not their
>> > values or length. These two vectors can be replaced by a single
>> > vector residing inbetween the original vectors but since the
>> > vectors are of zero length the exact angle of the replacement
>> > vector cannot be determined i.e. the metric of time must be added
>> > to the application to determine vector lengths.
>>
>> > Next to come....
>> > The application of a time varing current to the conservative field
>> > that we have just illustrated to make it a non conservative field
>> > which creates a radiation field
>> > Art Unwin KB9MZ.....XG
>>
>> you can not have an electric field parallel to the radiator, that is
>> impossible. the electric field is perpendicular to the radiator. the
>> magnetic field is around the radiator in accordance with the right hand
>> rule
>> from the current flow.

>
>> Very true, I misspoke
>
>> you can not replace the combination of the electric and magnetic fields
>> with
>> another single vector in a macro sense. you can do the ExH at each point
>> as
>> in the Poynting vector, but it will not be a single macro vector that you
>> can point at and say it is in any particular direction over all.
>
> The fields are created by the agitation of the particles in the
> element due to the
> jolt of electricity compressing the molecules. The jolt is directional
> along the line
> of the element. Because of this jolting action or disturbance of the
> gravitational
> center electrons are propelled from the surface of the element. These
> electrons
> are the static particles that we started of with Ofcourse these are
> two force vectors
> at right angles to each other BUT because we could not add the metric
> of time we can only
> add the vectors in directional form because of the absence of time one
> cannot quantify
> the value of the actual forces. Never the less we do know that if a
> jolt of electricity
> was applied for a small smidgeon of time two vector forces will occur.

a 'jolt' implies time varying. if you have time yo have time, if you don't
you have no jolt you have static... static and time varying don't mix.

and i just love the line about electrons being propelled from the surface of
the element, that is probably the most incorrect thing in the whole 20
questions. sorry art, but you just don't know what you are talking about,
and never will. go back to mechanical design, maybe you can figure out how
to keep elements from fluttering in the wind better than some of the
companies out there producing yagi's today.

2601. TUNER-CALL SWITCH

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 10:55:05 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <NqOdna_PtsOUFRrbnZ2dnUVZ_jOdnZ2d@comcast.com>
Source record: 39309

question: on the ORIGINAL IC706 is the TUNER/CALL SWITCH active or do I need to switch something under the hood to get it to work? I am using an ICAH4 tuner (80m-6m) and it does not work with the original 706 (same plug and wiring), but works OK with the 706MK2g!

2602. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 11:14:04 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <q33f83t1jf5dcb5odk6pn7u9seam7jng9c@4ax.com>
Source record: 39310

On Fri, 29 Jun 2007 20:56:52 GMT, Walter Maxwell <walt@w2du.com>
wrote:

>
>Hope to join you great guys again occasionally as I continue to recover.
>
>73 to All,
>
>Walt, W2DU
It is good to have you back Walter. I will keep you in my prayers.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

2603. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 11:22:15 UTC
From: "H. Adam Stevens" <hstevens@totalaccess.net>
Message-ID: <138f3j13fr9pnf8@corp.supernews.com>
Source record: 39311

Hey Walt
I had that standing-up problem once, but I sobered up the next day.
Seriously, have a successful recovery.
There are too few rational people around as it is.
Cheers
H.
NQ5H

"Walter Maxwell" <walt@w2du.com> wrote in message
news:fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com...
> Hello to all my antenna friends. I've just now returned home after nine
> weeks in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous
> intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection,
> after which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance
> and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto
> something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but
> unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and
> a cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU
>

2604. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 12:52:57 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <JsNhi.2656$Od7.142@newsread1.news.pas.earthlink.net>
Source record: 39312
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> Argh, that brings back fond nightmares of Ma Bell.

And of splicing damaged buried plant in a wet trench...that stuff had a
bite to it.

2605. Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 12:57:52 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.12.57.51.594119@from.qrz.com>
Source record: 39313

How high would you all feel comfortable about going with a Rohn 25G tower without guys, with a 6-foot concrete base and a 2 meter / 440 gain vertical antenna on top (e.g. Diamond X-700HNA)?

2606. Line-Of-Sight Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 13:25:30 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <k5mdnbfphYJBNxrbnZ2dnUVZ_jKdnZ2d@comcast.com>
Source record: 39314

Hello,

For the scanner frequencies in general from approx.140 MHz to 1 GHz, is propagation truly
line-of-site "totally", or is there bending of the signals by some atmospheric layer possible at various times ?

Any around 156 MHz fm in particular ?

Is there ever any "ducting" ?

Thanks,
B.

2607. Re: Line-Of-Sight Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:02:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <RtOhi.593$105.379@trndny08>
Source record: 39315

"Robert11" <rgsros@notme.com> wrote in message
news:k5mdnbfphYJBNxrbnZ2dnUVZ_jKdnZ2d@comcast.com...
> Hello,
>
> For the scanner frequencies in general from approx.140 MHz to 1 GHz, is
> propagation truly
> line-of-site "totally", or is there bending of the signals by some
> atmospheric layer possible at various times ?
>
> Any around 156 MHz fm in particular ?
>
> Is there ever any "ducting" ?
>
> Thanks,
> B.

yes there is normally some bending and refraction around hills and buildings
so it is not totally line of sight. generally the higher the frequency the
less bending and the better view of the antenna you need. and yes 150mhz
does duct very nicely at times.

2608. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:02:42 UTC
From: richardharrison@webtv.net
Message-ID: <21431-4687B402-28@storefull-3252.bay.webtv.net>
Source record: 39320

Mark Keith, NM5K wrote:
"Why are your`s so special?"

Art can`t answer but I will. Art is dead wrong.

Radiation resistance is a resistance. Radiated energy has its current in-phase with its voltage.

FCC defines output power of a transmitter as RF current at a designated common-point of known resistance, thus calculated as I squared R.

Terman says on page 2 of his 1955 opus:
"A plane parallel to the mutually perpendicular lines of electric and electromagnetic flux is called the wavefront."

Mutually perpendicular describes the physical positions of the fields, not the timing of their waxing and waning, which is simultaneous.

The intrinsic impedance of free-space is the E/H ratio, a resistance of 377 ohms. The vector product of E and H gives the Poynting vector, or power flow in watts per square neter in the direction of propagation. The above is found on page 7 of E.A. Laport`s "Radio Antenna Engineering".

Art has been promulgating pure baloney no matter how it is sliced about vector analysis. I recommended B. Whitfield Griffith,Jr.`s "Radio-Electronic Transmission Fundamentals" to Art for an understanding of Maxwell and radiation. He obviously hasn`t yet studied Mr. Griffith`s work.

I hate to dash the dreams of an old man, but he is leading others astray.

Best regards, Richard Harrison, KB5WZI

2609. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:07:46 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD0342.6CD32%dbowey@comcast.net>
Source record: 39316
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 10:44 PM, in article
8bHhi.2620$Od7.1551@newsread1.news.pas.earthlink.net, "DTC"
<no_spam@move_along_folks.foob> wrote:

> Mike Kaliski wrote:
>> ELF communications are carried out at very slow data rates, only a few
>> characters per hour at best.
>
> Actually its on the order of several characters per minute using a 64
> character "alphabet".
>
>> It is possible to communicate at a base band frequency of 0Hz. This is what
>> happens when you talk down a hard wired telephone or intercom. At a
>> telephone exchange (switching centre), the signals from each line are
>> modulated onto a higher frequency for onward transmission down a trunk wire
>> cable or fibre optic cable. The multiplexed high frequency modulated signals
>> are down converted back to audio frequencies once they reach the intended
>> destination.
>
> In the old T carrier (before 24 channel digital T1) carrier, each telephone
> conversation was modulated onto a low frequency radio frequency AM signal
> ranging from (and don't quote me as its been over thirty years since I
> worked T spans) 50 KC to 200 KC. Very similar in principle to the 5 kc wide
> AM radio station signals on the 530 kHz to 1700 kHz AM broadcast band.

The O Carrier systems went from a low of about 32 kHz up to 164 kHz if I
remember right. And the mainstay of long-haul communications (L Carrier)
channel bank, was 64 - 108 kHz.

One of the most strange Carrier Systems I worked with was a 1930s vintage H
Carrier, one channel ssb "system" operating at about 12 kHz, and it ran
without automatic synchronization. That was in the 60s. We used it as a
maintenance channel in a voice over data configuration for a gap-filler
radar site. I've never seen a more extreme merging of old and new
technologies.

Don

2610. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:07:54 UTC
From: Dave <noone@nowhere.com>
Message-ID: <_yOhi.2376$DM4.1089@trndny06>
Source record: 39317

i have been on 50' of rohn 25 unguyed to take down a tribander. it was in a no wind zone (surrounded by very dense 60'+ pine trees). i didn't like it and would not recommend it. the 'old' book shows a max of 40' with 1.5sq ft of antenn in a 70mph wind zone with no ice... and drops down to 20' with 90mph winds plus ice.

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message news:pan.2007.07.01.12.57.51.594119@from.qrz.com...
>
> How high would you all feel comfortable about going with a Rohn 25G tower
> without guys, with a 6-foot concrete base and a 2 meter / 440 gain
> vertical antenna on top (e.g. Diamond X-700HNA)?
>

2611. Re: Line-Of-Sight Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:08:29 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <tIWdnUeOYpHEKBrbnZ2dnUVZ8qSnnZ2d@bt.com>
Source record: 39318

"Robert11" <rgsros@notme.com> wrote in message
news:k5mdnbfphYJBNxrbnZ2dnUVZ_jKdnZ2d@comcast.com...
> Hello,
>
> For the scanner frequencies in general from approx.140 MHz to 1 GHz, is
> propagation truly
> line-of-site "totally", or is there bending of the signals by some
> atmospheric layer possible at various times ?
>
> Any around 156 MHz fm in particular ?
>
> Is there ever any "ducting" ?
>
> Thanks,
> B.
>
>

Typically you can expect 20% further than calculated line of sight range on VHF frequencies. Signals grazing over distant hills can also enhance range somewhat. Higher frequencies will tend to conform more tightly to line of sight.

Ionospheric disturbances and ducting (usually in the summer months) can lead to VHF signals being received at ranges of up to a 1,000 miles, sometimes more.

Mike G0ULI

2612. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:14:16 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD04C8.6CD34%dbowey@comcast.net>
Source record: 39319
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 11:25 PM, in article f67hdv$j96$1@nnrp.linuxfan.it, "John Smith
I" <assemblywizard@gmail.com> wrote:

> Radium wrote:
> ...
>
> You miss the simple point, the dc is the carrier ... instead of dc, you
> could put a 1 hz signal on the line and modulate it with your voice,
> indeed, you can put a 30 hz signal on the line and modulate it with your
> voice--if you can tollerate a bad 30 hz hum! But, who knows, perhaps
> you are tone deaf to the 30 hz hum and would like it ...
>
> JS

But you miss the basic point......

The topic was Amplitude Modulation.

2613. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:15:20 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD0508.6CD35%dbowey@comcast.net>
Source record: 39321
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 6/30/07 11:27 PM, in article f67hi1$j96$2@nnrp.linuxfan.it, "John Smith
I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> ...
>
> You are an idiot ... bother some one who has the time to take you to
> task ...
>

Open your mind.

2614. Re: Line-Of-Sight Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:19:00 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <pJOhi.542139$6P2.505767@newsfe16.phx>
Source record: 39322

"Robert11" <rgsros@notme.com> wrote in message
news:k5mdnbfphYJBNxrbnZ2dnUVZ_jKdnZ2d@comcast.com...
> Hello,
>
> For the scanner frequencies in general from approx.140 MHz to 1 GHz, is
> propagation truly
> line-of-site "totally", or is there bending of the signals by some
> atmospheric layer possible at various times ?
>
> Any around 156 MHz fm in particular ?
>
> Is there ever any "ducting" ?
>
> Thanks,
> B.
>

Suggest you read the articles at URL:
http://ac6v.com/propagation.htm#VHF

73 Lamont

2615. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 14:24:58 UTC
From: shawn.cormican@gmail.com
Message-ID: <1183299898.869692.116830@m36g2000hse.googlegroups.com>
Source record: 39324
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 30, 2:55 pm, John Smith I <assemblywiz...@gmail.com> wrote:
> Radium wrote:
>
> > ...
>
> > I am getting conflicting answers. Some say it's possible to modulate a
> > carrier frequency at a frequency higher than the carrier frequency,
> > others say it isn't.
>
> > Who is right?
>
> Radium:
>
> Use simple logic, you can modulate a dc (0 Hz) with higher freq (voice),
> (hint, your telephone line is an example) right?
>
> However, when you get into RF--possible, usable, desirable are seperate
> and distinct things.
>
> Again, with simple logic, modulating a 30 CPS signal with limited voice
> freq (say 5K wide) is going to create a LOT of harmonics and mixed
> signals, ain't it? Suggesting a very wide band receiver would be needed
> to begin with ... in my humble opinion, and for various reasons, NO, it
> is NOT possible ...
>
> Regards,
> JS

radium, I applaud you in your interest generating discussion.

if there are no questions there are no answers; dumb or smart!

to me your questions came across wonderfully, and generated both
responses.

as humans we stand on two legs, most of us that is.

men get the honor and privilage to stand on three legs from time to
time.

this is our blessing and our curse!

ps. how would u like to change the cell phone industry? and your
discussion group of course!

remeber all things are possible!!!!!!!!!!!!!!!

2616. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:05:58 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68ftdafr1@nnrp.linuxfan.it>
Source record: 39325
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> Open your mind.
>

Geesh!

Hook up a 20X linear behind an xmitter and see if you can't find some artifacts ...

JS

2617. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:22:34 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <uYmdnU1P6e-nJRrbnZ2dnUVZ_jCdnZ2d@bright.net>
Source record: 39323

Dear Rick (WA1RKT):

It depends. Out where I live with nothing (such as trees and buildings)
to reduce the energy of the wind, I would not feel comfortable with more
than two sections of 25G. Three sections in an urban area with lots of
trees and buildings, and with no danger to life or property if the thing
blows down, might be reasonable.

The standard for such things (222G) adjusts the safety factor (though
not called that) depending on terrain and what is in the fall-over-radius.
Thus the information provided by Rohn provides only a starting point.

It depends. Tell us more.

73, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.12.57.51.594119@from.qrz.com...
>
> How high would you all feel comfortable about going with a Rohn 25G tower
> without guys, with a 6-foot concrete base and a 2 meter / 440 gain
> vertical antenna on top (e.g. Diamond X-700HNA)?
>

2618. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:26:47 UTC
From: kev <invalid@invalid.invalid>
Message-ID: <m9-dnRHjnLAqWhrbnZ2dnUVZ8tijnZ2d@bt.com>
Source record: 39326
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC wrote:
> Jeff Liebermann wrote:
>> Argh, that brings back fond nightmares of Ma Bell.
>
> And of splicing damaged buried plant in a wet trench...that stuff had a
> bite to it.

The Coax we used for the repeaters was fed with 250-0-250V DC and the
current was regulated at 49mA. The only time the cable jointers worked
on it the power feed was disabled.

2619. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:31:54 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD16FA.6CDDE%dbowey@comcast.net>
Source record: 39327
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 8:05 AM, in article f68ftdafr1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> Open your mind.
>>
>
> Geesh!
>
> Hook up a 20X linear behind an xmitter and see if you can't find some
> artifacts ...
>
> JS

Sheesh....

That has nothing to do with helping someone understand AM. It appears you are more interested in dumping your blog on this board, than providing something to clarify the real answers for an electronic novice.

2620. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:32:58 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD173A.6CDDF%dbowey@comcast.net>
Source record: 39328
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 8:05 AM, in article f68ftdafr1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> Open your mind.
>>
>
> Geesh!
>
> Hook up a 20X linear behind an xmitter and see if you can't find some
> artifacts ...
>
> JS

By the way, I have. A 10B to a GPT750.

2621. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:39:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68hss$g38$1@nnrp.linuxfan.it>
Source record: 39329
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> That has nothing to do with helping someone understand AM. It appears you
> are more interested in dumping your blog on this board, than providing
> something to clarify the real answers for an electronic novice.

So, you will decide what he needs to know and what he doesn't?

If he becomes aware of the more esoteric and trivial it is dangerous.

Get real control freak!

JS

2622. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:43:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0cif83h1r2a5bb34d2eakq6dom6hun32h6@4ax.com>
Source record: 39330

On Sun, 1 Jul 2007 09:02:42 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>he is leading others astray.

Hi Richard,

That would be true if anyone could follow him.

In the 20 Questions thread, there have been 19 questions and 25 answers, and Arthur is no further than explaining what he understands from Faraday - imagine what it would take to get to Gauss, through his work, and on to Maxwell, then Heavisides beyond him. Then comes the pioneers of antennas.

As I recall, the game of 20 Questions could resolve an answer with less work. Imagine, Arthur's final answer is:
>>the right hand
>>rule
>>is still preserved

What insight! There's more interest in the morbid lock-step of how many questions until Arthur spits on Dave. I'm taking the pool number of 43.

73's
Richard Clark, KB7QHC

2623. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:49:21 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD1B11.6CDEF%dbowey@comcast.net>
Source record: 39231
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 8:39 AM, in article f68hss$g38$1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> That has nothing to do with helping someone understand AM. It appears you
>> are more interested in dumping your blog on this board, than providing
>> something to clarify the real answers for an electronic novice.
>
> So, you will decide what he needs to know and what he doesn't?
>
> If he becomes aware of the more esoteric and trivial it is dangerous.
>
> Get real control freak!
>
> JS
>

You really are thick headed if you can read Radium's posts and can't see how he can't even deal with the real topic, much less the junk you toss in. The more esoteric material should come after there is a grasp of the basics.

2624. Re: Antenna for Sony ST-JX220A

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:49:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h8jf83tk1d1m9b6g0ku1oicvjkpneol1h5@4ax.com>
Source record: 39232

On Sat, 30 Jun 2007 23:19:10 -0700, Leinad <macchilavel@gmail.com>
wrote:

>Hello all, (apologies if this is a really obvious question) I'm a
>radio noob who's come into possession of a Sony ST-JX220A tuner sans
>antenna - any advice on what I should get, compatibility etc?

What do you want to listen to?

73's
Richard Clark, KB7QHC

2625. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 15:55:16 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68iprhne1@nnrp.linuxfan.it>
Source record: 39233
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> You really are thick headed if you can read Radium's posts and can't see how
> he can't even deal with the real topic, much less the junk you toss in. The
> more esoteric material should come after there is a grasp of the basics.
>

What, you have already given up on him and consigned him to a special
education class? Damn, I missed him being that dense, of course I tend
to give everyone the benefit of the doubt--even you ...

JS

2626. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:11:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <nfhf83lg6glomi4l2ojsv9469cl4cio5he@4ax.com>
Source record: 39235
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Smith I <assemblywizard@gmail.com> hath wroth:

>RHF wrote:
> > ...
>> Because "Radium" Touched Them With A Thirst
>> For Knowledge And A Quest For Answers.
>> ...

>I don't know, according to any instructor I have ever had respect for:
>"There are NO stupid questions, only stupid people who are afraid to ask
>questions."

I beg to differ. My favorite mentor/instructor/employer had a different philosophy regarding questions and answers. His line was something like "If you don't understand the problem, no solution is possible". His method was to concentrate on understanding the problem, refining the corresponding questions, and only then concentrating on finding the answer. I would spend much more time thinking about "what problem am I trying to solve" instead of blundering prematurely toward some potentially irrelevant solution.

My problem with the original question is that it fails to associate itself with anything recognizable as a real problem to solve or a theory to expound. In my never humble opinion, if there was a question under all that rubbish, it was quite well hidden and severely muddled. He also introduced a substantial number of "facts" that varied from irrelevant to incoherent to just plain wrong. The problem for us in not in finding the answer, but in decoding the question.

There may not be any stupid questions, but there seem to be a substantial number of marginal people asking questions. I answer some techy questions in alt.internet.wireless. What I see, all too often, are people that seem to think that no effort on their part is necessary to obtain an answer. They exert no effort to read the FAQ, no effort to supply what problem they are trying to solve, and no effort to supply what they have to work with. In this case, Mr Radium has either exerted no effort to compose his question in a form that can be answered, or if there was such an effort, it has failed miserably. He couldn't even find a suitable collection of newsgroups for his question.

There may not be any stupid questions, but there certainly are questions not worth the time attempting to answer. If Mr Radium had left the question at the subject line:

"AM electromagnetic waves: 20 KHz modulation frequency on
an astronomically-low carrier frequency"
the question would have been easy to answer, as several people have
done. However, those that answered and I all did the same thing. We
extracted from the word salad question what we thought was something
resembling a coherent question, and ignored the rest of the rubbish.
In other words, we did the necessary simplification and problem
reduction, and discarded the bulk of the incoherent residue. There
may not be any stupid questions, but if you bury it under a sufficient
number of words, it may closely resemble a stupid question.

>Depends ... I guess.
>JS

Well, let's see:
<http://groups.google.com/groups?as_q=%22guess%28tm%29%22&as_uauthors=Jeff+Liebermann>
533 guesses, out of about 16,000 postings, which I guess(tm) isn't all
that bad.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2627. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:12:14 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD206E.6CF38%dbowey@comcast.net>
Source record: 39234
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 8:55 AM, in article f68iprhne1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> You really are thick headed if you can read Radium's posts and can't see how
>> he can't even deal with the real topic, much less the junk you toss in. The
>> more esoteric material should come after there is a grasp of the basics.
>>
>
> What, you have already given up on him and consigned him to a special
> education class? Damn, I missed him being that dense, of course I tend
> to give everyone the benefit of the doubt--even you ...
>
> JS

As a matter of fact, as you should be able to see, I am working here in support of his learning process while you do nothing but rag on in support of your blog.

2628. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:14:36 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.16.14.35.776188@from.qrz.com>
Source record: 39236

On Sun, 01 Jul 2007 14:07:54 +0000, Dave wrote:

> i have been on 50' of rohn 25 unguyed to take down a tribander.

Wow. You're a better man than I am, Gunga Din. :-)

I actually wasn't planning on climbing it, rather planned on using one of their hinge-over bases to raise and lower it when needed. I was thinking of 40 feet, max.

To answer J's question... it's in a suburban setting on 2 acres of land, and where the tower will be, if it fell over it would be all on my property (i.e. no danger to neighbors or passersby). We're sufficiently protected by trees such that only once in the 22 years I have lived here have I seen winds of over about 40 MPH at below-the-treetops level (around 60-70 feet).

I have another Rohn 25G tower on the other end of the house that is currently 40 feet, and I am in the process of adding another 10 feet for a total of 50. It is guyed at the 30-foot level. I had to remove the top section to add another 10-foot mid section, and now I'm in the process of rasslin' the top section back into place (oh, so much fun). So, that'll be 20 feet unguyed on top of 30 feet guyed. I'm trying to decide whether I want to put a tribander on top of that or maybe get something light like the Butternut Butterfly. I'm not a huge DX freak so don't really need a full size multi-element 20-meter beam.

2629. Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:23:16 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.16.23.14.976571@from.qrz.com>
Source record: 39237

I'd like to put up a 20-10 meter beam (probably the Butternut Butterfly), a 3-element 6-meter beam above that, and a 2M/440 gain vertical (probably the Diamond X-510MA) above that, all on a 50-foot Rohn 25G tower that's guyed at 30 feet.

So that I can figure out how long a mast I need, what are the minimum spacings between the antennas on a single mast?

2630. Re: AM electromagnetic waves: 20 KHz modulation frequency on an ast...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:45:19 UTC
From: richardharrison@webtv.net
Message-ID: <17350-4687DA1F-350@storefull-3256.bay.webtv.net>
Source record: 39238

Radium wrote:
"I have a very weird question about electromagnetic radiation, carriers, and modulators."

It makes no difference which signal you call the modulating signal and which you call the carrier. Modulation is simply mixing the two together at a nonlinear point to create new frequencies along with the originals.

The same modulation products are produced by 20 Hz on a 20 KHz carrier or 20 KHz on a 20 Hz carrier.

The nonlinear point may be a single diode, a diode bridge, or a high-level plate modulator. The signals out can be the same except for amplitudes.

I think Ian Jackson has also given a correct answer that is more complete though less simple.

Best regards, Richard Harrison, KB5WZI

2631. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 16:58:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <63Rhi.855$4e5.820@trndny07>
Source record: 39239

sorry, think again... no hinge bases allowed on free standing towers. those are only for guyed or bracketed towers. free standing towers must embed the base section in concrete.

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message news:pan.2007.07.01.16.14.35.776188@from.qrz.com...
> On Sun, 01 Jul 2007 14:07:54 +0000, Dave wrote:
>
>> i have been on 50' of rohn 25 unguyed to take down a tribander.
>
> Wow. You're a better man than I am, Gunga Din. :-)
>
> I actually wasn't planning on climbing it, rather planned on using one of
> their hinge-over bases to raise and lower it when needed. I was thinking
> of 40 feet, max.
>
> To answer J's question... it's in a suburban setting on 2 acres of land,
> and where the tower will be, if it fell over it would be all on my
> property (i.e. no danger to neighbors or passersby). We're sufficiently
> protected by trees such that only once in the 22 years I have lived here
> have I seen winds of over about 40 MPH at below-the-treetops level (around
> 60-70 feet).
>
> I have another Rohn 25G tower on the other end of the house that is
> currently 40 feet, and I am in the process of adding another 10 feet for a
> total of 50. It is guyed at the 30-foot level. I had to remove the top
> section to add another 10-foot mid section, and now I'm in the process of
> rasslin' the top section back into place (oh, so much fun). So, that'll
> be 20 feet unguyed on top of 30 feet guyed. I'm trying to decide whether
> I want to put a tribander on top of that or maybe get something light like
> the Butternut Butterfly. I'm not a huge DX freak so don't really need a
> full size multi-element 20-meter beam.
>

2632. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 17:04:52 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <U8Rhi.2584$rR.351@newsread2.news.pas.earthlink.net>
Source record: 39240

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.16.23.14.976571@from.qrz.com...
>
> I'd like to put up a 20-10 meter beam (probably the Butternut Butterfly),
> a 3-element 6-meter beam above that, and a 2M/440 gain vertical (probably
> the Diamond X-510MA) above that, all on a 50-foot Rohn 25G tower that's
> guyed at 30 feet.
>
> So that I can figure out how long a mast I need, what are the minimum
> spacings between the antennas on a single mast?
>

Here is as good a song and dance as any about the spacing.

http://www.ifwtech.co.uk/g3sek/stacking/stacking2.htm

Usually on small towers you just do the best you can. I just installed a stack of antennas . Used a 21 foot joint of pipe on a 60 foot 25 G tower. About 6 feet is in the tower to the inside tower mounted rotator. That gives me about 15 feet of pipe out the top. At the very top is a 432 mhz beam on a 15 foot boom , four feet below is a 2 meter antenna on a 15 foot boom , five feet below that is a 6 meter beam on a 18 foot boom and then a triband TH3 just over the top of the tower. All fed with some Davis Buryflex coax.

The vertical on top should not have much effect on the installation if the ground plane elements are small

The tower is in a yard of cement and guyed at the 30 and 55 foot levels.

2633. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 17:10:53 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <zeRhi.13856$oh3.3273@newsfe03.phx>
Source record: 39241

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.16.23.14.976571@from.qrz.com...
>
> I'd like to put up a 20-10 meter beam (probably the Butternut Butterfly),
> a 3-element 6-meter beam above that, and a 2M/440 gain vertical (probably
> the Diamond X-510MA) above that, all on a 50-foot Rohn 25G tower that's
> guyed at 30 feet.
>
> So that I can figure out how long a mast I need, what are the minimum
> spacings between the antennas on a single mast?
>

See URL's
http://www.arrl.org/tis/info/HTML/stacking-yagis/

http://www.ifwtech.co.uk/g3sek/stacking/stacking2.htm

Lamont

2634. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 17:12:46 UTC
From: richardharrison@webtv.net
Message-ID: <17350-4687E08E-351@storefull-3256.bay.webtv.net>
Source record: 39242

Hi Walter,
Congratulation on your recuperation so far!
Glad you are in position to communicate some sense into the r.r.a.a.
group frpm time to time.

Best regards, Richard Harrison, KB5WZI

2635. From OP: Re: Line-Of-Sight Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 17:37:49 UTC
From: Robert11 <rgsros@notme.com>
Message-ID: <6LidnZQpQuCYexrbnZ2dnUVZ_uOmnZ2d@comcast.com>
Source record: 39243

Hi All,

Much thanks for the info.

Lamont's Link suggestion is terrific-just what I need.

Bob

"Robert11" <rgsros@notme.com> wrote in message
news:k5mdnbfphYJBNxrbnZ2dnUVZ_jKdnZ2d@comcast.com...
> Hello,
>
> For the scanner frequencies in general from approx.140 MHz to 1 GHz, is
> propagation truly
> line-of-site "totally", or is there bending of the signals by some
> atmospheric layer possible at various times ?
>
> Any around 156 MHz fm in particular ?
>
> Is there ever any "ducting" ?
>
> Thanks,
> B.
>

2636. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:11:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68qps$8gt$1@nnrp.linuxfan.it>
Source record: 39244
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> As a matter of fact, as you should be able to see, I am working here in
> support of his learning process while you do nothing but rag on in support
> of your blog.
>
>

idiot

JS

2637. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:18:22 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD3DFE.6CF68%dbowey@comcast.net>
Source record: 39245
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 11:11 AM, in article f68qps$8gt$1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> As a matter of fact, as you should be able to see, I am working here in
>> support of his learning process while you do nothing but rag on in support
>> of your blog.
>>
>>
>
> idiot
>
> JS

OK, you win.

2638. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:19:49 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68r8sasb1@nnrp.linuxfan.it>
Source record: 39246
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:
> [pure crap!]

"In the mid-1870s, a form of amplitude modulationï¿½initially called "undulatory currents"ï¿½was the first method to successfully produce quality audio over telephone lines. Beginning with Reginald Fessenden's audio demonstrations in the early 1900s, it was also the original method used for audio radio transmissions, and remains in use by some forms of radio communicationï¿½"AM" is often used to refer to the mediumwave broadcast band (see AM radio)."

Taken from this URL: http://en.wikipedia.org/wiki/Amplitude_modulation

And, please read the WHOLE PAGE before making a larger idiot of yourself ...

JS

2639. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:46:15 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD4487.6CF8E%dbowey@comcast.net>
Source record: 39247
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 11:19 AM, in article f68r8sasb1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>> [pure crap!]
>
> "In the mid-1870s, a form of amplitude modulationï¿½initially called
> "undulatory currents"ï¿½was the first method to successfully produce
> quality audio over telephone lines. Beginning with Reginald Fessenden's
> audio demonstrations in the early 1900s, it was also the original method
> used for audio radio transmissions, and remains in use by some forms of
> radio communicationï¿½"AM" is often used to refer to the mediumwave
> broadcast band (see AM radio)."
>
> Taken from this URL: http://en.wikipedia.org/wiki/Amplitude_modulation
>
> And, please read the WHOLE PAGE before making a larger idiot of yourself ...
>
> JS

I didn't read the link, as it has nothing to do with this string.

You posted to Radium's question about Amplitude Modulation, saying that on a telephone line, the DC voltage is the Carrier and the microphone current (or voltage if you prefer) is the modulation. Now THAT is un-pure crap and it is what I responded to and which you deleted in this post hoping to look better, which you don't.

I already conceded to your ignorance, so you really didn't need to post more, but thanks for the opportunity to help.

2640. mumbo-jumbo

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:51:40 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <f69bhv$vg2$1@aioe.org>
Source record: 39275

"art" <aunwin@insightbb.com> wrote in message
news:1183219379.906929.15190@n2g2000hse.googlegroups.com...
> Yuri, to say this is mumbo jumbo at this point puts you in a much
> smaller group
> than the large group following the thread from the beginning. That
> also includes
> a group of people from the Eham forum that formerly allowed you to be
> a part of them.
> We are at the point where "natural" radiation of a particular
> polarised field is not
> at right angles to the plane of the radiator and yet still obeys
> Maxwellian law,
> the basis of which computor programs are based upon. Thus you should
> changed from your aproach of a Lemming or snake and attempt to
> understand the
> logic that is now being placed before you and the observations
> reported
> along the way. I would suggest that you abandon your normal derisive
> position and determine the vertical polarised radiation gain of a
> vertical dipole at
> various angles with respect to the ground starting at right angles and
> progresively
> tip the dipole where you will see a correlation to the science
> explanations that
> I am providing. Thus, by your own observations you will find that
> your allegations
> of mumbo jumbo is totally misplaced and where you will regret the
> slander
> that you have applied to me over the years. Ofcourse, you can close
> your mind,
> shake your head where your brain will rattle in the much larger
> confines of your skull
> and instead of being a Lemming you can continue to be a rattle snake.
> as well
> .. You badly need an attitude adjustment,this is a good time to
> comply
> Art Unwin KB9MZ.......XG
>

Besides being Goosian soup mumbo-jumbo mechanical XG wizzzzard, he is also psychologist and authority on skulls, Lemmings and minds of rattle snakes.

Can we back off and get some explanation how in the Yagi the reflector can be director according to Arties patent? Perhaps if can comprehend that, then we can progress to understand the rest of Goossy story.

Inquiring Lemmings wanna know.

bada BUm

2641. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 18:53:21 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f68t7oglp1@nnrp.linuxfan.it>
Source record: 39248
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> [more crap!]

Oh, that explains it, your understanding of amplitude modulation is:

AM = Black Magic.

ROFLOL!

JS

2642. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 19:16:35 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183317395.152563.144060@x35g2000prf.googlegroups.com>
Source record: 39249
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
> radium, I applaud you in your interest generating discussion.
>
> if there are no questions there are no answers; dumb or smart!
>
> to me your questions came across wonderfully, and generated both
> responses.
>
> as humans we stand on two legs, most of us that is.
>
> men get the honor and privilage to stand on three legs from time to
> time.
>
> this is our blessing and our curse!
>

Thanks for your understanding.

> ps. how would u like to change the cell phone industry?

Analog cells phones should stop using FM and should start using AM
between frequencies of 40,000 to 285,000 Hz.

As I learned recently, 40 KHz is the minimum radio frequency required
to coherently transmit/receive audio signals. The highest sound a
human can hear is 20 KHz. The radio-frequency used must be at least 2x
the intended frequency of the information being transmitted/received.

I chose 285 KHz to be the highest radio frequency for cell-phones
because it is roughly the highest-frequency categorized as "long wave"
radio.

> and your
> discussion group of course!

You mean the anti-yahoo group?

http://groups.google.com/group/yahoo_stinks?lnk=li&hl=en

2643. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 19:20:54 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.19.20.54.3234@from.qrz.com>
Source record: 39250

On Sun, 01 Jul 2007 16:58:42 +0000, Dave wrote:

> sorry, think again... no hinge bases allowed on free standing towers.

Hmmm ... OK, I guess I will have to be able to climb it...

I suppose I could install temporary guys while I'm up on it doing antenna work, but in that location permanent guying wouldn't work too well...

> free standing towers must embed the base section in concrete.

How about the BPC25G base plate (non-hinged)?

I already have a concrete base in place, 6 feet deep, intended for the predecessor to the US Tower MA-series crank-up mast. The mast (and the base, and the tower on the other end of the house) belonged to my father when he lived with us, but he sold the mast many years ago, and the new ones are a bit too pricey for me right now.

So, it's too late to embed the bottom section directly into the concrete, at least in that location.

2644. Spacing side-mounted VHF / UHF verticals away from tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 19:37:35 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.19.37.34.792010@from.qrz.com>
Source record: 39251

How far from the tower should I space a side-mounted 2M/440 gain vertical such as the Diamond X-510MA?

I am considering mounting one vertical on top and two more on the sides, with the tops of the side-mounted verticals approximately even with or a bit below the base of the top-mounted one, all on a 50-foot Rohn 25G tower guyed at 30 feet.

2645. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 19:42:52 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.19.42.50.682755@from.qrz.com>
Source record: 39252

On Sun, 01 Jul 2007 17:04:52 +0000, Ralph Mowery wrote:

> The vertical on top should not have much effect on the installation if the
> ground plane elements are small

Suppose I forget the 6 meter beam (I'm not much of a 6-meter fan anyway)
and just put up a beam such as the Butternut Butterfly (although I've been
reading some not-so-nice things about that antenna so might bite the
bullet and go with something like a TA-33Jr) with a VHF gain vertical
above that?

The radials for the vertical will be 1/4 wavelength at 2 meters, or about
19 inches, and there are three of them.

How high above the beam should I space the vertical?

(The URLs you guys provided, nor anything else I've found, don't seem to
get into that...)

2646. "Radium" <glucegen1@gmail.com COMPLETE IDIOT.....

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 19:50:34 UTC
From: Porgy Tirebiter <biteme@gmail.com>
Message-ID: <eAThi.43000$5j1.12545@newssvr21.news.prodigy.net>
Source record: 39253
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183317395.152563.144060@x35g2000prf.googlegroups.com...
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
> Analog cells phones should stop using FM and should start using AM
> between frequencies of 40,000 to 285,000 Hz.
>
> I chose 285 KHz to be the highest radio frequency for cell-phones
> because it is roughly the highest-frequency categorized as "long wave"
> radio.

IDIOT!......complete idiot......

2647. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:01:50 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <us0g831qhufd8ka6cj1aoenuoof9j92dqe@4ax.com>
Source record: 39254
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 01 Jul 2007 12:16:35 -0700, Radium <glucegen1@gmail.com>
wrote:

>On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
>> radium, I applaud you in your interest generating discussion.
>>
>> if there are no questions there are no answers; dumb or smart!
>>
>> to me your questions came across wonderfully, and generated both
>> responses.
>>
>> as humans we stand on two legs, most of us that is.
>>
>> men get the honor and privilage to stand on three legs from time to
>> time.
>>
>> this is our blessing and our curse!
>>
>
>Thanks for your understanding.
>
>> ps. how would u like to change the cell phone industry?
>
>Analog cells phones should stop using FM and should start using AM
>between frequencies of 40,000 to 285,000 Hz.

Good idea. The available spectrum between 40kHz and 285kHz is
245kHz wide, so at a little less than 3kHz per channel the maximum
number of channels available would be 82. That means that no more
than 82 people can be on the air at the same time.

Probably all over the world, to boot, what with those frequencies
being able to propagate over long distances.

That's probably a good thing, because with those 1875 meter long 1/4
wave whips at 40kHz and those 263 meter 1/4 wave whips at 285kHz on
the mobiles, any more people on the air than that would certainly
create a hazardous situation.

--
JF

2648. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:35:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <weUhi.23581$C96.15145@newssvr23.news.prodigy.net>
Source record: 39255

Richard Harrison wrote:
> Radiation resistance is a resistance. Radiated energy has its current
> in-phase with its voltage.

The IEEE Dictionary is pretty clear when they define two
types of resistances: (A) a resistor with resistance and
(B) a virtual resistance with the V/I ratio in phase.
--
73, Cecil http://www.w5dxp.com

2649. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:44:03 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.20.44.03.41065@from.qrz.com>
Source record: 39257

On Sun, 01 Jul 2007 16:39:37 -0500, J. Mc Laughlin wrote:

> What was your father's call-sign?

K4MH. He became a silent key about a year and a half ago.

2650. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:44:45 UTC
From: Dave <noone@nowhere.com>
Message-ID: <1nUhi.2084$za5.294@trndny09>
Source record: 39258

to quote the book 'pinned bases must not be used'. think about it, when there are no guys the highest stress point is where the metal meets the concrete. each leg must be held down by something at least as strong as it is. there might be a way to drill holes for each leg and epoxy in a stub of some kind, but that would be a job for a pro.

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message news:pan.2007.07.01.19.20.54.3234@from.qrz.com...
> On Sun, 01 Jul 2007 16:58:42 +0000, Dave wrote:
>
>> sorry, think again... no hinge bases allowed on free standing towers.
>
> Hmmm ... OK, I guess I will have to be able to climb it...
>
> I suppose I could install temporary guys while I'm up on it doing antenna
> work, but in that location permanent guying wouldn't work too well...
>
>> free standing towers must embed the base section in concrete.
>
> How about the BPC25G base plate (non-hinged)?
>
> I already have a concrete base in place, 6 feet deep, intended for the
> predecessor to the US Tower MA-series crank-up mast. The mast (and the
> base, and the tower on the other end of the house) belonged to my father
> when he lived with us, but he sold the mast many years ago, and the new
> ones are a bit too pricey for me right now.
>
> So, it's too late to embed the bottom section directly into the concrete,
> at least in that location.
>

2651. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:52:04 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.20.52.01.328891@from.qrz.com>
Source record: 39259

On Sun, 01 Jul 2007 16:39:37 -0500, J. Mc Laughlin wrote:

>> Dear Rick WA1RHT:... eventually Conn. will see same.

Ah, I see. I was wondering why the reference to Conn. :-)

It's actually RKT (in New Hampshire) not RHT.

The cryptic spelling in my From: line is an attempt to deter spammers, who no doubt harvest this and other rec.radio.amateur forums for call signs, add "@arrl.net" to the end, and add them to their spam lists.

Of course any such attempt to deter spammers is likely doomed to failure but I do the best I can... :-(

As for ice we actually do get ice from time to time here, but high winds are rare.

Of course, all you need is once, I suppose...

2652. Re: Spacing side-mounted VHF / UHF verticals away from tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 20:52:23 UTC
From: dplatt@radagast.org
Message-ID: <7pgll4-la6.ln1@radagast.org>
Source record: 39262

>How far from the tower should I space a side-mounted 2M/440 gain vertical
>such as the Diamond X-510MA?
>
>I am considering mounting one vertical on top and two more on the sides,
>with the tops of the side-mounted verticals approximately even with or a
>bit below the base of the top-mounted one, all on a 50-foot Rohn 25G tower
>guyed at 30 feet.

You might want to take a look at the page at

http://www.telewave.com/pdf/TWDS-7057.pdf

which is part of Telewave's antenna catalog. It shows the effect on
the pattern of Telewave's exposed-dipole antenna patterns, of
adjusting the side-mounting distance from 1/4 wavelength to 1/2
wavelength.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2653. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:02:39 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.21.02.37.735850@from.qrz.com>
Source record: 39260

On Sun, 01 Jul 2007 20:44:45 +0000, Dave wrote:

> to quote the book 'pinned bases must not be used'. think about it, when
> there are no guys the highest stress point is where the metal meets the
> concrete. each leg must be held down by something at least as strong as
> it is.

Yup, makes sense.

Unfortunately the base is spaced out just a bit too far from the house to be able to add a house brace that's strong enough. Why Dad did that I can't quite figure out... of course, he had the mast at the time...

Also unfortunately, US Towers tells me that the bolt spacing on my base, which was for a mast that was manufactured by a company that US Towers apparently acquired years ago, is wrong for their current crop of crank-up masts. :-(:-(

So, I guess I have a tower base that would hold up a (proper) self-supporting tower through a hurricane, but I can't do anything with it. :-(

2654. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:04:59 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD650B.6CFA3%dbowey@comcast.net>
Source record: 39261
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 11:53 AM, in article f68t7oglp1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> [more crap!]
>
> Oh, that explains it, your understanding of amplitude modulation is:
>
> AM = Black Magic.
>
> ROFLOL!
>
> JS
>

OK you stupid shit, I'm almost out of patience with your ignorance. I was hoping you might learn something, but I see that is unlikely.

AM is a process of frequency multiplication. Now you tell me where you think such multiplication takes place on a phone line, and I'll follow-uo by telling why you're full of crap.

SIMECS!

2655. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:09:03 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD65FF.6CFA5%dbowey@comcast.net>
Source record: 39263
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 12:16 PM, in article
1183317395.152563.144060@x35g2000prf.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
>> radium, I applaud you in your interest generating discussion.
>>
>> if there are no questions there are no answers; dumb or smart!
>>
>> to me your questions came across wonderfully, and generated both
>> responses.
>>
>> as humans we stand on two legs, most of us that is.
>>
>> men get the honor and privilage to stand on three legs from time to
>> time.
>>
>> this is our blessing and our curse!
>>
>
> Thanks for your understanding.
>
>> ps. how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> between frequencies of 40,000 to 285,000 Hz.
>
> As I learned recently, 40 KHz is the minimum radio frequency required
> to coherently transmit/receive audio signals. The highest sound a
> human can hear is 20 KHz. The radio-frequency used must be at least 2x
> the intended frequency of the information being transmitted/received.
>
> I chose 285 KHz to be the highest radio frequency for cell-phones
> because it is roughly the highest-frequency categorized as "long wave"
> radio.
>
>> and your
>> discussion group of course!
>
> You mean the anti-yahoo group?
>
> http://groups.google.com/group/yahoo_stinks?lnk=li&hl=en

>

Darn it Radium, you just hit a new low.

See that teeney antenna on cell phones? Just how well do you think it will radiate 285 kHz?

2656. Re: "Radium" a COMPLETE IDIOT... - More Likely An In-Complete-Want-To-Be [.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:11:16 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183324276.703651.17260@o11g2000prd.googlegroups.com>
Source record: 39264
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 12:50 pm, "Porgy Tirebiter" <bit...@gmail.com> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183317395.152563.144060@x35g2000prf.googlegroups.com...
>
> > On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
> > Analog cells phones should stop using FM and should start using AM
> > between frequencies of 40,000 to 285,000 Hz.
>
> > I chose 285 KHz to be the highest radio frequency for cell-phones
> > because it is roughly the highest-frequency categorized as "long wave"
> > radio.
>
- IDIOT!......complete idiot......

PT - Once again why waste your time replying
to his posts ? ? ? {Oops Like I Am Doing Too !}

Actually "Radium" would appear to be an
In-Complete-Want-To-Be driven by the 'urge'
to Post these Forever Ponding Questions
for others to charge at like Don Quijote's
quest to slay Windmills {a fool's errand}
http://en.wikipedia.org/wiki/Don_Quixote
http://en.wikipedia.org/wiki/Fool%27s_errand

FWIW - While many of his Post might fit into
the "sci.electronics.basics" NewsGroup; often
they would be consider OFF-TOPIC in other
NewsGroups like : rec.radio.shortwave,
rec.radio.amateur.antenna, alt.cellular.cingular,
alt.internet.wireless, etc

IMHO - In another life "Radium" would have
made a great High School Science Teacher :
Who's Students when on to do great things
with their lives :
Because "Radium" Touched Them With A Thirst
For Knowledge And A Quest For Answers.

-but- These NewsGroups are NOT a High School
Science Class -and- "Radium" is just being 'radium'.
http://en.wikipedia.org/wiki/Radium

-alas- Our "Radium's" Half-Life of Readable Interest
http://en.wikipedia.org/wiki/Half-life
is at best about 16.04 Seconds ~ RHF
.
.
. .

2657. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:14:54 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.21.14.53.717482@from.qrz.com>
Source record: 39265

On Sun, 01 Jul 2007 16:39:37 -0500, J. Mc Laughlin wrote:

> Two sections above guys next to the house is pushing prudence. With a
> clear area next to the proposed tower in the back, three sections with
> just a VHF antenna seems reasonable in view of your description.

I'm curious why two sections above the guys, next to the house, is marginal but three sections self-supporting out in the open seems OK.

Actually the three sections self-supporting would be as close to the house on one end as the guyed tower is on the other end.

Perhaps the tribander on the guyed tower makes the difference, but in truth I think the chances are fairly slim that I'll end up doing that. I have two inverted vees and two NVIS dipoles, which together cover 160 through 40, which these days are the only HF bands that really hold my interest... I never was much of a DX hound and with the Internet and satellite phones, it doesn't seem like hardly anybody wants to pass any traffic or run phone patches anymore. Perhaps when the sunspots get more favorable I'll re-think the notion of the tribander but until then it's probably pretty low on the priority list.

2658. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:22:20 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <7j3g831r9b5emt9u6mqidi1s65h17llg2m@4ax.com>
Source record: 39266
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>> ps. how would u like to change the cell phone industry?
>
>Analog cells phones should stop using FM and should start using AM
>between frequencies of 40,000 to 285,000 Hz.

Analog cell phones are going to be history in the US on Feb 18, 2008.
Japan killed off analog around June 1999, Korea in Jan 2000, most of
Europe in 1997, etc.

40KHz thru 285Khz? Great idea. Just one minor problem. A 1/4 wave
antenna at about 100Khz frequency is 750 meters long. That's going to
be a rather large antenna for literally dragging behind you. Maybe a
balloon? Maybe a loop like this one?
<http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=10850>
Of course propagation might be a problem, as it will only work at
night and you'll have to connect to a cell site on the opposite coast
for those frequencies to work. The customers can be ignored when they
complain about atmospheric static and noise.

Of course, 240KHz of usable bandwidth is much less than the hundreds
of MHz currently in use by cellular providers, so there will
substantially fewer users. Let's see.... there are 240 million
subscribers in the US. Your AM system can handle about 40 users (6KHz
channels), so your cell phone bill will only be 6 million times larger
than it is currently. Now do you see why the microwave bands are so
in demand for cellular.

>As I learned recently, 40 KHz is the minimum radio frequency required
>to coherently transmit/receive audio signals.

Coherently? I would be worried if you planned to incoherently
transmit/receive audio signals. Perhaps if you added 40KHz to your
word salad, it would make your blather more coherent. (Hint: Look
up the definition of coherent and then use it where appropriate).

Actually, you're close. 40KHz is the common frequency used by
ultrasonic TV remote controls. I've seen PWM modulation system using
a pair of these to act as a crude cordless phone (that doesn't require
FCC type certification). You could probably go down to 20KHz, but
then intermodulation products (mixes) between the audio and the
carrier will begin to be a problem. Congratulations, you got one
thing mostly correct.

>The highest sound a
>human can hear is 20 KHz.

Voice is from 300 to 3000Hz. You could probably get away with 300 to
2400Hz. If you're planning to transmitting AM hi-fi or data, then you
might need the 20KHz.

>The radio-frequency used must be at least 2x
>the intended frequency of the information being transmitted/received.

Ummm... no. You're apparently thinking of the Shannon rule for
information bandwidth:
<http://en.wikipedia.org/wiki/Nyquist%E2%80%93Shannon_sampling_theorem>
If your input audio is perhaps bandwidth limited to 3KHz, a 6KHz
carrier will not work. You'll get considerable mixing (aliasing) and
audio intermodulation crud. The carrier would need to be somewhat
higher in frequency as limited by whatever output RF filtering is
used.

>I chose 285 KHz to be the highest radio frequency for cell-phones
>because it is roughly the highest-frequency categorized as "long wave"
>radio.

Nope. See details at:
<http://en.wikipedia.org/wiki/Longwave>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2659. Re: "Radium" a COMPLETE IDIOT... - More Likely An In-Complete-Want-To-Be [.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:28:12 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD6A7C.6CFD0%dbowey@comcast.net>
Source record: 39267
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 2:11 PM, in article
1183324276.703651.17260@o11g2000prd.googlegroups.com, "RHF"
<rhf-newsgroups@pacbell.net> wrote:

> On Jul 1, 12:50 pm, "Porgy Tirebiter" <bit...@gmail.com> wrote:
>> "Radium" <gluceg...@gmail.com> wrote in message
>>
>> news:1183317395.152563.144060@x35g2000prf.googlegroups.com...
>>
>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
>>> Analog cells phones should stop using FM and should start using AM
>>> between frequencies of 40,000 to 285,000 Hz.
>>
>>> I chose 285 KHz to be the highest radio frequency for cell-phones
>>> because it is roughly the highest-frequency categorized as "long wave"
>>> radio.
>>
> - IDIOT!......complete idiot......
>
> PT - Once again why waste your time replying
> to his posts ? ? ? {Oops Like I Am Doing Too !}
>
> Actually "Radium" would appear to be an
> In-Complete-Want-To-Be driven by the 'urge'
> to Post these Forever Ponding Questions
> for others to charge at like Don Quijote's
> quest to slay Windmills {a fool's errand}
> http://en.wikipedia.org/wiki/Don_Quixote
> http://en.wikipedia.org/wiki/Fool%27s_errand
>
> FWIW - While many of his Post might fit into
> the "sci.electronics.basics" NewsGroup; often
> they would be consider OFF-TOPIC in other
> NewsGroups like : rec.radio.shortwave,
> rec.radio.amateur.antenna, alt.cellular.cingular,
> alt.internet.wireless, etc
>
> IMHO - In another life "Radium" would have
> made a great High School Science Teacher :
> Who's Students when on to do great things
> with their lives :
> Because "Radium" Touched Them With A Thirst

> For Knowledge And A Quest For Answers.

But a teacher MUST be rational. You rate Radium with more potential than I
can. This most recent post is really off the wall.

>
> -but- These NewsGroups are NOT a High School
> Science Class -and- "Radium" is just being 'radium'.
> http://en.wikipedia.org/wiki/Radium
>
> -alas- Our "Radium's" Half-Life of Readable Interest
> http://en.wikipedia.org/wiki/Half-life
> is at best about 16.04 Seconds ~ RHF
> .
> .
> . .
>

2660. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:28:35 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <70Vhi.2797$zA4.1031@newsread3.news.pas.earthlink.net>
Source record: 39268

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.19.42.50.682755@from.qrz.com...
> On Sun, 01 Jul 2007 17:04:52 +0000, Ralph Mowery wrote:
>
>> The vertical on top should not have much effect on the installation if
>> the
>> ground plane elements are small
>
> Suppose I forget the 6 meter beam (I'm not much of a 6-meter fan anyway)
> and just put up a beam such as the Butternut Butterfly (although I've been
> reading some not-so-nice things about that antenna so might bite the
> bullet and go with something like a TA-33Jr) with a VHF gain vertical
> above that?
>
> The radials for the vertical will be 1/4 wavelength at 2 meters, or about
> 19 inches, and there are three of them.
>
> How high above the beam should I space the vertical?
>
> (The URLs you guys provided, nor anything else I've found, don't seem to
> get into that...)
>

If you go about 4 or more feet above the beam I doubt the vertical and radials will have much effect. I didn't mention it but the beams I have up are all horizontal for working ssb. I don't do much FM from the house. I do have a seperate antenna near the house about 20 feet up for the 2 meter and 440 FM repeaters . Also a circular polorised beam for those beams to work the satalites and they will work the FM repeaters also.

I don't think I would get the JR version of a triband. Not sure about how much power they will take but not enough for many of the amplifiers. Think I would go with the Mosley or HYGain for the triband beam. I never did like the CC brand but that is personal and goes back to the days of the Ringo and 11 element beams.

Here is a link to my setup.

http://home.earthlink.net/~ku4pt/images/Beams%20on%20tower/

I think you also asked about how far to put a vertical from the tower. Try to get it 1/2 wavelength or more away. Any distance from the side of the tower you put it will give it some lobes and distort the patern.

2661. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:39:37 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <J7idncixy7cHjRXbnZ2dnUVZWhednZ2d@bright.net>
Source record: 39256

Dear Rick WA1RHT:

You have received useful advice.

While you may not have seen serious wind nor serious ice, eventually
Conn. will see same.

Two sections above guys next to the house is pushing prudence. With a
clear area next to the proposed tower in the back, three sections with just
a VHF antenna seems reasonable in view of your description.

It is nice to see questions from actual radio amateurs who state their
call-sign. What was your father's call-sign? Good luck.

73, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.19.20.54.3234@from.qrz.com...
> On Sun, 01 Jul 2007 16:58:42 +0000, Dave wrote:
>
> > sorry, think again... no hinge bases allowed on free standing towers.
>
> Hmmm ... OK, I guess I will have to be able to climb it...
>
> I suppose I could install temporary guys while I'm up on it doing antenna
> work, but in that location permanent guying wouldn't work too well...
>
> > free standing towers must embed the base section in concrete.
>
> How about the BPC25G base plate (non-hinged)?
>
> I already have a concrete base in place, 6 feet deep, intended for the
> predecessor to the US Tower MA-series crank-up mast. The mast (and the
> base, and the tower on the other end of the house) belonged to my father
> when he lived with us, but he sold the mast many years ago, and the new
> ones are a bit too pricey for me right now.
>
> So, it's too late to embed the bottom section directly into the concrete,
> at least in that location.
>

2662. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:40:32 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183326032.260197.218550@g4g2000hsf.googlegroups.com>
Source record: 39269

On Jul 1, 4:35 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Richard Harrison wrote:
> > Radiation resistance is a resistance. Radiated energy has its current
> > in-phase with its voltage.
>
> The IEEE Dictionary is pretty clear when they define two
> types of resistances: (A) a resistor with resistance and
> (B) a virtual resistance with the V/I ratio in phase.
> --
> 73, Cecil http://www.w5dxp.com

I could not find "virtual resistance" in "IEEE 100, The Authoritative
Dictionary of IEEE Standards Terms, Seventh
Edition".

Do you have a reference?

Interesting, they explicitly define "radiation resistance" as
"The ratio of the power radiated by an antenna to the
square of the RMS antenna current referred to a specified
point.
Notes: 1. The total power radiated is equal to the power
accepted by the antenna minus the power dissipated in the
antenna.
2. This term is of limited utility for antennas in lossy
media."

There seems to be a lot of opportunity for confusion with
this definition: "referred to a specified point" indeed.
Which point?

The IEEE definition of "resistance" is hardly less obtuse:
"(1)(A)(network analysis) That physical property of an
element, device, branch, network, or system that is the
factor by which the mean-square conduction current must be
multiplied to give the corresponding power lost by
dissipation as heat or as other permanent radiation or
loss of electromagnetic energy from the circuit.
(B)(network analysis) The real part of impedance.
Note: Definitions (A) and (B) are not equivalent but are
supplementary. In any case where confusion may arise,
specify definition being used. See also: resistor."

...Keith

2663. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:44:40 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46881ff1$0$16531$4c368faf@roadrunner.com>
Source record: 39270
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ian Jackson" <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote in message
news:3s9WZMIfx2hGFwvm@g3ohx.demon.co.uk...
> In message <EXChi.23350$C96.1422@newssvr23.news.prodigy.net>, cledus
> <cledus@noemail.net> writes

<snip>

>>
>>The fundamental answer is no, it is not possible to generate AM where the
>>baseband signal is a pure 20 kHz sinewave and Fc<20kHz. The reason is
>>that the modulated waveform consists of the sum of a sinewave at Fc, a
>>sinewave at Fc+20kHz, and a sinewave at Fc-20kHz. If Fc<20kHz then one of
>>the components becomes a "negative" frequency. So the carrier must be
>>greater than the baseband signal to prevent this.
>>
> I'm afraid that this is not correct. The 'laws of physics' don't suddenly
> stop working if the carrier is lower than the modulating frequency.
> However, there's no need to get into complicated mathematics to illustrate
> this. Here is a simple example:
>
> (a) If you modulate a 10MHz carrier with a 1MHz signal, you will produce
> two new signals (the sidebands) at the difference frequency of 10 minus 1
> = 9MHz, and the sum frequency of 10 plus 1 = 11MHz. So you have the
> original carrier at 10MHz, and sideband signals at 9 and 11MHz (with a
> balanced modulator - no carrier - only 9 and 11MHz).
>
> (b) If you modulate a 1MHz carrier with a 10MHz signal, you will produce
> two new signals (the sidebands) at the difference frequency of 1 minus 10
> = minus 9MHz, and the sum frequency of 1 plus 10 = 11MHz. The implication
> of the negative 'minus 9' MHz signal is that the phase of the 9MHz signal
> is inverted, ie 180 degrees out-of-phase from 9MHz

Actually there would be no phase flip.
cos(-a) = cos(a)

> produced in (a). So you have the original carrier at 1MHz, and sidebands
> at 9 and 11MHz (again, with a balanced modulator - no carrier - only 9 and
> 11MHz).
>
> The waveforms of the full composite AM signals of (a) and (b) will look
> quite different. The carriers are at different frequencies, and the phase
> of the 9MHz signal is inverted. However, with a double-balanced modulator,
> you will only have the 9 and 11MHz signal so, surprisingly, the resulting

> signals of (a) and (b) will look the same.

A double-balanced mixer is a multiplier. A * B = B * A

>
> [Note that, in practice, many double-balanced modulators/mixers put loads
> of unwanted signals - mainly due the effects of harmonic mixing. However,
> the basic 'laws of physics' still apply.]
>
> Finally, although I have spoken with great authority, when I get a chance
> I WILL be doing at test with a tobacco-tin double-balanced mixer,

What's a tobacco-tin double-balanced mixer?

> a couple of signal generators and a spectrum analyser - just to make sure
> that I'm not talking rubbish. In the meantime, I'm sure that some will
> correct me if I'm wrong.

You did pretty good.

>
> Ian.
> --
>

--
rb

2664. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:54:42 UTC
From: Tommy Tootles <tommy@toot.com>
Message-ID: <CoVhi.27717$YL5.21538@newssvr29.news.prodigy.net>
Source record: 39271
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:

> 40KHz thru 285Khz? Great idea. Just one minor problem. A 1/4 wave
> antenna at about 100Khz frequency is 750 meters long. That's going to
> be a rather large antenna for literally dragging behind you.

Well, your math is correct. However, the so-called "atomic" wrist
watches receive their time signal from WWVB which transmits at 60kHz.

How do they get that 1250 meter long antenna (1/4 wave at 60 kHz)
inside that itty bitty wrist watch case? ;-)

2665. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 21:57:01 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f69805$f9d$1@nnrp.linuxfan.it>
Source record: 39272
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:

> AM is a process of frequency multiplication. Now you tell me where you
> think such multiplication takes place on a phone line, and I'll follow-uo by
> telling why you're full of crap.
>
> SIMECS!
>

It is all right before your eyes, if you can't see it by now, forget it
... perhaps at a later date. I know your frustration, I have seen the
mentally handicapped attempt to deal with the real world and it end only
in frustration ... perhaps a change of meds is in order ...

JS

2666. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 22:35:49 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.01.22.35.48.724182@from.qrz.com>
Source record: 39273

On Sun, 01 Jul 2007 21:28:35 +0000, Ralph Mowery wrote:

> I don't think I would get the JR version of a triband. Not sure about
> how much power they will take but not enough for many of the amplifiers.

If I recall correctly the TA33Jr is something like 300 watts. That's plenty for me... so far there hasn't been anyone I needed to talk to that I couldn't reach with 200 watts out of the Kenwood or 100 watts out of the IC-706 or IC-735. In fact a lot of what I do is using 5 watts out of the FT-817 and it seems I can make the contact as often as not.

Every once in a while I think about getting an amplifier and then I go and lie down until the thought goes away. :-)

Wasn't always that way... back in the day (late 70's / early 80's) I had an NCX-5 and an NCL-2000 feeding a TA-33 (full power model). That was back when we were actually called upon to run phone patches just about every day on Intercon and MMSN. Then one day I forgot to dial the NCL-2000 back to "tune" mode before tuning up and ended up feeding about 3 kilowatts into the antenna. It didn't like that very much. :-(

> Here is a link to my setup.
>
> http://home.earthlink.net/~ku4pt/images/Beams%20on%20tower/

Nice setup. I think that I probably won't do anything nearly that comprehensive. So far I haven't had much interest in VHF SSB, and the two inverted vees and two NVIS dipoles I have work fine on 160 through 40, so something basic for 20 through 10 and I'll be fine... even that is kind of a low priority until those bands improve.

2667. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 22:57:29 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AD7F69.6CFDF%dbowey@comcast.net>
Source record: 39274
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 2:57 PM, in article f69805$f9d$1@nnrp.linuxfan.it, "John Smith I" <assemblywizard@gmail.com> wrote:

> Don Bowey wrote:
>
>> AM is a process of frequency multiplication. Now you tell me where you
>> think such multiplication takes place on a phone line, and I'll follow-uo by
>> telling why you're full of crap.
>>
>> SIMECS!
>>
>
> It is all right before your eyes, if you can't see it by now, forget it
> ... perhaps at a later date. I know your frustration, I have seen the
> mentally handicapped attempt to deal with the real world and it end only
> in frustration ... perhaps a change of meds is in order ...
>
> JS

I see..... You finally admit you don't understand AM at all and can't justify your statement. It's what I expected.

Now, run off and play in the street with your tinker toys.

2668. Re: "Radium" a COMPLETE IDIOT... - More Likely An In-Complete-Want-To-Be [.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 23:05:33 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183331133.684691.191500@a26g2000pre.googlegroups.com>
Source record: 39276
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 2:28 pm, Don Bowey <dbo...@comcast.net> wrote:
> On 7/1/07 2:11 PM, in article
> 1183324276.703651.17...@o11g2000prd.googlegroups.com, "RHF"
>
>
>
>
>
> <rhf-newsgro...@pacbell.net> wrote:
> > On Jul 1, 12:50 pm, "Porgy Tirebiter" <bit...@gmail.com> wrote:
> >> "Radium" <gluceg...@gmail.com> wrote in message
>
> >>news:1183317395.152563.144060@x35g2000prf.googlegroups.com...
>
> >>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote:
> >>> Analog cells phones should stop using FM and should start using AM
> >>> between frequencies of 40,000 to 285,000 Hz.
>
> >>> I chose 285 KHz to be the highest radio frequency for cell-phones
> >>> because it is roughly the highest-frequency categorized as "long wave"
> >>> radio.
>
> > - IDIOT!......complete idiot......
>
> > PT - Once again why waste your time replying
> > to his posts ? ? ? {Oops Like I Am Doing Too !}
>
> > Actually "Radium" would appear to be an
> > In-Complete-Want-To-Be driven by the 'urge'
> > to Post these Forever Ponding Questions
> > for others to charge at like Don Quijote's
> > quest to slay Windmills {a fool's errand}
> >http://en.wikipedia.org/wiki/Don_Quixote
> >http://en.wikipedia.org/wiki/Fool%27s_errand
>
> > FWIW - While many of his Post might fit into
> > the "sci.electronics.basics" NewsGroup; often
> > they would be consider OFF-TOPIC in other
> > NewsGroups like : rec.radio.shortwave,
> > rec.radio.amateur.antenna, alt.cellular.cingular,
> > alt.internet.wireless, etc
>

> > IMHO - In another life "Radium" would have
> > made a great High School Science Teacher :
> > Who's Students when on to do great things
> > with their lives :
> > Because "Radium" Touched Them With A Thirst
> > For Knowledge And A Quest For Answers.
>

- But a teacher MUST be rational.
- You rate Radium with more potential than I can.
- This most recent post is really off the wall.

"Radium" -and- 'Rational' now there is an Oxymoron !
http://en.wikipedia.org/wiki/Oxymoron

>
>
>
>
>
> > -but- These NewsGroups are NOT a High School
> > Science Class -and- "Radium" is just being 'radium'.
> >http://en.wikipedia.org/wiki/Radium
>
> > -alas- Our "Radium's" Half-Life of Readable Interest
> >http://en.wikipedia.org/wiki/Half-life
> > is at best about 16.04 Seconds ~ RHF
> > .
> > .
> > . .- Hide quoted text -
>
> - Show quoted text -- Hide quoted text -
>
> - Show quoted text -

DB remember that I did write :
Actually "Radium" would appear to be an
In-Complete-Want-To-Be driven by the 'urge'
to Post these Forever Ponding Questions
for others to charge at like Don Quijote's
quest to slay Windmills {a fool's errand}
http://en.wikipedia.org/wiki/Don_Quixote
http://en.wikipedia.org/wiki/Fool%27s_errand
.
.
. .

2669. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-01 23:34:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rq8g83dc3v1erhf9e6gsph6egm6hq7n7l9@4ax.com>
Source record: 39277
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Tommy Tootles <tommy@toot.com> hath wroth:

>Jeff Liebermann wrote:
>
>> 40KHz thru 285Khz? Great idea. Just one minor problem. A 1/4 wave
>> antenna at about 100Khz frequency is 750 meters long. That's going to
>> be a rather large antenna for literally dragging behind you.

>Well, your math is correct. However, the so-called "atomic" wrist
>watches receive their time signal from WWVB which transmits at 60kHz.

Yes, but the original derranged rantings required that *AUDIO* be
used. This was suppose to be some kind of replacement for cellular.
None of the long wave time standards belch audio like the short wave
WWV stations.

However, these time code transmitters operate at RF frequencies as low
as 20KHz (mostly in Russia). See:
<http://www.npl.co.uk/time/measurement_time/time_trans.html> (2002)

>How do they get that 1250 meter long antenna (1/4 wave at 60 kHz)
>inside that itty bitty wrist watch case? ;-)

Touche and good question. Most of the desktop variety have a ferrite
rod loaded with lots of fine wire. I have several like this, one with
an external rod. However, that's obviously not going to work in a
wristwatch unit. I don't have any idea what's inside or how the
antenna done, but I can guess(tm). Here's one way:
<http://www.leapsecond.com/pages/atomic-bill/>

The question has been asked before:
<http://www.eham.net/forums/Elmers/148090>
However, no real description of what's inside the wristwatch.

Going to the source:
<http://tf.nist.gov/stations/radioclocks.htm>
NIST Recommended Practices for WWVB receivers.
<http://tf.nist.gov/general/pdf/1976.pdf> (See section 8A)
"We recommend that RCC products should be sensitive enough
to successfully synchronize to signals from WWVB with a field
strength of 50 uV/m, if the signal to noise ratio exceeds 20 dB.
The RF bandwidth of the receiver should be narrow, typically
ï¿½10 Hz or less."
and:

"Wristwatch antennas should not be contained in the band,
so that RCC watch bands can be replaced in the same manner
as the bands of ordinary watches when they are damaged or
worn out."

So much for the antenna in the wrist band idea. So, the question is,
what type of tiny antenna will work with such a field strength at
60KHz. I dug through the FCC ID web pile looking for an inside photo
of Casio watch, but couldn't find anything. I'm gonna have to either
break one open, and/or calculate the field strength of a very small
ferrite rod antenna (later).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2670. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 00:08:05 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183334885.308793.248490@o11g2000prd.googlegroups.com>
Source record: 39278
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 4:34 pm, Jeff Liebermann <j...@cruzio.com> wrote:
> Tommy Tootles <t...@toot.com> hath wroth:
>
> >Jeff Liebermann wrote:
>
> >> 40KHz thru 285Khz? Great idea. Just one minor problem. A 1/4 wave
> >> antenna at about 100Khz frequency is 750 meters long. That's going to
> >> be a rather large antenna for literally dragging behind you.
> >Well, your math is correct. However, the so-called "atomic" wrist
> >watches receive their time signal from WWVB which transmits at 60kHz.
>
> Yes, but the original derranged rantings required that *AUDIO* be
> used. This was suppose to be some kind of replacement for cellular.
> None of the long wave time standards belch audio like the short wave
> WWV stations.
>
> However, these time code transmitters operate at RF frequencies as low
> as 20KHz (mostly in Russia). See:
> <http://www.npl.co.uk/time/measurement_time/time_trans.html> (2002)
>
> >How do they get that 1250 meter long antenna (1/4 wave at 60 kHz)
> >inside that itty bitty wrist watch case? ;-)
>
> Touche and good question. Most of the desktop variety have a ferrite
> rod loaded with lots of fine wire. I have several like this, one with
> an external rod. However, that's obviously not going to work in a
> wristwatch unit. I don't have any idea what's inside or how the
> antenna done, but I can guess(tm). Here's one way:
> <http://www.leapsecond.com/pages/atomic-bill/>
>
> The question has been asked before:
> <http://www.eham.net/forums/Elmers/148090>
> However, no real description of what's inside the wristwatch.
>
> Going to the source:
> <http://tf.nist.gov/stations/radioclocks.htm>
> NIST Recommended Practices for WWVB receivers.
> <http://tf.nist.gov/general/pdf/1976.pdf> (See section 8A)
> "We recommend that RCC products should be sensitive enough
> to successfully synchronize to signals from WWVB with a field
> strength of 50 uV/m, if the signal to noise ratio exceeds 20 dB.
> The RF bandwidth of the receiver should be narrow, typically

> ±10 Hz or less."
> and:
> "Wristwatch antennas should not be contained in the band,
> so that RCC watch bands can be replaced in the same manner
> as the bands of ordinary watches when they are damaged or
> worn out."
>
> So much for the antenna in the wrist band idea. So, the question is,
> what type of tiny antenna will work with such a field strength at
> 60KHz. I dug through the FCC ID web pile looking for an inside photo
> of Casio watch, but couldn't find anything. I'm gonna have to either
> break one open, and/or calculate the field strength of a very small
> ferrite rod antenna (later).
>
> --
> Jeff Liebermann j...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

Okay. I now extremely insterested and frustrated about how the
wristwatch can be so tiny yet receive so longwave signals.

Its probably something those FBI/CIA bastards are going to keep secret
from us.

Sick government f---scums. USA citizens should turn against the FBI/
CIA and molest the f---ing s--- out of their colons using bubbas' c--
ks.

I want to know how such a tiny device can operate at such a long
wavelength. Unfortunately, that info is classified by the FBI/CIA, and
then won't let me or any USA citizen find out about it.

I am getting so pissed off right now.

I am so interested in this wristwatch question yet I am so angry about
it because the FBI/CIA won't let me know about it.

F=== the CIA/FBI, may they be raped by big bubbas.

2671. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 00:47:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <j2gg83hu84166edr0h8fevc4v8st31uedm@4ax.com>
Source record: 39279
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann <jeffl@cruzio.com> hath wroth:

>So much for the antenna in the wrist band idea. So, the question is,
>what type of tiny antenna will work with such a field strength at
>60KHz. I dug through the FCC ID web pile looking for an inside photo
>of Casio watch, but couldn't find anything. I'm gonna have to either
>break one open, and/or calculate the field strength of a very small
>ferrite rod antenna (later).

I found a photo of the insides of a watch. See:
<http://tf.nist.gov/general/pdf/1877.pdf>
on page 11-12. It's a small 2cm internal rod antenna.

There are some ferrite rod antenna design notes on the Temic/C-Max
chips used on some receivers:
<http://www.c-max-time.com/downloads/search.php?search=CME6005>
<http://www.c-max-time.com/downloads/search.php?search=CME8000>

There's some on antenna matching here:
<http://www.c-max-time.com/downloads/getFile.php?id=437>

Watch antennas:
<http://www.c-max-time.com/products/productsOverview.php?catID=5>
See the photos of the various antennas. Too bad there's no specs.

I'll grind out the field strength numbers later. I've been living in
the microwave region for so long, that I'm having problems with LF
calcs.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2672. Re: Spacing between tribander and higher antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 01:09:24 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <8fYhi.2959$zA4.1892@newsread3.news.pas.earthlink.net>
Source record: 39280

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.22.35.48.724182@from.qrz.com...
> comprehensive. So far I haven't had much interest in VHF SSB, and the two
> inverted vees and two NVIS dipoles I have work fine on 160 through 40, so
> something basic for 20 through 10 and I'll be fine... even that is kind of
> a low priority until those bands improve.
>

I am just opposit . I like weak signal vhf and have not done too much with the low bands. I moved about 3 years ago and at the old place I had the vhf antennas but no beam for HF. Decided to put one up with the other beams. It sure makes a differance on 20 meters over the dipoles.

I have up 2 dipoles , one cut for 80 meters at 20 feet and an off center fed that is about 125 feet long at 50 feet for 80 to 10 meters. What is your setup for the NVIS and dipoles and how do they compair ? I have a couple of stations about 75 miles away I talk to on 80 meters alot and often one of them goes to the coast of North Carolina and I am in the middle of NC. I usually use the low 80 meter dipole for the shorter distance but the higher one is beter when the guys are at the coast. Only problem is in the summer the higher antenna has more noise on it. I usually use the low antenna to receive and then switch to the higher one for transmitting.

2673. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 01:20:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jhkg8393djc9oc6trjoh13cvnonl0geo5q@4ax.com>
Source record: 39131

On Sun, 01 Jul 2007 16:52:04 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

> my From: line is an attempt to deter spammers, who
>no doubt harvest this and other rec.radio.amateur forums for call signs,

Hi Rick,

I've laid my return address out there bare for more than a dozen
years, and the amount of spam hardly compares to my other email
(professional and social) accounts (sometimes 40-60 in a day for them,
compared to one or two a month here).

73's
Richard Clark, KB7QHC

2674. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 02:19:27 UTC
From: cledus <cledus@noemail.net>
Message-ID: <PgZhi.908$eY.131@newssvr13.news.prodigy.net>
Source record: 39132
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ian Jackson wrote:
> In message <EXChi.23350$C96.1422@newssvr23.news.prodigy.net>, cledus
> <cledus@noemail.net> writes
>> Radium wrote:
>>> Hi:
>>> Please don't be annoyed/offended by my question as I decreased the
>>> modulation frequency to where it would actually be realistic.
>>> I have a very weird question about electromagnetic radiation,
>>> carriers, and modulators.
>>>
>>>
>>>
>>>
>>>
>>> No offense but please respond with reasonable answers & keep out the
>>> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
>>> really interested in this.
>>> Thanks,
>>> Radium
>>>
>>
>>
>> The fundamental answer is no, it is not possible to generate AM where
>> the baseband signal is a pure 20 kHz sinewave and Fc<20kHz. The
>> reason is that the modulated waveform consists of the sum of a
>> sinewave at Fc, a sinewave at Fc+20kHz, and a sinewave at Fc-20kHz.
>> If Fc<20kHz then one of the components becomes a "negative"
>> frequency. So the carrier must be greater than the baseband signal to
>> prevent this.
>>
> I'm afraid that this is not correct. The 'laws of physics' don't
> suddenly stop working if the carrier is lower than the modulating
> frequency. However, there's no need to get into complicated mathematics
> to illustrate this. Here is a simple example:
>
> (a) If you modulate a 10MHz carrier with a 1MHz signal, you will produce
> two new signals (the sidebands) at the difference frequency of 10 minus
> 1 = 9MHz, and the sum frequency of 10 plus 1 = 11MHz. So you have the
> original carrier at 10MHz, and sideband signals at 9 and 11MHz (with a
> balanced modulator - no carrier - only 9 and 11MHz).
>
> (b) If you modulate a 1MHz carrier with a 10MHz signal, you will produce

> two new signals (the sidebands) at the difference frequency of 1 minus
> 10 = minus 9MHz, and the sum frequency of 1 plus 10 = 11MHz. The
> implication of the negative 'minus 9' MHz signal is that the phase of
> the 9MHz signal is inverted, ie 180 degrees out-of-phase from 9MHz
> produced in (a). So you have the original carrier at 1MHz, and sidebands
> at 9 and 11MHz (again, with a balanced modulator - no carrier - only 9
> and 11MHz).
>
> The waveforms of the full composite AM signals of (a) and (b) will look
> quite different. The carriers are at different frequencies, and the
> phase of the 9MHz signal is inverted. However, with a double-balanced
> modulator, you will only have the 9 and 11MHz signal so, surprisingly,
> the resulting signals of (a) and (b) will look the same.
>
> [Note that, in practice, many double-balanced modulators/mixers put
> loads of unwanted signals - mainly due the effects of harmonic mixing.
> However, the basic 'laws of physics' still apply.]
>
> Finally, although I have spoken with great authority, when I get a
> chance I WILL be doing at test with a tobacco-tin double-balanced mixer,
> a couple of signal generators and a spectrum analyser - just to make
> sure that I'm not talking rubbish. In the meantime, I'm sure that some
> will correct me if I'm wrong.
>
> Ian.

Ian,

I believe your analysis is correct. But if you expect to build a
receiver that uses a filter centered at 1 MHz with a BW of 20+ MHz to
recover a DSB AM signal, I don't believe that the DBM approach will
accomplish this. With your approach, you could filter out the sidebands
by centering a filter around 10 MHz (the baseband freq). This could be
used to recover the baseband 10 MHz signal. But the OP asked about AM
of a carrier at very low frequencies. Good explanation of what happens
when using a DBM, though.

Regards,
-C

2675. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 03:14:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <D4_hi.10075$vi5.542@newssvr17.news.prodigy.net>
Source record: 39133

Keith Dysart wrote:
> On Jul 1, 4:35 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> Richard Harrison wrote:
>>> Radiation resistance is a resistance. Radiated energy has its current
>>> in-phase with its voltage.
>> The IEEE Dictionary is pretty clear when they define two
>> types of resistances: (A) a resistor with resistance and
>> (B) a virtual resistance with the V/I ratio in phase.
>
> I could not find "virtual resistance" in "IEEE 100, The Authoritative
> Dictionary of IEEE Standards Terms, Seventh
> Edition".
>
> Do you have a reference?
> Note: Definitions (A) and (B) are not equivalent but are
> supplementary. In any case where confusion may arise,
> specify definition being used. See also: resistor."

Sure do, Keith - your own quote. An example of Definition
(A) is a resistor. An example of Definition (B) is the
characteristic impedance of a transmission line which
is a virtual dissipationless resistance. Another example
of (B) is the feedpoint impedance of a standing wave
antenna. Another example of (B) is the virtual impedance
at the end of a quarter-wave series section transformer.
Another probable example of (B) is the dissipationless
part of a generator's source impedance.
--
73, Cecil http://www.w5dxp.com

2676. beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 04:05:52 UTC
From: "Juan M." <jdmollanNOSPAMPLEASE@juno.com>
Message-ID: <FYedneiQJdgO5BXbnZ2dnUVZ_smonZ2d@centurytel.net>
Source record: 39134

Most of us old timers know the beverage antenna is quite effective as a receiving antenna.
Has anyone used it as a transmitting antenna?

2677. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 05:06:56 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-142DD0.22065601072007@newsclstr03.news.prodigy.net>
Source record: 39135
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <PgZhi.908$eY.131@newssvr13.news.prodigy.net>,
cledus <cledus@noemail.net> wrote:

< Snip >

Would you please have the decency to snip rec.radio.shortwave and other
groups from the newsgroup header. Thanks.

--
Telamon
Ventura, California

2678. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 05:27:05 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6a2b9uai1@usenet01.boi.hp.com>
Source record: 39136
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f6772qaot1@nnrp.linuxfan.it...
> Listen to a "strong--pure am signal" on an fm receiver, turn up the volume
> on the fm receiver, something is responsible for that ... repeat
> experiment with the reverse ... "imperfect world theory" proof!

What is responsible for that is not that AM somehow also
produces FM, but simply that the type of demodulator used
by the FM receiver in question will also demodulate AM to
a usable degree. Ditto the reverse (look up "slope detection"
for an example of how a very common AM demodulator
can also demodulate FM).

Bob M.

2679. Re: MA5B Newby's misunderstand of Beams?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 06:12:56 UTC
From: neno <nenadBEZSPAMA@elektro-celik.hr>
Message-ID: <f6a516$2cb$1@ss408.t-com.hr>
Source record: 39137

Your dipole is close to ground?
It is normal that antenna close to ground is almost without noise.
That's why people use vertical antenna for TX and low beverage antenna for RX.
Did You try your beam on TX?
Maybe You are living in urban area where the noise is common.
Try using some quiet antenna like vertical delta loop or quad.
You can use separate antenna for TX and RX.
I have 1 ele quad (vertical loop) for 40m and it is pretty quiet comparing to vertical or dipole.
73 Neno 9A4MN

"mike" <kyw1060@verizon.net> wrote in message news:1183230494.290917.311230@n60g2000hse.googlegroups.com...
> Please e-mail me directly if you think you know what my problem is and
> how to resolve it. I have just installed an MA5B Cushcraft Mini-Beam
> and all seems fine. SWR's are normal, Coils are installed
> correctly...all is well except a major noise increase that rides along
> with the signal received. Like hearing a weak station and switching on
> a receive amplifier (Bringing noise with the signal) I believe in my
> heart I have constructed the Beam IAW the Cushcraft manual. Coax is
> new and connection are correct. Could this noise be because of the
> matching network being bad. I switch over to my Dipole on the ground
> and the signal changes from static voice to clear audio right down to
> absoloutly no noise when transmitter un-keys. Very frustrating. Help
> and hilfe bitte!
> Mike KB3IUL
>

2680. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 08:12:02 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183363922.388122.37590@j4g2000prf.googlegroups.com>
Source record: 39138
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 10:06 pm, Telamon
<telamon_spamshi...@pacbell.net.is.invalid> wrote:
> In article <PgZhi.908$eY....@newssvr13.news.prodigy.net>,
>
> cledus <cle...@noemail.net> wrote:
>
> < Snip >
>
- Would you please have the decency to snip
- rec.radio.shortwave and other groups from
- the newsgroup header. Thanks.
-
- --
- Telamon
- Ventura, California

Telamon,

Off-Topic + Cross-Posting -and- 'Decency'
http://en.wikipedia.org/wiki/Oxymoron
Wow - Now There Is A Real Oxymoron !

~ RHF
.
.
. .

2681. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 08:42:51 UTC
From: kev <invalid@invalid.invalid>
Message-ID: <edidnYuxbJ0VJxXbRVnyvQA@bt.com>
Source record: 39139
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:

> Watch antennas:
> <http://www.c-max-time.com/products/productsOverview.php?catID=5>
> See the photos of the various antennas. Too bad there's no specs.
>
> I'll grind out the field strength numbers later. I've been living in
> the microwave region for so long, that I'm having problems with LF
> calcs.
>
http://www.c-max-time.com/downloads/getFile.php?id=423
Gives dimensions,No of turns,Inductance etc.

2682. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 10:53:02 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183373582.149798.147870@w5g2000hsg.googlegroups.com>
Source record: 39140

On Jul 1, 11:14 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Keith Dysart wrote:
> > On Jul 1, 4:35 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> >> Richard Harrison wrote:
> >>> Radiation resistance is a resistance. Radiated energy has its current
> >>> in-phase with its voltage.
> >> The IEEE Dictionary is pretty clear when they define two
> >> types of resistances: (A) a resistor with resistance and
> >> (B) a virtual resistance with the V/I ratio in phase.
>
> > I could not find "virtual resistance" in "IEEE 100, The Authoritative
> > Dictionary of IEEE Standards Terms, Seventh
> > Edition".
>
> > Do you have a reference?
> Sure do, Keith - your own quote. An example of Definition
> (A) is a resistor. An example of Definition (B) is the
> characteristic impedance of a transmission line which
> is a virtual dissipationless resistance. Another example
> of (B) is the feedpoint impedance of a standing wave
> antenna. Another example of (B) is the virtual impedance
> at the end of a quarter-wave series section transformer.
> Another probable example of (B) is the dissipationless
> part of a generator's source impedance.

I understand now. "Virtual resistance" is a term of your
own invention, not the IEEE, which explains why it is not
in the dicionary.

It is not a bad term for the concept, just misattributed.

...Keith

2683. Re: beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 11:12:43 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1183374763.872524.95890@n2g2000hse.googlegroups.com>
Source record: 39141

On Jul 2, 12:05 am, "Juan M." <jdmollanNOSPAMPLE...@juno.com> wrote:
> Most of us old timers know the beverage antenna is quite effective as a
> receiving antenna.
> Has anyone used it as a transmitting antenna?

Most of us old timers know better...

denny / k8do

2684. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 11:17:37 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1183375057.841396.278450@k79g2000hse.googlegroups.com>
Source record: 39142

I have fifty feet of 25G standing next to a pole barn... It is bracketed to the eve at ~14 feet and free standing above that... It has a gaggle of vhf/uhf stuff on it... It has withstood 80mph wind gusts... It is a bit loosey goosey when you are at the top so I pull some light rope up there when I climb up, and cinch it off to stop the sway...

denny / k8do

2685. Re: Mumbo jumbo allegation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 12:32:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Wf6ii.9834$c06.7779@newssvr22.news.prodigy.net>
Source record: 39143

Keith Dysart wrote:
> I understand now. "Virtual resistance" is a term of your
> own invention, not the IEEE, which explains why it is not
> in the dicionary.

I didn't invent the term, Keith. It is simply
descriptive of a resistance when the resistance
is not a resistor - a virtual resistance as
opposed to a physical resistor.

The fact that there are two definitions, (A) and
(B), for resistance in the IEEE dictionary is what
is important. But their definition has (A) as a
subset of (B). So what do we call a resistance that
satisfies the (B) definition but not the (A) definition?
Walter Maxwell calls it a virtual resistance and that's
good enough for me.

> It is not a bad term for the concept, just misattributed.

I believe the first time I encountered the word
"virtual" used for an impedance was when I read
Walter Maxwell's early QST articles some 30 years
ago.
--
73, Cecil http://www.w5dxp.com

2686. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 13:02:40 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <fkqh83db67lq593i4u6hgk16q2admdf8fd@4ax.com>
Source record: 39144

On Sun, 01 Jul 2007 15:20:54 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>On Sun, 01 Jul 2007 16:58:42 +0000, Dave wrote:
>
>> sorry, think again... no hinge bases allowed on free standing towers.
>
>Hmmm ... OK, I guess I will have to be able to climb it...
>
>I suppose I could install temporary guys while I'm up on it doing antenna
>work, but in that location permanent guying wouldn't work too well...
>
>> free standing towers must embed the base section in concrete.
>
>How about the BPC25G base plate (non-hinged)?
>
>I already have a concrete base in place, 6 feet deep, intended for the
>predecessor to the US Tower MA-series crank-up mast. The mast (and the
>base, and the tower on the other end of the house) belonged to my father
>when he lived with us, but he sold the mast many years ago, and the new
>ones are a bit too pricey for me right now.
>
>So, it's too late to embed the bottom section directly into the concrete,
>at least in that location.
I have the early model Crank up mast (Wilson, CT-77) that I brought
with me from Ohio in 1993. No one would give me $400 for it! The top
section failed (overloaded with VHF-UHF stuff in 1980's while in a
guyed configuration. It twisted and developed a diagonal crease.

Some time in the late 1990's I restored the mast and built a home brew
base for it. With the top section removed it is about 55 feet.

I had an opportunity to examine a factory built erection base and I
felt too many compromises were made to keep it shippable. I was able
to acquire scrap steel from a local salvage yard. I mounted a 1/2"
steel plate (actually 2 1/4" pieces) about 20" x 30" on wide spread
1/2" J-Bolts embedded in 5 Yards of concrete (5 yards is overkill, but
that was the minimum charge so I elected to use it). I think they were
about 36" long. I feel the J-Bolts are the weakest part of the design.

I mounted an I-Beam vertically (about 12 feet tall) to the plate with
1/2" Grade 8 bolts and heavy angle iron to the base. I also mounted
the hinge plate for the mast to the plate. Then I fashioned a pulley
arrangement from the upright to raise & lower the tower.

The tower at the 23 foot mark with a Cushcraft A3S beam and a G800 Yaesu rotor is load enough to raise and lower. In that configuration a ladder is still needed to reach the beam mounting bolts due to the length of the antenna elements and the boom length.

The combination seems to handle the weather better at about the 45 foot mark so I seldom raise it above that.

I use an electric boat winch to raise & lower the mast extent ion. I have been using a crank winch to raise & lower the tubular assembly. Hopefully, I will get that converted to an electric winch sometime this year. Age is catching up with me.

We have Hurricanes & Ice in North Carolina. However, the wind rarely exceeds 80 mph in my area. I expect to lose the antenna some day but I doubt the tower will fail.

Although I had an electric welder available I used nuts & bolts because I felt my welding skills were suspect. I had a small back hoe (Terra Mite) available for the digging & Heavy lifting.

I would do it again. But I would not consider it with a non retractable mast.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

2687. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 13:16:40 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2AE48C8.6D094%dbowey@comcast.net>
Source record: 39145
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/1/07 10:06 PM, in article
telamon_spamshield-142DD0.22065601072007@newsclstr03.news.prodigy.net,
"Telamon" <telamon_spamshield@pacbell.net.is.invalid> wrote:

> In article <PgZhi.908$eY.131@newssvr13.news.prodigy.net>,
> cledus <cledus@noemail.net> wrote:
>
> < Snip >
>
> Would you please have the decency to snip rec.radio.shortwave and other
> groups from the newsgroup header. Thanks.

Would you please come and ask nicely. I don't like how you put your order.

2688. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 14:21:51 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2007.07.02.14.21.45@ME.networksplus.net>
Source record: 39146

On Fri, 29 Jun 2007 20:56:52 +0000, Walter Maxwell wrote:

> Hope to join you great guys again occasionally as I continue to recover.

That is good news, Walt. Keep at it and keep a good attitude. The rest of us will take care of the prayers for you!

Thanks for providing us with common sense antenna theory all of these years. Hopefully, Reflections III will make it into print soon. I'm looking forward to it.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds, the pessimist fears this is true."

2689. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 14:30:22 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46890C09.BBCAD369@earthlink.net>
Source record: 39147
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
>
> Conventional TV is VSB (visidual side band)

Vestigal Sideband

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

2690. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 15:41:01 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <0pKGoNANyRiGFwmA@g3ohx.demon.co.uk>
Source record: 39148
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In message <46890C09.BBCAD369@earthlink.net>, Michael A. Terrell
<mike.terrell@earthlink.net> writes
>Jeff Liebermann wrote:
>>
>> Conventional TV is VSB (visidual side band)
>
>
> Vestigal Sideband
>
>
Better still, Vestigial Sideband!
--
Ian

2691. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 15:55:03 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <qu4i831932bmlh5c6d5efduh4nhlcmvv5v@4ax.com>
Source record: 39149
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

kev <invalid@invalid.invalid> hath wroth:

>Jeff Liebermann wrote:
>
>> Watch antennas:
>> <http://www.c-max-time.com/products/productsOverview.php?catID=5>
>> See the photos of the various antennas. Too bad there's no specs.
>>
>> I'll grind out the field strength numbers later. I've been living in
>> the microwave region for so long, that I'm having problems with LF
>> calcs.

> http://www.c-max-time.com/downloads/getFile.php?id=423
>Gives dimensions,No of turns,Inductance etc.

Thanks. I downloaded that yesterday and got a file with no extension.
I eventually figured out it's a PDF file and renamed it.

The site also has a rather sketchy article on antenna design at:
<http://www.c-max-time.com/tech/antenna.php>
I also found the chip sensitivity somewhere at
0.5uv typical
0.8uv max
with a field strength range of:
15-20 uV/m using a 10mm x 60 mm rod.

I'm currently slogging through the NIST web pile trying to find the
historical or estimated field strengths for the left coast area.
<http://tf.nist.gov/timefreq/stations/lflibrary.htm>
Ah, foundit:
<http://tf.nist.gov/timefreq/general/pdf/1383.pdf>
Table 2.4 shows signal strength in San Diego varying from 180 uV/m to
1000 uV/m. Now all I need to do is figure out how much S/N ratio is
required at the receiver input to properly decode the time signals.

All the information needed is probably there, scattered among an
assortment of documents, but I'm at a loss on how to estimate the
actual field strength sensitivity given the rod antenna
specifications. The formula #1 at:
<http://www.c-max-time.com/tech/antenna.php>
has all the right parameters, but I keep getting insane results when I
try to plug in real and estimated values. Maybe some coffee will
help.

I'll work on it more during the next few daze. It should be easy
(famous last words). However, paying work comes first.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2692. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 16:01:09 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <t18i83ph0ebmgvp4her18n7dagvd5gigau@4ax.com>
Source record: 39150
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:

>Jeff Liebermann wrote:
>> Conventional TV is VSB (visidual side band)

> Vestigal Sideband

Ummm... How about Vestigial Sideband instead?
<http://www.javvin.com/hardware/VSB.html>
<http://whatis.techtarget.com/definition/0,,sid9_gci332235,00.html>
The last vestige of spelling abilities disappeared long ago and was
replaced by a spellin chequer that lacked the term. Sorry.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2693. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 16:13:34 UTC
From: Mark@k4yz.org
Message-ID: <6609123.91277965@tarrnews.net>
Source record: 39151
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Mon, 2 Jul 2007 16:41:01 +0100, Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
wrote:
> In message <46890C09.BBCAD369@earthlink.net>, Michael A. Terrell
> <mike.terrell@earthlink.net> writes
> >Jeff Liebermann wrote:
> >>
> >> Conventional TV is VSB (visidual side band)
> >>
> >>
> > Vestigal Sideband
> >>
> >>
> Better still, Vestigial Sideband!

You're both wrong. It is VIRTUAL SIDEBAND because it isn't completely
real and the other sideband which isn't virtual carries the missing high
frequency modulation info. Once it gets into your second detector then
it becomes real due to the laws of product modulation.

Next, you will be telling people that VGA doesn't stand for "virtual
graphics array."

--
Posted via a free Usenet account from http://www.tarrnews.net

2694. Re: beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 17:02:28 UTC
From: "Juan M." <jdmollanNOSPAMPLEASE@juno.com>
Message-ID: <BoCdnepvkYEOshTbnZ2dnUVZ_hqdnZ2d@centurytel.net>
Source record: 39152

"Denny" <k8do@mailblocks.com> wrote in message
news:1183374763.872524.95890@n2g2000hse.googlegroups.com...
> On Jul 2, 12:05 am, "Juan M." <jdmollanNOSPAMPLE...@juno.com> wrote:
>> Most of us old timers know the beverage antenna is quite effective as a
>> receiving antenna.
>> Has anyone used it as a transmitting antenna?
>
> Most of us old timers know better...
>
>
> denny / k8do

Speaking of "beverage" antennas, many decades ago I read an article on
antennas made of beer cans soldered together. Then came the aluminum can
and so much for that story.

2695. Alpha Delta DX-EE Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 17:04:52 UTC
From: NotMe <NotMe@Oops.edu>
Message-ID: <UOydna0c0ICprRTbnZ2dnUVZ_h2pnZ2d@comcast.com>
Source record: 39153

I'm planning on putting up an Alpha Delta DX-EE this week. The highest I can get it up is about 30 feet.

Just wondering if anyone has any pointers or tips before I get this antenna in the air.

Thanks!

2696. Re: beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 17:15:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jdonl4-gag.ln1@mail.specsol.com>
Source record: 39154

Juan M. <jdmollanNOSPAMPLEASE@juno.com> wrote:

> "Denny" <k8do@mailblocks.com> wrote in message
> news:1183374763.872524.95890@n2g2000hse.googlegroups.com...
> > On Jul 2, 12:05 am, "Juan M." <jdmollanNOSPAMPLE...@juno.com> wrote:
> >> Most of us old timers know the beverage antenna is quite effective as a
> >> receiving antenna.
> >> Has anyone used it as a transmitting antenna?
> >
> > Most of us old timers know better...
> >
> >
> > denny / k8do

> Speaking of "beverage" antennas, many decades ago I read an article on
> antennas made of beer cans soldered together. Then came the aluminum can
> and so much for that story.

A high school buddy and I tried it and found it to be more trouble
than it was worth for a lot of reasons, not the least of which was
the sturdiness of the thing.

--
Jim Pennino

Remove .spam.sux to reply.

2697. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 17:42:48 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <sOaii.2913$rR.1554@newsread2.news.pas.earthlink.net>
Source record: 39155

Walt:

Get well soon... and try to stay away from those doctor places, eh?

You go guy!

We need you here to keep us all honest.

Best Wishes,

-- Pete K1PO
Indialantic By-the-Sea, FL

"Nate Bargmann" <n0nb.DO.NOT.SPAM@ME.networksplus.net> wrote in message
news:pan.2007.07.02.14.21.45@ME.networksplus.net...
> On Fri, 29 Jun 2007 20:56:52 +0000, Walter Maxwell wrote:
>
>> Hope to join you great guys again occasionally as I continue to recover.
>
> That is good news, Walt. Keep at it and keep a good attitude. The rest
> of us will take care of the prayers for you!
>
> Thanks for providing us with common sense antenna theory all of these
> years. Hopefully, Reflections III will make it into print soon. I'm
> looking forward to it.
>
> 73, de Nate >>
>
> --
>
> "The optimist proclaims that we live in the best of all possible worlds,
> the pessimist fears this is true."

2698. Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 17:49:39 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1183398579.914966.74310@k29g2000hsd.googlegroups.com>
Source record: 39156
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Hello:

I have been trying to find the answer to my question on the front-to-back ratio on UHF antennas, and so far have been unsuccessful.

I think I understand what the front-to-back ratio is, but the specs on my Winegard PR-8800 (8 bay bowtie) show negative front-to-back ratios (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69). The "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11 dB @ ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be negative, and is this good or bad? I am assuming this could be bad in my case as I would like the signal at the back of the antenna to be minimal.

I am currently trying to improve our HDTV reception. I currently have the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast amp. This antenna works very well overall. But from time to time, on a couple channels the HD signal strength will drop all the way down, enough to drop the signal or cause break-up. I've been considering a Winegard HD9095P or PR9032 to use in conjunction with the PR-8800 since they have a higher gain than the PR-8800, then rotate the PR-8800 the other way to receive some different stations.

I really appreciate the help and feedback on this!!

Thanks,
--
Chris

2699. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 18:02:04 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns996184A0B50E2VeebleFetzer@127.0.0.1>
Source record: 39157
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

chris@groupinfo.com (szilagyic) wrote in
news:1183398579.914966.74310@k29g2000hsd.googlegroups.com:

> I think I understand what the front-to-back ratio is, but the specs
> on my Winegard PR-8800 (8 bay bowtie) show negative front-to-back
> ratios (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch
> 69). The "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @
> ch 32; 11 dB @ ch 50; 12.5 dB @ ch 69. How can the front-to-back
> ratio be negative, and is this good or bad? I am assuming this
> could be bad in my case as I would like the signal at the back of
> the antenna to be minimal.

Showing the F/B ratio as negative is non-standard, but I ->guess
they're just trying to emphasize that the signal received off the
back of the antenna is less than that received from the direction
it's pointing.

Anyway, if that's not the case, you could always mount the antenna
backward :-)

--
Bert Hyman | St. Paul, MN | bert@iphouse.com

2700. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 19:49:22 UTC
From: phil-news-nospam@ipal.net
Message-ID: <f6bks20ev4@news2.newsguy.com>
Source record: 39158
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In alt.tv.tech.hdtv Bert Hyman <bert@iphouse.com> wrote:
| chris@groupinfo.com (szilagyic) wrote in
| news:1183398579.914966.74310@k29g2000hsd.googlegroups.com:
|
|> I think I understand what the front-to-back ratio is, but the specs
|> on my Winegard PR-8800 (8 bay bowtie) show negative front-to-back
|> ratios (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch
|> 69). The "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @
|> ch 32; 11 dB @ ch 50; 12.5 dB @ ch 69. How can the front-to-back
|> ratio be negative, and is this good or bad? I am assuming this
|> could be bad in my case as I would like the signal at the back of
|> the antenna to be minimal.
|
| Showing the F/B ratio as negative is non-standard, but I ->guess
| they're just trying to emphasize that the signal received off the
| back of the antenna is less than that received from the direction
| it's pointing.

Looks like negative DB is used for any direction to indicate how much less
the signal will be relative to the main lobe. Whether side or back or any
other direction, the circles are labeled with negative DB, more negative
as you move to the inner circles.

See: http://www.hdtvprimer.com/ANTENNAS/cm4228.html

--
|--------------------------------------/----------------------------------|
| Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
| first name lower case at ipal.net / spamtrap-2007-07-02-1447@ipal.net |
|--------------------------------------/----------------------------------|

2701. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 19:56:55 UTC
From: G-squared <stratus46@yahoo.com>
Message-ID: <1183406215.584718.110770@57g2000hsv.googlegroups.com>
Source record: 39159
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 2, 10:49 am, szilagyic <c...@groupinfo.com> wrote:
> Hello:
>
> I have been trying to find the answer to my question on the front-
to-
> back ratio on UHF antennas, and so far have been unsuccessful.
>
> I think I understand what the front-to-back ratio is, but the specs
on
> my Winegard PR-8800 (8 bay bowtie) show negative front-to-back
ratios
> (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69).
The
> "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11
dB @
> ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be
negative,
> and is this good or bad? I am assuming this could be bad in my
case
> as I would like the signal at the back of the antenna to be
minimal.
>
> I am currently trying to improve our HDTV reception. I currently
have
> the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast
> amp. This antenna works very well overall. But from time to time,
on
> a couple channels the HD signal strength will drop all the way
down,
> enough to drop the signal or cause break-up. I've been considering
a
> Winegard HD9095P or PR9032 to use in conjunction with the PR-8800
> since they have a higher gain than the PR-8800, then rotate the
> PR-8800 the other way to receive some different stations.
>
> I really appreciate the help and feedback on this!!
>
> Thanks,
> --
> Chris

30 dB is quite a bit of gain on top of a decent gain antenna. If
you're _far_ from the stations OR they're still running reduced power

it can be justified but as a point of reference, I use a Winegard squareshooter (4-5 dB gain), no amplifier split 4 ways with 100' of RG-6 35 miles from the LA transmitters. SIgnal strength reported as 80% on the HDTV Wonders. I wonder if perhaps you're almost overloading either the preamp or the front-end of the TV.

As Bert mentioned, the negative front-to-back number just referencing the front gain of the antenna.

Again, I wouldn't use so 'much' preamp unless I was 50+ miles from the nearest station.

GG

2702. Re: beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 20:17:28 UTC
From: richardharrison@webtv.net
Message-ID: <21430-46895D58-377@storefull-3252.bay.webtv.net>
Source record: 39160

Juan M. wrote:
"Has anyone used it as a transmitting antenna?

I had a military communicarions manual that recommended the Beverage antenna for transmitting as well as for receivimng. However, the recommendation was for an unterminated Beverage with a height of 10 feet or more. Length, 2 or more wavelengths.

On the other hand, the military manual also recommended laying a wire directly on the earth if necessary and extending it as far as possible towards its target for a 2-way antenna. It had a stealth advantage and was expected to be usable.

Best regards, Richard Harrison, KB5WZI

2703. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 21:00:38 UTC
From: ValveJob <me@privacy.net>
Message-ID: <mppi83le8seqnnmgkv5bn2ts873r10gjfa@4ax.com>
Source record: 39161
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Mon, 02 Jul 2007 10:49:39 -0700, szilagyic <chris@groupinfo.com>
wrote:

>Hello:
>
>I have been trying to find the answer to my question on the front-to-
>back ratio on UHF antennas, and so far have been unsuccessful.
>
>I think I understand what the front-to-back ratio is, but the specs on
>my Winegard PR-8800 (8 bay bowtie) show negative front-to-back ratios
>(-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69). The
>"dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11 dB @
>ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be negative,
>and is this good or bad? I am assuming this could be bad in my case
>as I would like the signal at the back of the antenna to be minimal.
>
>I am currently trying to improve our HDTV reception. I currently have
>the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast
>amp. This antenna works very well overall. But from time to time, on
>a couple channels the HD signal strength will drop all the way down,
>enough to drop the signal or cause break-up. I've been considering a
>Winegard HD9095P or PR9032 to use in conjunction with the PR-8800
>since they have a higher gain than the PR-8800, then rotate the
>PR-8800 the other way to receive some different stations.
>
>I really appreciate the help and feedback on this!!
>
>Thanks,

Get that antenna OUT of your attic. Put it outside on your roof, no
more than 12 feet mast. All your problems will go away.

2704. snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group from the Newsgroups {Distribution} Header - please, Please. PLEASE !

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 21:42:49 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183412569.470579.320170@i38g2000prf.googlegroups.com>
Source record: 39162
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 2, 6:16 am, Don Bowey <dbo...@comcast.net> wrote:
> On 7/1/07 10:06 PM, in article
> telamon_spamshield-142DD0.22065601072...@newsclstr03.news.prodigy.net,
>
> "Telamon" <telamon_spamshi...@pacbell.net.is.invalid> wrote:
> > In article <PgZhi.908$eY....@newssvr13.news.prodigy.net>,
> > cledus <cle...@noemail.net> wrote:
>
> > < Snip >
>
> > Would you please have the decency to snip rec.radio.shortwave and other
> > groups from the newsgroup header. Thanks.
>
- Would you please come and ask nicely.
- I don't like how you put your order.

don bowey, Don Bowey. DON BOWEY !

Oh Please with Sugar and Spice and Everything Nice
snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group
from the Newsgroups {Distribution} Header when you
Post your Reply - It would be ever so decent of you
Kind and Wonder Sir. ;-)

thank you very much - most respectfully ~ RHF
.
.
. .

2705. Re: beverage antennas for transmitting?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 21:46:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <kneii.1329$4e5.674@trndny07>
Source record: 39163

The "Beverage" antenna (proper name of the inventor), will work as a transmit antenna, but is relatively lossy. it falls in the class of traveling wave antennas and being so close to the ground it has very good coupling to it which creates much of the loss. it can also be very directional like any long wire with multiple lobes depending on length and frequency.

"Juan M." <jdmollanNOSPAMPLEASE@juno.com> wrote in message news:FYedneiQJdgO5BXbnZ2dnUVZ_smonZ2d@centurytel.net...
> Most of us old timers know the beverage antenna is quite effective as a
> receiving antenna.
> Has anyone used it as a transmitting antenna?
>
>
>

2706. Re: Cleaning an aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-02 23:33:04 UTC
From: catfuel <catfuel@tds.net>
Message-ID: <QWfii.36121$G23.25375@newsreading01.news.tds.net>
Source record: 39164

Geoffrey S. Mendelson wrote:
> I have Cushraft 2m vertical antenna made out of aluminum. It has been
> sitting out in the weather for 10 years and could use a good cleaning.
>
> Anyone have any suggestions for common household products that would
> do the job?
>
> Thanks,
>
> Geoff.
I have taken aluminum antennas apart and cleaned the parts with a green 'scrubby' or Scotchbrite pad. it cleans the oxidation off well except if it is really pitted. After all the parts are clean and shiny, reassemble the antenna and adjust it for the frequency desired. After all is working well, clearcoat the assembled antenna with clear spraypaint. This also goes for the antenna connections as well. I tape them really well with scotch 88 electrical tape and then clearcoat the assy. I was in the commercial radio business awhile ago and learned this trick. The paint seals the aluminum from the elements and also seals any tiny holes that may be in the wrapping job. 73's Steve KA1LHZ

2707. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 00:16:18 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <295j83tp740ms16f6eij2ml46ta314lfnl@4ax.com>
Source record: 39166

On Wed, 27 Jun 2007 08:01:44 -0700, John Smith I
<assemblywizard@gmail.com> wrote:

>John Smith I wrote:
>> Actually, old news from 3 years ago ...
>>
>> http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>>
>> JS
>
>I am taking for granted that everyone realizes the inventor can be
>emailed directly:
>
>RVI3489U@URI.EDU
>
>Regards,
>JS
>
>

the spammers will love this, but he will regret your posting his url
openly.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2708. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 00:52:24 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <ILudnfZtI67VEhTbnZ2dnUVZ_iydnZ2d@bright.net>
Source record: 39165

Dear Rick: Sorry to have received the call-sign incorrectly. Your
Father's call does not ring any bells.

The main reason for two sections above a house bracket is because of the
significantly greater probability of greater wind pressure on the two
sections compared to three sections that start at ground level. You also
expect to have more effective area for the greater wind pressure to work on.

I have become convinced that the reason few urban TV/FM antennas and
Rohn 20 (no cross braces) towers fail is because of a dramatic reduction in
wind pressure up to about 35 feet above ground in a typical urban
environment.

The real limitation (for you) may turn out to be due to the building
code used in your area. When the time comes to have a serious antenna tower
for HF, do find a professional engineer licensed in your State who's advice
about how to satisfy the building code and 222G will be worth every penny
you pay to him or her.

Warm regards, Mac N8TT

P.S. My neighbor K8DO still does things that give me the willies. Even
when I was young, I sure would not climb 50 feet of un-guyed Rohn 25.
Medical school instills rather more "confidence" than engineering schools
do.
--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.21.14.53.717482@from.qrz.com...
> On Sun, 01 Jul 2007 16:39:37 -0500, J. Mc Laughlin wrote:
>
> > > Two sections above guys next to the house is pushing prudence. With a
> > > clear area next to the proposed tower in the back, three sections with
> > > just a VHF antenna seems reasonable in view of your description.
>
> I'm curious why two sections above the guys, next to the house, is
> marginal but three sections self-supporting out in the open seems OK.
>
> Actually the three sections self-supporting would be as close to the house
> on one end as the guyed tower is on the other end.
>
> Perhaps the tribander on the guyed tower makes the difference, but in
> truth I think the chances are fairly slim that I'll end up doing that. I
> have two inverted vees and two NVIS dipoles, which together cover 160
> through 40, which these days are the only HF bands that really hold my

> interest... I never was much of a DX hound and with the Internet and
> satellite phones, it doesn't seem like hardly anybody wants to pass any
> traffic or run phone patches anymore. Perhaps when the sunspots get more
> favorable I'll re-think the notion of the tribander but until then it's
> probably pretty low on the priority list.
>

2709. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 00:53:56 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <177j83pllbferg01uqjink0drl182lqpks@4ax.com>
Source record: 39167

On Sat, 30 Jun 2007 18:23:41 -0700, nm5k@wt.net wrote:

>On Jun 30, 6:51 pm, John Smith I <assemblywiz...@gmail.com> wrote:
>> n...@wt.net wrote:
>>
>> > ...
>>
>> > That ain't no joke. And nursing homes are bad too.. My mother is in
>> > one of those now after two strokes, and I have to watch them all the
>> > time. They can get pretty sloppy if they think no one is watching.
>> > So I sneak up on them fairly often, just to keep them on their
>> > toes.
>> > Welcome back Walt, and hope the recovery is quick.
>> > MK
>>
>> Here in the central valley of CA, they have imported a bunch of low wage
>> filipinos, trained in the philippines, rest are most likely illegal
>> aliens, latino mostly, all lazy and dumb as wood.
>>
>> I wouldn't want 'em watchin' my dog why I was on vacation!
>>
>> I don't know what we are going to do when our mom has to go into
>> one--only thing us children are sure of--she ain't goin' in one!
>>
>> Regards,
>> JS
>
>
>We didn't have much choice. She is pretty much immobile and
>can't really do anything on her own, including going to the
>bathroom, etc.. Insurance will not cover full time help at home,
>only 1-2 hour visits. So that was out. The one she is at now
>is outside of Houston a bit, in a smaller town setting.

25 years ago when my mother's health was failing we hired
round-the-clock, in home help. The cost was little different than a
nursing home and that would not have been covered back then either.
OTOH they also had food and lodging. Bout the time they started we
discovered my dad had cancer so they ended up doing double duty. That
lasted for a couple of years but at least they were able to stay home
and the cost was almost the same.

>Almost all the workers are from that area.
>She is not crazy about nursing home life, but she realizes
>she is really better off there, than trying to live at home.

>There is no way I could take care of her by myself.
>She's very hard to move, as pretty much just dead weight,
>and she would end up falling and breaking a hip, or worse.
>She has very little balance at all, even just sitting up in a
>chair. She'll fall right over if nothing is there to stop her.
>Besides that, she really needs a women to help her
>go to the bathroom, shower, etc.. So there it is...
>MK

2710. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 00:57:19 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <ql7j839auhp1for6elgbpuhec19iu2u7bf@4ax.com>
Source record: 39168

On Mon, 2 Jul 2007 19:52:24 -0500, "J. Mc Laughlin"
<jcm@power-net.net> wrote:

>Dear Rick: Sorry to have received the call-sign incorrectly. Your
>Father's call does not ring any bells.
>
> The main reason for two sections above a house bracket is because of the
>significantly greater probability of greater wind pressure on the two
>sections compared to three sections that start at ground level. You also
>expect to have more effective area for the greater wind pressure to work on.
>
> I have become convinced that the reason few urban TV/FM antennas and
>Rohn 20 (no cross braces) towers fail is because of a dramatic reduction in
>wind pressure up to about 35 feet above ground in a typical urban
>environment.
>
> The real limitation (for you) may turn out to be due to the building
>code used in your area. When the time comes to have a serious antenna tower
>for HF, do find a professional engineer licensed in your State who's advice
>about how to satisfy the building code and 222G will be worth every penny
>you pay to him or her.
>
> Warm regards, Mac N8TT
>
>P.S. My neighbor K8DO still does things that give me the willies. Even
>when I was young, I sure would not climb 50 feet of un-guyed Rohn 25.
>Medical school instills rather more "confidence" than engineering schools
>do.

Shucks, I met him way before he became so conservative.

2711. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 01:23:42 UTC
From: szilagyic@gmail.com
Message-ID: <1183425822.654975.200400@m37g2000prh.googlegroups.com>
Source record: 39169
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 2, 3:56 pm, G-squared <stratu...@yahoo.com> wrote:
> On Jul 2, 10:49 am, szilagyic <c...@groupinfo.com> wrote:
> > Hello:
> >
> > I have been trying to find the answer to my question on the front-
> to-
> > back ratio on UHF antennas, and so far have been unsuccessful.
> >
> > I think I understand what the front-to-back ratio is, but the specs
> on
> > my Winegard PR-8800 (8 bay bowtie) show negative front-to-back
> ratios
> > (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69).
> The
> > "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11
> dB @
> > ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be
> negative,
> > and is this good or bad? I am assuming this could be bad in my
> case
> > as I would like the signal at the back of the antenna to be
> minimal.
> >
> > I am currently trying to improve our HDTV reception. I currently
> have
> > the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast
> > amp. This antenna works very well overall. But from time to time,
> on
> > a couple channels the HD signal strength will drop all the way
> down,
> > enough to drop the signal or cause break-up. I've been considering
> a
> > Winegard HD9095P or PR9032 to use in conjunction with the PR-8800
> > since they have a higher gain than the PR-8800, then rotate the
> > PR-8800 the other way to receive some different stations.
> >
> > I really appreciate the help and feedback on this!!
> >
> > Thanks,
> > --
> > Chris
>
> 30 dB is quite a bit of gain on top of a decent gain antenna. If

> you're _far_ from the stations OR they're still running reduced power
> it can be justified but as a point of reference, I use a Winegard
> squareshooter (4-5 dB gain), no amplifier split 4 ways with 100' of
> RG-6 35 miles from the LA transmitters. SIgnal strength reported as
> 80% on the HDTV Wonders. I wonder if perhaps you're almost overloading
> either the preamp or the front-end of the TV.
>
> As Bert mentioned, the negative front-to-back number just referencing
> the front gain of the antenna.
>
> Again, I wouldn't use so 'much' preamp unless I was 50+ miles from the
> nearest station.
>
> GG

I'm about 45 miles from the stations that are dropping. I'm not sure
if they are at reduced power, my guess is they might be as other
stations near the same area come in a lot better with consistently
higher signal strength.

I will experiment with the gain on the amp and post any positive
results. Thanks for the info on that and on the front-to-back ratio.

--
Chris

2712. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 01:27:20 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6c8mg$df9$1@nnrp.linuxfan.it>
Source record: 39170

Buck wrote:

> ...
> the spammers will love this, but he will regret your posting his url
> openly.

Naaa ...

He works at a university, trust me, if he can't stop the spam from being in his mailbox, a co-worker/student can!

Ever try gmail? That one simple tool allows me to freely give out my email ... if the spammers get though it, I will evoke other counter measures ... spam is only a problem for the computer illiterate ...

JS

2713. How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 01:30:02 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183426202.090405.75900@d30g2000prg.googlegroups.com>
Source record: 39171
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On Jul 1, 4:34 pm, Jeff Liebermann <j...@cruzio.com> wrote in
http://groups.google.com/group/sci.electronics.basics/msg/41b78aad0ad94699?hl=en&
:
> Tommy Tootles <t...@toot.com> hath wroth:
>
> >Jeff Liebermann wrote:
>
> >> 40KHz thru 285Khz? Great idea. Just one minor problem. A 1/4 wave
> >> antenna at about 100Khz frequency is 750 meters long. That's going to
> >> be a rather large antenna for literally dragging behind you.
> >Well, your math is correct. However, the so-called "atomic" wrist
> >watches receive their time signal from WWVB which transmits at 60kHz.
>
> Yes, but the original derranged rantings required that *AUDIO* be
> used. This was suppose to be some kind of replacement for cellular.
> None of the long wave time standards belch audio like the short wave
> WWV stations.
>
> However, these time code transmitters operate at RF frequencies as low
> as 20KHz (mostly in Russia). See:
> <http://www.npl.co.uk/time/measurement_time/time_trans.html> (2002)
>
> >How do they get that 1250 meter long antenna (1/4 wave at 60 kHz)
> >inside that itty bitty wrist watch case? ;-)
>
> Touche and good question. Most of the desktop variety have a ferrite
> rod loaded with lots of fine wire. I have several like this, one with
> an external rod. However, that's obviously not going to work in a
> wristwatch unit. I don't have any idea what's inside or how the
> antenna done, but I can guess(tm). Here's one way:
> <http://www.leapsecond.com/pages/atomic-bill/>
>
> The question has been asked before:
> <http://www.eham.net/forums/Elmers/148090>
> However, no real description of what's inside the wristwatch.
>
> Going to the source:
> <http://tf.nist.gov/stations/radioclocks.htm>
> NIST Recommended Practices for WWVB receivers.
> <http://tf.nist.gov/general/pdf/1976.pdf> (See section 8A)
> "We recommend that RCC products should be sensitive enough
> to successfully synchronize to signals from WWVB with a field

> strength of 50 uV/m, if the signal to noise ratio exceeds 20 dB.
> The RF bandwidth of the receiver should be narrow, typically
> =B110 Hz or less."
> and:
> "Wristwatch antennas should not be contained in the band,
> so that RCC watch bands can be replaced in the same manner
> as the bands of ordinary watches when they are damaged or
> worn out."
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> So much for the antenna in the wrist band idea. So, the question is,
> what type of tiny antenna will work with such a field strength at
> 60KHz. I dug through the FCC ID web pile looking for an inside photo
> of Casio watch, but couldn't find anything. I'm gonna have to either
> break one open, and/or calculate the field strength of a very small
> ferrite rod antenna (later).
>
> --
> Jeff Liebermann j...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

Sorry, I am now extremely interested and frustrated about how the wristwatch can be so tiny yet receive so long-wave signals.

Just how does such a magical device work? It seems to defy laws of science that such a small device can operate at such long-wavelengths of radio waves.

I suspect it's probably something those FBI/CIA bastards are going to keep secret from us.

Sick government f---scums. USA citizens should turn against the FBI/CIA and molest the f---ing s--- out of their colons using bubbas' c--ks.

I want to know how such a tiny device can operate at such a long wavelength. Unfortunately, that info is classified by the FBI/CIA, and then won't let me or any USA citizen find out about it.

I am getting so pissed off right now.

I am so interested in this wristwatch question yet I am so angry about it because the FBI/CIA won't let me know about it.

F--k the CIA/FBI, may they be raped by big bubbas.

No offense but please respond with reasonable answers & keep out the jokes, off-topic nonsense, taunts, insults, and trivializations. I am really interested in this.

2714. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 01:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <simol4-io7.ln1@mail.specsol.com>
Source record: 39172
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:

> Sorry, I am now extremely interested and frustrated about how the
> wristwatch can be so tiny yet receive so long-wave signals.

> Just how does such a magical device work? It seems to defy laws of
> science that such a small device can operate at such long-wavelengths
> of radio waves.

Have you ever seen a portable AM radio, e.g. a Walkman?

<snip remaining idiocy>

Idiot troll.

--
Jim Pennino

Remove .spam.sux to reply.

2715. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:07:17 UTC
From: gyansorova@gmail.com
Message-ID: <1183428437.985830.66250@x35g2000prf.googlegroups.com>
Source record: 39173
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On Jul 3, 1:30 pm, Radium <gluceg...@gmail.com> wrote:
> On Jul 1, 4:34 pm, Jeff Liebermann <j...@cruzio.com> wrote
inhttp://groups.google.com/group/sci.electronics.basics/msg/41b78aad0ad...
> :
>
>
>
> > Tommy Tootles <t...@toot.com> hath wroth:
>
> > >Jeff Liebermann wrote:
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> > >> antenna at about 100Khz frequency is 750 meters long. That's going to
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> > >watches receive their time signal from WWVB which transmits at 60kHz.
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> > used. This was suppose to be some kind of replacement for cellular.
> > None of the long wave time standards belch audio like the short wave
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> > However, these time code transmitters operate at RF frequencies as low
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> > <http://www.npl.co.uk/time/measurement_time/time_trans.html> (2002)
>
> > >How do they get that 1250 meter long antenna (1/4 wave at 60 kHz)
> > >inside that itty bitty wrist watch case? ;-)
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> > rod loaded with lots of fine wire. I have several like this, one with
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> > <http://www.leapsecond.com/pages/atomic-bill/>
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> > The question has been asked before:
> > <http://www.eham.net/forums/Elmers/148090>
> > However, no real description of what's inside the wristwatch.
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> > Going to the source:
> > <http://tf.nist.gov/stations/radioclocks.htm>

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> > to successfully synchronize to signals from WWVB with a field
> > strength of 50 uV/m, if the signal to noise ratio exceeds 20 dB.
> > The RF bandwidth of the receiver should be narrow, typically
> > =B110 Hz or less."
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> > "Wristwatch antennas should not be contained in the band,
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> > of Casio watch, but couldn't find anything. I'm gonna have to either
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> > ferrite rod antenna (later).
>
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> > Jeff Liebermann j...@cruzio.com
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> > Santa Cruz CA 95060http://802.11junk.com
> > Skype: JeffLiebermann AE6KS 831-336-2558
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> F--k the CIA/FBI, may they be raped by big bubbas.

>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.

Normally they can coil the aerial inside the device either as a real
coil or on an IC. This takes a lot of space however.

2716. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:09:54 UTC
From: dplatt@radagast.org
Message-ID: <ionol4-335.ln1@radagast.org>
Source record: 39174
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

In article <1183426202.090405.75900@d30g2000prg.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:
>> Going to the source:
>> <http://tf.nist.gov/stations/radioclocks.htm>
>> NIST Recommended Practices for WWVB receivers.
>> <http://tf.nist.gov/general/pdf/1976.pdf> (See section 8A)
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>> to successfully synchronize to signals from WWVB with a field
>> strength of 50 uV/m, if the signal to noise ratio exceeds 20 dB.
>> The RF bandwidth of the receiver should be narrow, typically
>> =B110 Hz or less."
>> and:
>> "Wristwatch antennas should not be contained in the band,
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>> of Casio watch, but couldn't find anything. I'm gonna have to either
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>> ferrite rod antenna (later).
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>> --
>> Jeff Liebermann j...@cruzio.com
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>Just how does such a magical device work? It seems to defy laws of
>science that such a small device can operate at such long-wavelengths
>of radio waves.
>
>I suspect it's probably something those FBI/CIA bastards are going to
>keep secret from us.... >>SNIP<<

$DEITY, man, get a grip on yourself, OK? This is *old* technology - a
similar method has been used in AM radios for decades, dating to back

before the transistor was invented. There is nothing at all tricky,
or hidden/concealed about it.

>No offense but please respond with reasonable answers & keep out the
>jokes, off-topic nonsense, taunts, insults, and trivializations. I am
>really interested in this.

So, go "back to the source" just as the previous poster did.

A quick Google on the phrase "wwv watch antenna ferrite" turns up, as
its very first alternative, the following:

http://tf.nist.gov/general/pdf/1877.pdf

which is a very nice overview of radio controlled clocks, courtesy of
the United States Government (specifically, the National Institute of
Standards and Technology).

On Page 11 you'll see a clear photo of the sort of antenna used in a
WWVB-capable desk clock. It's a standard ferrite loop antenna.

On the following page you'll see a photo of the innards of a
WWVB-capable watch. It has a similar (although smaller)
ferrite-loaded loop antenna.

If you go to http://www.mas-oy.com/data/MAS_docu_AR.htm you'll find
the web site (with data sheets) for WWVB receiver chips. Download the
MAS9180 data sheet. You'll see schematics, which show how a
ferrite-loaded antenna is combined with a capacitor, creating a
resonant circuit tuned to the 60 kHz (or whatever) radio signal.

The trick is fundamentally no different that the one used in an
ordinary battery-powered AM broadcast radio, which (in the older
designs) uses a ferrite-core multi-turn loop antenna, tuned to
resonate at AM broadcast frequencies using a variable capacitor
(typically a 365 pF maximum). The WWVB frequency is about 10% that of
signals at the low end of the AM broadcast band, so it's necessary to
use a larger-value capacitor to tune any given amount of ferrite
antenna inductance to the desired frequency, but it's the same method.

As to how it works... well, think of it this way (and this is just an
approximation). The high magnetic permeability of the ferrite acts as
a sort of "concentrator", so that more of the transmitted EM field
flows through the antenna than would be the case if the antenna had an
air or plastic core. And, the large number of turns of wire on the
antenna both increases the amount of signal produced by the EM field,
and adds enough inductance that it's possible to tune the antenna to
resonance with a reasonable-sized capacitor.

Google on "small loop antennas" for more background.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior

I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2717. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:14:32 UTC
From: gyansorova@gmail.com
Message-ID: <1183428872.361026.274170@o11g2000prd.googlegroups.com>
Source record: 39175
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On Jul 3, 2:09 pm, dpl...@radagast.org (Dave Platt) wrote:
> In article <1183426202.090405.75...@d30g2000prg.googlegroups.com>,
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> Dave Platt <dpl...@radagast.org> AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

http://www.st-andrews.ac.uk/~jcgl/Scots_Guide/RadCom/part7/page5.html

2718. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:29:34 UTC
From: Paul Cardinale <pcardinale@volcanomail.com>
Message-ID: <1183429774.717106.85500@m36g2000hse.googlegroups.com>
Source record: 39176
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Radium wrote:

[snip]

>
> Sorry, I am now extremely interested and frustrated about how the
> wristwatch can be so tiny yet receive so long-wave signals.
>
> Just how does such a magical device work? It seems to defy laws of
> science that such a small device can operate at such long-wavelengths
> of radio waves.
>
> I suspect it's probably something those FBI/CIA bastards are going to
> keep secret from us.
>

If you weren't a babbling imbecile you would realize that the fact
that you can buy a wristwatch with a LW receiver in it means that the
technology is not classified (or do you harbor the delusion that the
FBI/CIA [sic] makes the watches?)

Paul Cardinale

2719. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:55:10 UTC
From: Tom Ring <news0003@taring.org>
Message-ID: <4689ba7c$0$21256$39cecf19@news.twtelecom.net>
Source record: 39177

Walter Maxwell wrote:
> Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection, after which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and a cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU
>

Welcome back.

tom
K0TAR

2720. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 02:59:07 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183431547.919240.262320@i13g2000prf.googlegroups.com>
Source record: 39178
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On Jul 2, 7:29 pm, Paul Cardinale <pcardin...@volcanomail.com> wrote:

> If you weren't a babbling imbecile you would realize that the fact
> that you can buy a wristwatch with a LW receiver in it means that the
> technology is not classified (or do you harbor the delusion that the
> FBI/CIA [sic] makes the watches?)

In the thread where I talk about analog cell phones using AM radio
between 40 KHz - 285Khz, responders told me that it is impractical
because the receiver would need to be too big to be portable.

Then the topic of how wrist-watches can receiver long-wave while still
being so small began.

>From the links and from what the responders said -- in that thread, it
seemed that there just wasn't any explanation as to how wrist-watches
could operate in long-wave.

Usually with weird gadgetry like this, I tend to believe someone [or a
lot of someones] is/are attempting to cover up a new type of
technology that somehow exists and functions despite defying
conventional laws of science.

I then get extremely curious, jealous, and angry and want to forcibly
get information as to how it is possible for that device to work. I
want to torture the designers -- who I believe are the CIA/FBI -- into
providing me the information. Its only human nature to be interested
in things that seem too good to be true yet are still possible and
existing with full functionality.

I start to believe only the CIA/FBI could be doing something like this
because they are the smartest and most evil bastards in the universe.
Cold-hearted CIA f-kfoams.

I get the feeling that the exploitative sadistic CIA/FBI know about
science that ordinary USA citizens are not allowed to know about.

I then want the CIA/FBI to suffer for what I perceive as their
"stinginess".

Anyways...

So I guess it is possible to have analog AM cell phones operating
between 40 KHz and 285 KHz that are the same small size as today's
cell phones. Right? If it's not possible then why not? If a wrist

watch can do it, then why not a cell phone?

2721. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 03:11:58 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <28jii.3352$zA4.2567@newsread3.news.pas.earthlink.net>
Source record: 39179
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Radium wrote:
> So I guess it is possible to have analog AM cell phones operating
> between 40 KHz and 285 KHz that are the same small size as today's
> cell phones. Right? If it's not possible then why not? If a wrist
> watch can do it, then why not a cell phone?

If a wrist watch can to what? Transmit a signal? They don't, they only
receive.

2722. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 03:14:19 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <fajii.3353$zA4.535@newsread3.news.pas.earthlink.net>
Source record: 39180
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Radium wrote:
> So I guess it is possible to have analog AM cell phones operating
> between 40 KHz and 285 KHz that are the same small size as today's
> cell phones. Right? If it's not possible then why not? If a wrist
> watch can do it, then why not a cell phone?

Actually, this thread or logic reminds me of a redneck wanting me to
connect his 40 watt car stereo amplifier to his CB radio 30 years ago.

2723. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 03:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <k7rol4-fhk.ln1@mail.specsol.com>
Source record: 39181
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:

<snip idiocy>

> So I guess it is possible to have analog AM cell phones operating
> between 40 KHz and 285 KHz that are the same small size as today's
> cell phones. Right? If it's not possible then why not? If a wrist
> watch can do it, then why not a cell phone?

Bandwidth, you babbling idiot.

--
Jim Pennino

Remove .spam.sux to reply.

2724. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 03:29:51 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <Rojii.23847$C96.18921@newssvr23.news.prodigy.net>
Source record: 39182
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Actually, most likely, the reason these work, is
because you (and most people) live under the
Biggest Long-Wave Antenna around (Power lines,
telephone cables, TV cables, ect)! And, those
that doubt, tell me the range with a lousy
antenna, that Jim Creek, and Ect. can be copied!
this is around 18 KHz ! Corse, doent hurt
to have a massive antenna, and beaucoup power
! BTW, THAT signal is also used to sync
generators on the Power Grid (wonder what
would happen in a power co got even 1%
out of phase? Answer: Meltdown! Jim NN7K

DTC wrote:
> Radium wrote:
>> So I guess it is possible to have analog AM cell phones operating
>> between 40 KHz and 285 KHz that are the same small size as today's
>> cell phones. Right? If it's not possible then why not? If a wrist
>> watch can do it, then why not a cell phone?
>
> If a wrist watch can to what? Transmit a signal? They don't, they only
> receive.
>

2725. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 03:56:29 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <s3gj83tj8df8ir8o4hal89tvthqsi16l6r@4ax.com>
Source record: 39183
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Radium <glucegen1@gmail.com> hath wroth:

>Sorry, I am now extremely interested and frustrated about how the
>wristwatch can be so tiny yet receive so long-wave signals.

Oh, miniaturization is easy. I prefer the laundry method. Throw the laundry into the washer, add boiling water, and everything shrinks. Do it often enough and your clothes become miniaturized. It's the same way with electronics. Boil the watch in water and it will shrink. Try it.

You can also manipulate the waves. Long waves are nothing more than short waves, that have been passed through a medium that slows them down (e.g. slow glass). Slow down the short waves enough, and they become long waves. So, the WWVB watch is really working with stretched short waves.

There are other methods of component and size reduction. For example, simply leaving the watch in an exposed location will often make it disappear completely, the ultimate form of miniaturization.

>Just how does such a magical device work?

It works quite well. If it didn't, there's always the limited warranty.

>It seems to defy laws of
>science that such a small device can operate at such long-wavelengths
>of radio waves.

Yeah, that's a problem. Breaking the laws of science is quite common and generally accepted. Just watch any action movie and see how many physical laws are broken. If you defy a huge number of physical laws, it's called science fiction. The problem is that there is no physics police to enforce the laws and apply appropriate penalties to the violators. The last time that was tried was during the Inquisition. It failed. I wouldn't worry about defying the laws of science as it's unlikely that you'll serve any time or pay any fines.

>I suspect it's probably something those FBI/CIA bastards are going to
>keep secret from us.

It's secret for your own safety and welfare. Were you to be properly educated, informed, and receive a diploma at public expense, I suspect the required effort and cost would bankrupt the country. Therefore,

keeping you ignorant is economically justifiable. Try not to take it personally.

>I want to know how such a tiny device can operate at such a long
>wavelength. Unfortunately, that info is classified by the FBI/CIA, and
>then won't let me or any USA citizen find out about it.

Well, I guess it's safe to tell you. Please don't redistribute the arcane knowledge to the GUM (great unwashed masses).

The WWVB watch is not really miniaturized. The greater bulk of the circuitry is hidden in another dimension. String theory postulates 10 or 11 dimensions, so there are plenty of spare places (branes) to hide bulky and awkward circuitry. What you're carrying on your wrist is only a small part of the receiver, as the rest is invisible. I hope this helps.

>I am getting so pissed off right now.

Off? I don't think it would help if you tried getting pissed on.

>I am so interested in this wristwatch question yet I am so angry about
>it because the FBI/CIA won't let me know about it.

Yeah, that's a problem when the government controls your brane.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2726. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:09:43 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-BFBA93.21094302072007@newsclstr03.news.prodigy.net>
Source record: 39184
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2AE48C8.6D094%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/1/07 10:06 PM, in article
> telamon_spamshield-142DD0.22065601072007@newsclstr03.news.prodigy.net,
> "Telamon" <telamon_spamshield@pacbell.net.is.invalid> wrote:
>
> > In article <PgZhi.908$eY.131@newssvr13.news.prodigy.net>,
> > cledus <cledus@noemail.net> wrote:
> >
> > < Snip >
> >
> > Would you please have the decency to snip rec.radio.shortwave and other
> > groups from the newsgroup header. Thanks.
>
> Would you please come and ask nicely. I don't like how you put your order.

This is a stupid cross posted Troll thread so pretty please with sugar
on it snip the other news groups it does not originate from. Thank you
very, very much in advance.

--
Telamon
Ventura, California

2727. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:35:53 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183437353.084132.252860@e16g2000pri.googlegroups.com>
Source record: 39185
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 2, 9:09 pm, Telamon <telamon_spamshi...@pacbell.net.is.invalid>
wrote:
> In article <C2AE48C8.6D094%dbo...@comcast.net>,
> Don Bowey <dbo...@comcast.net> wrote:
>
> > On 7/1/07 10:06 PM, in article
> > telamon_spamshield-142DD0.22065601072...@newsclstr03.news.prodigy.net,
> > "Telamon" <telamon_spamshi...@pacbell.net.is.invalid> wrote:
>
> > > In article <PgZhi.908$eY....@newssvr13.news.prodigy.net>,
> > > cledus <cle...@noemail.net> wrote:
>
> > > < Snip >
>
> > > Would you please have the decency to snip rec.radio.shortwave and other
> > > groups from the newsgroup header. Thanks.
>
> > Would you please come and ask nicely. I don't like how you put your order.
>
> This is a stupid cross posted Troll thread so pretty please with sugar
> on it snip the other news groups it does not originate from. Thank you
> very, very much in advance.
>
> --
> Telamon
> Ventura, California

Bravo ! ;o} ~ RHF
```

2728. Re: AM electromagnetic waves: astronomically-high modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:37:11 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <Xnkii.41666$s57.15964@newsfe07.phx>
Source record: 39187
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

"Martin" <mrbgoogle@hotmail.com> wrote in message
news:1183049755.531767.139580@o61g2000hsh.googlegroups.com...
>
< snip >

> Your troll-o-meter is defective, it should be pegged hard in the red
> zone.
> Please have it recalibrated to a proper sensitivity.

Big laugh -- TKS

2729. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:37:51 UTC
From: Rick Frazier <rickf@rickfrazier.com>
Message-ID: <4689d263$0$3142$4c368faf@roadrunner.com>
Source record: 39186
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

szilagyic wrote:
> Hello:
>
> I have been trying to find the answer to my question on the front-to-
> back ratio on UHF antennas, and so far have been unsuccessful.
>
> I think I understand what the front-to-back ratio is, but the specs on
> my Winegard PR-8800 (8 bay bowtie) show negative front-to-back ratios
> (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69). The
> "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11 dB @
> ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be negative,
> and is this good or bad? I am assuming this could be bad in my case
> as I would like the signal at the back of the antenna to be minimal.
>
> I am currently trying to improve our HDTV reception. I currently have
> the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast
> amp. This antenna works very well overall. But from time to time, on
> a couple channels the HD signal strength will drop all the way down,
> enough to drop the signal or cause break-up. I've been considering a
> Winegard HD9095P or PR9032 to use in conjunction with the PR-8800
> since they have a higher gain than the PR-8800, then rotate the
> PR-8800 the other way to receive some different stations.
>
> I really appreciate the help and feedback on this!!
>
> Thanks,
> --
> Chris
>
1) If you can, you'd be better off if you can get it out of the attic,
as UHF doesn't like roofing and other stuff between your antenna and the
signal source. (I think this has already been mentioned). Getting it
up in the air above the roof may help a bit, but it is always worth
trying various heights to find the "sweet spot". Antenna reception
isn't always quite like the theories would indicate...

2) UHF is also really susceptible to reflection. If you recieve the
direct signal and a reflected signal at the same time (the reflected
signal typically will be out of phase and tend to reduce the direct
signal, or if severe, look like ghosts on analog) you will have
difficulties during reception of the reflection. One place I lived had
a periodic loss of signal (didn't actually go away, just got
messy/snowy, it was in the analog days). Signal would get bad from a

half to a couple of seconds, and had an odd period. Certain times of day it was every couple of minutes, other times it took hours to show up. After beating around for a long time, discovered the problem seemed to be related to reflection off of jets taking off from an airport partway between us and the transmitter site... In messing about with the antenna, found an "off axis" reflection off of something on a hill offside to us (antenna was swung about 30 degrees to one side off of direct line of sight) and, though the signal was a bit lower overall, the periodic fading disappeared completely....

3) Radio Shack amplifiers tend to be way over-hyped. They rarely meet the specs they claim, and tend to be somewhat unstable over time. Better to get a commercial TV brand than Radio Shack, if you've a chouce. If you're into home brew, you could use one of the mini-circuits monolithic amplifiers and know you have decent gain. They're pretty easy to work with, even at UHF frequencies, and stable to boot. If you're really getting 30db from the Radio Shack amp, look at the coax between your antenna and the receiver. Good quality coax can help keep the signal you've taken so much care to obtain.

4) just for grins, try the exsisting system outside the attic without the amplifier and see if you have a decent level of signal. You may be surprised to see it isn't as bad as you think. As one person suggested, you may actually have too much gain in the amplifier (though with RS, you're actual gain may change with temperature and seemingly even the phase of the moon...)

Not familiar with the model of antenna you have, though the "typical" double bow tie (with 4 copies in your case)are mounted in front of a mesh screen. In your case it looks like open elements as a reflector. Sometimes you can get a better front to back ratio by adding a solid reflector in place of the mesh/reflector rods. I would think in your case it would help, and wouldn't take much trouble to try. Front to back ratio is just that, the ratio of signal between what is received from the front and the back of the antenna. A front to back ratio of 3db means you have twice the amount recieved from the front than the back. A high front to back means you will be essentially "blocking" potential interference from the back side of the antenna by the ratio indicated.

10 or 12 db of forward gain means your recieved signal is about 10 to 16 times as strong as a dipole hanging in the air. If you interpret the negative number as the amount the signal is down from the forward gain, the numbers given (9 to 17db) would indicate reception off the back side would be somewhere near a dipole in open space (1 db net) to -5db (about 1/3 of the signal of a dipole) pickup from the back. I have used aluminum sheet (tested prior with aluminum foil) tied to the mesh to completely block reception from the back (a near infinite front to back ratio) in an extreme case where I had significant multipath reflections coming in from the back. It really cleaned things up. In your case you may not need to go to this rather severe step.

Looking at alternate antennas, the two you've indicated would likely help, but you're only getting about 3db better signal (double the power). They do have narrower beamwidth, so if your interference is coming off axis, you may be able to use one of these to solve your problem. Personally, I tend to like this type of antenna over the big flat looking bowties. Especially out in the weather, there's only a single connection to worry about, rather than the phasing array connecting the 8 separate bow ties of the one you have now.

Another alternative to higher gain antennas would be if you have all of your HDTV channels in the same relative band. Antennas like you've looked at so far are compromises because they are set up for the entire UHF channel set. If you have a relatively small set of close by channels, you could get an antenna that is better matched to that set. (I haven't looked in about 10 or 12 years, but you used to be able to purchase antennas optimized for about a 10 channel spread, and they had great gain and front to back specs.)

Hope you're not in an antenna restricted neighborhood, they can be the pits to deal with. If you've currently got the bow tie in the attic due to your neighborhood, look around and see if there's a place at one end of the attic where you can pretty much shoot through a single wall. Replacing the wallboard/t1-11/sheathing/siding with a plastic panel that is about the size of the antenna reflector area could help increase the signal strength without replacing the antenna. Of course, before getting this drastic, I'd mount it temporarily outside of the attic at that location first to see if it actually helps...

Good luck!
--Rick AH7H

2730. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:46:45 UTC
From: "Juan M." <jdmollanNOSPAMPLEASE@juno.com>
Message-ID: <y_2dnagZt4w-SRTbnZ2dnUVZ_oKnnZ2d@centurytel.net>
Source record: 39188
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"Rick Frazier" <rickf@rickfrazier.com> wrote in message
news:4689d263$0$3142$4c368faf@roadrunner.com...
> szilagyic wrote:
>> Hello:
>>
>> I have been trying to find the answer to my question on the front-to-
>> back ratio on UHF antennas, and so far have been unsuccessful.
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>> I think I understand what the front-to-back ratio is, but the specs on
>> my Winegard PR-8800 (8 bay bowtie) show negative front-to-back ratios
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>> "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11 dB @
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>> a couple channels the HD signal strength will drop all the way down,
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>> since they have a higher gain than the PR-8800, then rotate the
>> PR-8800 the other way to receive some different stations.
>>
>> I really appreciate the help and feedback on this!!
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>> Thanks,
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>> Chris
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> 1) If you can, you'd be better off if you can get it out of the attic, as
> UHF doesn't like roofing and other stuff between your antenna and the
> signal source. (I think this has already been mentioned). Getting it up
> in the air above the roof may help a bit, but it is always worth trying
> various heights to find the "sweet spot". Antenna reception isn't always
> quite like the theories would indicate...
>
> 2) UHF is also really susceptible to reflection. If you recieve the
> direct signal and a reflected signal at the same time (the reflected
> signal typically will be out of phase and tend to reduce the direct
> signal, or if severe, look like ghosts on analog) you will have
> difficulties during reception of the reflection. One place I lived had a

> periodic loss of signal (didn't actually go away, just got messy/snowy, it
> was in the analog days). Signal would get bad from a half to a couple of
> seconds, and had an odd period. Certain times of day it was every couple
> of minutes, other times it took hours to show up. After beating around for
> a long time, discovered the problem seemed to be related to reflection off
> of jets taking off from an airport partway between us and the transmitter
> site... In messing about with the antenna, found an "off axis"
> reflection off of something on a hill offside to us (antenna was swung
> about 30 degrees to one side off of direct line of sight) and, though the
> signal was a bit lower overall, the periodic fading disappeared
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> 3) Radio Shack amplifiers tend to be way over-hyped. They rarely meet the
> specs they claim, and tend to be somewhat unstable over time. Better to
> get a commercial TV brand than Radio Shack, if you've a chouce. If you're
> into home brew, you could use one of the mini-circuits monolithic
> amplifiers and know you have decent gain. They're pretty easy to work
> with, even at UHF frequencies, and stable to boot. If you're really
> getting 30db from the Radio Shack amp, look at the coax between your
> antenna and the receiver. Good quality coax can help keep the signal
> you've taken so much care to obtain.
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> 4) just for grins, try the exsisting system outside the attic without the
> amplifier and see if you have a decent level of signal. You may be
> surprised to see it isn't as bad as you think. As one person suggested,
> you may actually have too much gain in the amplifier (though with RS,
> you're actual gain may change with temperature and seemingly even the
> phase of the moon...)
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> screen. In your case it looks like open elements as a reflector.
> Sometimes you can get a better front to back ratio by adding a solid
> reflector in place of the mesh/reflector rods. I would think in your case
> it would help, and wouldn't take much trouble to try. Front to back ratio
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> and the back of the antenna. A front to back ratio of 3db means you have
> twice the amount recieved from the front than the back. A high front to
> back means you will be essentially "blocking" potential interference from
> the back side of the antenna by the ratio indicated.
>
> 10 or 12 db of forward gain means your recieved signal is about 10 to 16
> times as strong as a dipole hanging in the air. If you interpret the
> negative number as the amount the signal is down from the forward gain,
> the numbers given (9 to 17db) would indicate reception off the back side
> would be somewhere near a dipole in open space (1 db net) to -5db (about
> 1/3 of the signal of a dipole) pickup from the back. I have used aluminum
> sheet (tested prior with aluminum foil) tied to the mesh to completely
> block reception from the back (a near infinite front to back ratio) in an
> extreme case where I had significant multipath reflections coming in from

> the back. It really cleaned things up. In your case you may not need to
> go to this rather severe step.
>
> Looking at alternate antennas, the two you've indicated would likely help,
> but you're only getting about 3db better signal (double the power). They
> do have narrower beamwidth, so if your interference is coming off axis,
> you may be able to use one of these to solve your problem. Personally, I
> tend to like this type of antenna over the big flat looking bowties.
> Especially out in the weather, there's only a single connection to worry
> about, rather than the phasing array connecting the 8 separate bow ties of
> the one you have now.
>
> Another alternative to higher gain antennas would be if you have all of
> your HDTV channels in the same relative band. Antennas like you've looked
> at so far are compromises because they are set up for the entire UHF
> channel set. If you have a relatively small set of close by channels, you
> could get an antenna that is better matched to that set. (I haven't looked
> in about 10 or 12 years, but you used to be able to purchase antennas
> optimized for about a 10 channel spread, and they had great gain and front
> to back specs.)
>
> Hope you're not in an antenna restricted neighborhood, they can be the
> pits to deal with. If you've currently got the bow tie in the attic due
> to your neighborhood, look around and see if there's a place at one end of
> the attic where you can pretty much shoot through a single wall. Replacing
> the wallboard/t1-11/sheathing/siding with a plastic panel that is about
> the size of the antenna reflector area could help increase the signal
> strength without replacing the antenna. Of course, before getting this
> drastic, I'd mount it temporarily outside of the attic at that location
> first to see if it actually helps...
>
>
> Good luck!
> --Rick AH7H

Gee, I want an isotropic antenna!
After all, it's the standard for comparison.
(If you don't recognize this as an attempt at humor, then God bless you.)

2731. troll alert, Troll Alert. TROLL ALERT ! - Danger Will Robinson ! - Troll Alert . . .

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 04:52:55 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183438375.192682.235660@e9g2000prf.googlegroups.com>
Source record: 39189
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

On Jul 2, 9:37 pm, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> "Martin" <mrbgoo...@hotmail.com> wrote in message
>
> news:1183049755.531767.139580@o61g2000hsh.googlegroups.com...
>
> < snip >
>
> > Your troll-o-meter is defective, it should be pegged hard in the red
> > zone.
> > Please have it recalibrated to a proper sensitivity.
>
> Big laugh -- TKS

troll alert, Troll Alert. TROLL ALERT !
http://www.lostinspacerobot.com/
Danger Will Robinson ! - Troll Alert . . .
http://en.wikipedia.org/wiki/Danger%2C_Will_Robinson
.
.
. .

2732. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 05:15:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138jms9hvinoj86@corp.supernews.com>
Source record: 39190

I've been out of the country for three weeks during which Internet access was unexpectedly spotty. I did put a priority on answering email, however. Emailing me is a better way to get support for EZNEC than posting on a newsgroup -- assuming you purchased EZNEC rather than obtaining it by some other means. I apologize if I did fail to answer an email message. The volume has been too high to quite keep up with.

To answer the question: There's no way to add gain to an antenna pattern unless you want to save it in a trace (plot) file and modify the file. The binary file format is described in detail in the EZNEC manual.

It's easy, however, to reduce the gain of the other antenna -- just add a resistive load in the same segment as the source. You can reduce the gain by any amount you'd like by using this method.

Roy Lewallen, W7EL

amdx wrote:
> I'm comparing elevation plots of an antenna. They have different
> forward gains, this makes it difficult to compare the lobe shape.
>
> Is there a way to equalize the gains to do a comparison?
>
>
> Example: I have an antenna that is -19dbi and one that is -23dbi.
> Can I add 4db of gain to one to make the comparison easier?
> Mike
>
>

2733. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 05:20:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138jn4oguvomje5@corp.supernews.com>
Source record: 39191

By the way, with EZNEC v. 4.0 or higher, you can also get a direct readout of the difference in gains between the reference trace (the current model when in regular operation, or the primary trace in TraceView mode) and any added trace: After adding one or more traces, just click on the name of the desired comparison trace in the upper left corner of the 2D plot window. The gain difference is the last item in the right column in the data window below the plot.

Roy Lewallen, W7EL

Jim - NN7K wrote:
> Try this (with Eznec 5)
>
> Step 1 Open (or write) your file. . .

2734. Re: Help with EZNEC- Hey Roy!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 05:23:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138jnacolfpi529@corp.supernews.com>
Source record: 39192

Ian White GM3SEK wrote:
>
> FYI, Roy will be at the Friedrichshafen hamfest in Germany next week, so
> he may already be traveling.
>
> Like most travelers, he may have access to e-mail, but is unlikely to
> have a newsgroup feed.

True.

But the very pleasant dinner with Ian and his lovely wife was a much better way to spend an evening than sorting through the flotsam of a newsgroup!

Roy Lewallen, W7EL

2735. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 06:03:36 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4689e661$0$24779$4c368faf@roadrunner.com>
Source record: 39193
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Smith I" <assemblywizard@gmail.com> wrote in message
news:f64hg5$d3j$1@nnrp.linuxfan.it...
> Radium wrote:

<snip>

Suppose you have a 1 MHz sine wave whose amplitude
is multiplied by a 0.1 MHz sine wave.
What would it look like on an oscilloscope?
What would it look like on a spectrum analyzer?

Then suppose you have a 1.1 MHz sine wave added
to a 0.9 MHz sine wave.
What would that look like on an oscilloscope?
What would that look like on a spectrum analyzer?

2736. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 08:08:31 UTC
From: dil <spam@noprivacy.spam>
Message-ID: <4eadnVRxKM5onhfb4p2dnAA@bt.com>
Source record: 39194
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular

Ron Baker, Pluralitas! wrote:
> "John Smith I" <assemblywizard@gmail.com> wrote in message
> news:f64hg5$d3j$1@nnrp.linuxfan.it...
>> Radium wrote:
>
> <snip>
>
> Suppose you have a 1 MHz sine wave whose amplitude
> is multiplied by a 0.1 MHz sine wave.
> What would it look like on an oscilloscope?
> What would it look like on a spectrum analyzer?
>
> Then suppose you have a 1.1 MHz sine wave added
> to a 0.9 MHz sine wave.
> What would that look like on an oscilloscope?
> What would that look like on a spectrum analyzer?
>
>

2737. Enlighten us about your Tips on Managing Home & Family

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 09:01:24 UTC
From: merlin <merlin.disoza@gmail.com>
Message-ID: <1183453284.789550.143990@o11g2000prd.googlegroups.com>
Source record: 39195

Ever contributed articles about your expertise in home-keeping and family matters? Try koonji.com. Share your forte with the world in an easy to follow step by step how-to guide.

Koonji allows you to share, organize and enhance every kind of information. It redefines the way people search for and use information on the web. Share your expertise in home-remedies, great recipes, tips on managing family and lots more.

2738. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 11:08:34 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1183460914.924049.151890@q75g2000hsh.googlegroups.com>
Source record: 39196

On Jul 3, 1:15 am, Roy Lewallen <w...@eznec.com> wrote:
> I've been out of the country for three weeks during which Internet
> access was unexpectedly spotty. I did put a priority on answering email,
> however. Emailing me is a better way to get support for EZNEC than
> posting on a newsgroup -- assuming you purchased EZNEC rather than
> obtaining it by some other means. I apologize if I did fail to answer an
> email message. The volume has been too high to quite keep up with.
>
> To answer the question: There's no way to add gain to an antenna pattern
> unless you want to save it in a trace (plot) file and modify the file.
> The binary file format is described in detail in the EZNEC manual.
>
> It's easy, however, to reduce the gain of the other antenna -- just add
> a resistive load in the same segment as the source. You can reduce the
> gain by any amount you'd like by using this method.
>
> Roy Lewallen, W7EL
>
>
>
> amdx wrote:
> > I'm comparing elevation plots of an antenna. They have different
> > forward gains, this makes it difficult to compare the lobe shape.
>
> > Is there a way to equalize the gains to do a comparison?
>
> > Example: I have an antenna that is -19dbi and one that is -23dbi.
> > Can I add 4db of gain to one to make the comparison easier?
> > Mike- Hide quoted text -
>
> - Show quoted text -

Roy, I have a serious complaint about Eznec+ 5.0... I can't believe
you could drop the ball this badly... Come on man, get a grip... I
expect better of you...

Every time I click on the far field plot it now comes up so fast I
don't have time to get a sip from my beer... Ya know, I'm not a
camel! A man could die of thirst using this program... sheeeesh...

denny / k8do

2739. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 11:43:52 UTC
From: Christopher Cox <chrisTOPHERcOX@coboxincORORATED.com>
Message-ID: <468a3636$0$4904$4c368faf@roadrunner.com>
Source record: 39197
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

> I start to believe only the CIA/FBI could be doing something like this
> because they are the smartest and most evil bastards in the universe.
> Cold-hearted CIA f-kfoams.
>
> I get the feeling that the exploitative sadistic CIA/FBI know about
> science that ordinary USA citizens are not allowed to know about.
>
> I then want the CIA/FBI to suffer for what I perceive as their
> "stinginess".
>
> Anyways...
>
> So I guess it is possible to have analog AM cell phones operating
> between 40 KHz and 285 KHz that are the same small size as today's
> cell phones. Right? If it's not possible then why not? If a wrist
> watch can do it, then why not a cell phone?
>

All this for 245kHz of band space in a frequency area of high noise and
long propagation paths.

Engineering would dictate looking elsewhere.

But hey, you want to try, go ahead. I believe there are allocations in
the above spectrum for transmitting a couple watts into a antenna less
than three feet long. I would think a wrist watch transmitter would qualify.

Google up VLF, melt some solder, and let us know how you do.

Chris

2740. Length of Dipole / Inverted Vee with Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 12:20:02 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.03.12.20.01.189575@from.qrz.com>
Source record: 39198

I think I asked this question before some months ago but can't find it with google / dejanews and anyway I'm not entirely certain I fully understood the answer.

I am putting up an inverted vee fed with ladder line and a tuner, that I want to use from 160 through 10, but mostly on 160 through 40.

The space I have to put it up is large enough for a half wave on 160 and then some.

Since I am feeding with ladder line and a tuner, is there a particular advantage to cutting the antenna as a half wavelength on 160, or would I be just as well off to make it as long as I have space for without considering its actual resonant frequency?

2741. Re: Help with EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 12:42:16 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f6dg78$1igs$1@f04n12.cac.psu.edu>
Source record: 39199

Denny wrote:

>
> Roy, I have a serious complaint about Eznec+ 5.0... I can't believe
> you could drop the ball this badly... Come on man, get a grip... I
> expect better of you...
>
> Every time I click on the far field plot it now comes up so fast I
> don't have time to get a sip from my beer... Ya know, I'm not a
> camel! A man could die of thirst using this program... sheeeesh...

Just put it on a Vista machine. That'll slow anything down! ;^)

- 73 de Mike KB3EIA -

2742. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 12:52:03 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f6dgpj$17ri$1@f04n12.cac.psu.edu>
Source record: 39200

John Smith I wrote:
> Buck wrote:
>
> > ...
> > the spammers will love this, but he will regret your posting his url
> > openly.
>
> Naaa ...
>
> He works at a university, trust me, if he can't stop the spam from being
> in his mailbox, a co-worker/student can!
>
> Ever try gmail? That one simple tool allows me to freely give out my
> email ... if the spammers get though it, I will evoke other counter
> measures ... spam is only a problem for the computer illiterate ...

Who ever head of posting url's in a newsgroup? (joke)

That page appears to be the original one that came out in 2004. It's missing one part though. In the original release, there was a mention of how efficient the antenna was, proof cited was how when he turned the power up to 100 watts, the antenna melted. That part is gone. I googled up the thread to see if my memory was bad, but it wasn't. The release must have been revised.

So has there been a breakthrough in how the antenna maintains a constant current through it? Can we assume the voltage must be constant also?

- 73 de Mike KB3EIA -

2743. Re: Length of Dipole / Inverted Vee with Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 14:33:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <r7tii.1293$eY.749@newssvr13.news.prodigy.net>
Source record: 39201

Rick (W-A-one-R-K-T) wrote:
> Since I am feeding with ladder line and a tuner, is there a particular
> advantage to cutting the antenna as a half wavelength on 160, or would I
> be just as well off to make it as long as I have space for without
> considering its actual resonant frequency?

Fed with ladder-line, there is no particular advantage to making the dipole 1/2WL long. If the feedpoint impedance is 50 ohms, the SWR will be 9:1 on 450 ohm ladder-line. The impedance seen by the tuner will be some transformed impedance associated with that 9:1 SWR and can range up to 4050 ohms if the feedline length is 1/4WL. I personally like to feed a 75m 1/2WL dipole with 1/2WL of ladder-line to duplicate the antenna feedpoint impedance at the tuner but that results in an unwieldy ladder-line length of 233 feet on 160m.

In fact, one popular length for 160m is a 204 foot dipole center-fed with 60-100 foot of ladder-line. With 60 feet of ladder-line, it is known as the double-sized G5RV. With 60+ to 100 feet of ladder-line, the impedance seen by the tuner on 160m is fairly low with some inductive reactance.

Another consideration for dipole length is the EDZ length frequency. If you divide 1200 by the length of the dipole, you will get the EDZ frequency in MHz. Above the EDZ frequency, the radiation pattern breaks up into multiple lobes with a smaller amount of broadside radiation. The free demo version of EZNEC will predict the radiation patterns.
--
73, Cecil http://www.w5dxp.com

2744. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 14:39:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Hctii.1294$eY.1158@newssvr13.news.prodigy.net>
Source record: 39202

Michael Coslo wrote:
> So has there been a breakthrough in how the antenna maintains a
> constant current through it? Can we assume the voltage must be constant
> also?

If the ends of a 1/2WL dipole are terminated to
ground by ~1000 ohm resistors, the antenna current
is relatively constant. :-)
--
73, Cecil http://www.w5dxp.com

2745. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 14:44:29 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6dnd6$v5$1@nnrp.linuxfan.it>
Source record: 39203

Michael Coslo wrote:
> ... It's
> missing one part though. In the original release, there was a mention of
> how efficient the antenna was, proof cited was how when he turned the
> power up to 100 watts, the antenna melted. That part is gone. I googled
> ...
> - 73 de Mike KB3EIA -

Actually, if you don't get the coils in the proper ratio/position to
each other, efficiency drops DRAMATICALLY!

Like usual, the best configuration to give the best reception of a known
and stable signal also results in the antenna being to configured to
achieve maximum radiation ...

Or simply, if the antenna isn't performing as a full length 1/2
wave--reconfigure 'till it does! Which, using the test fixture I
supplied, is done quickly with no problem ...

JS

2746. Re: snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group from the Newsgroups {Distribution} Header - please, Please. PLEASE !

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 14:51:56 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <4fok831dcch0v0na36btnt413lli58v8nk@4ax.com>
Source record: 39204
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Mon, 02 Jul 2007 14:42:49 -0700, RHF <rhf-newsgroups@pacbell.net>
wrote:

>On Jul 2, 6:16 am, Don Bowey <dbo...@comcast.net> wrote:
>> On 7/1/07 10:06 PM, in article
>> telamon_spamshield-142DD0.22065601072...@newsclstr03.news.prodigy.net,
>>
>> "Telamon" <telamon_spamshi...@pacbell.net.is.invalid> wrote:
>> > In article <PgZhi.908$eY....@newssvr13.news.prodigy.net>,
>> > cledus <cle...@noemail.net> wrote:
>>
>> > < Snip >
>>
>> > Would you please have the decency to snip rec.radio.shortwave and other
>> > groups from the newsgroup header. Thanks.
>>
>>- Would you please come and ask nicely.
>>- I don't like how you put your order.
>
>don bowey, Don Bowey. DON BOWEY !
>
>Oh Please with Sugar and Spice and Everything Nice
>snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group
>from the Newsgroups {Distribution} Header when you
>Post your Reply - It would be ever so decent of you
>Kind and Wonder Sir. ;-)
>
>thank you very much - most respectfully ~ RHF

Seems to me his posts are on topic for rrs, so why don't you just
learn how to use a filter?

--
JF

2747. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 15:06:57 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6don9$43p$1@nnrp.linuxfan.it>
Source record: 39205

Cecil Moore wrote:

> ...
> If the ends of a 1/2WL dipole are terminated to
> ground by ~1000 ohm resistors, the antenna current
> is relatively constant. :-)

Cecil:

In one of the configurations of a 1/2 wave, the bottom helix and length of the straight length of radiator ends up right at ~8.1 ft. The upper loading coil and top-hat/upper-radiator ends up being ~8.1 ft. This, most likely, helps to force the current into that upper loading coil. As, Robert Vincent, has mentioned something about "storing" the rf energy in the bottom helix with the effect of it having a relationship to "driving" the upper portion of the antenna.

I don't know, he has offered me a CD with complete data on the antenna, I am arranging a anonymous address to have the CD shipped to now ...

JS

2748. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 15:21:08 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f6dphs$6c0$1@nnrp.linuxfan.it>
Source record: 39206

John Smith I wrote:

> [stuff]

Actually, I got those figs wrong, I am late to a meeting, can't find the paper with the final/optimized lengths/ratios/dia/turns for 10m ... I'll send post/email 'em later today so as to have it right--just in case there is one guy with the energy curiosity to kludge one together ...

Most important thing, I can tell, is the ratio of inductance between the coils--my final length of all coils/radiators if .333% of full 1/2 half ... a darn good mobile antenna!

JS

2749. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 16:40:53 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183480853.128507.286160@o61g2000hsh.googlegroups.com>
Source record: 39207

On 17 Jun, 16:13, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "John Smith I" <assemblywiz...@gmail.com> wrote in
messagenews:f54d8pok1@nnrp.linuxfan.it...
>
> > Actually, old news from 3 years ago ...
>
> >http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> > JS
>
> The guy doesn't even seem to realise that height is one of the prime factors
> in optimising propogation, particularly at medium wave frequencies and vhf.
> Building a tall mast costs plenty of money and if commercial radio stations
> could broadcast efficiently from an antenna the size of a bean can, they
> would have done it years ago.
>
> This is surely just a couple of coils wound in opposite directions with
> capacitive coupling and a capacity top hat to prevent coronal discharge and
> maximise current in the top half of the antenna. Basically a form of top
> loaded, inductively wound whip antenna tapped somewhere up from the base in
> order to pick up a 50 ohm matching impedence at the design frequency. I
> don't see any new or innovative principles at work here.
>
> Now if he could make it work efficiently on all frequencies with 50 ohms
> impedence and with no requirement for further matching or adjustment of any
> sort, I would be impressed. :-)
>
> Mike G0ULI

Mike
The antenna is based on confirmed scientific findings of the masters
and can be proved mathematically as one would expect from such an
antenna.
It is true that what happens to radiation when it is formed is
important
but what is more important is to understand radiation in its formative
stage.
When this is understood then miniturisation comes to the fore that
may
well be more important than the TOA but then even this antenna can be
raised in height. There is a lesson to be learned here. The Yagi was
invented by the Japanese in the early 1920 where America embraced the
invention

and where Japan did not. That same invention proved to be one of
Japans
undoing as they never caught on to the importance possibly by
beurocracy.
This new antenna has been pushed aside by America where I am positive
other Countries are moving fast ahead and now have 3 years lead to
play with.
It is America this time that is complacent. The antenna is there,
the mathematics is there and Maxwells laws are still there, all of
which conform with each other both with this antenna and my Gaussian
antenna but who cares.
Art Unwin KB9MZ.......XG

2750. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 16:45:35 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <422l83ht923luuj30qv4hcr64r1iv29b3r@4ax.com>
Source record: 39208

On Mon, 02 Jul 2007 21:55:10 -0500, Tom Ring <news0003@taring.org> wrote:

>Walter Maxwell wrote:
>> Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital following major
>> spinal surgery. The surgery was successful, but I contracted hideous intestinal infection C Diff, or colitis,
>> in the hospital. Forty nine days were required to clear the infection, after which I could begin physical
>> therapy. I'm still recuperating very slowly, learning to regain my balance and walk again. Have you ever
>> wondered what it would feel like to stand up, but needing to hang onto something stationary to avoid falling
>> down? And have you ever wondered what it would feel like to stand up, but unable to move a foot to start
>> walking? I'm still learning how to walk, with the aid of both a walker and a cane. Long and tough, but I'm
>> making it.
>>
>> Hope to join you great guys again occasionally as I continue to recover.
>>
>> 73 to All,
>>
>> Walt, W2DU

A heartfelt thank you to all who responded to my hospital note. I really appreciate all your kind words of
wisdom and encouragement. As for helping keep the truth in rraa, I take that comment as a real compliment,
indeed.

B 'Cin ya soon,

Walt

>
>Welcome back.
>
>tom
>K0TAR

2751. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 16:50:48 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <c9sk83p9m0fhnr6npfntsc2j8f6cvs88cm@4ax.com>
Source record: 39209
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
<this@aint.me> wrote:

>
>"John Smith I" <assemblywizard@gmail.com> wrote in message
>news:f64hg5$d3j$1@nnrp.linuxfan.it...
>> Radium wrote:
>
><snip>
>
>Suppose you have a 1 MHz sine wave whose amplitude
>is multiplied by a 0.1 MHz sine wave.
>What would it look like on an oscilloscope?

---
LTSPICE circuit list:

Version 4
SHEET 1 1672 1576
WIRE 32 880 -256 880
WIRE 192 880 32 880
WIRE 528 912 336 912
WIRE 192 944 -112 944
WIRE -256 992 -256 880
WIRE -112 992 -112 944
WIRE -256 1120 -256 1072
WIRE -112 1120 -112 1072
WIRE -112 1120 -256 1120
WIRE -256 1168 -256 1120
FLAG -256 1168 0
FLAG 32 880 in
SYMBOL SPECIALFUNCTIONS\\MODULATE 192 880 R0
WINDOW 0 37 -55 Left 0
WINDOW 3 55 119 Center 0
SYMATTR InstName A1
SYMATTR Value mark=1e6 space=1e6
SYMBOL voltage -256 976 R0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V1
SYMATTR Value 10
SYMBOL voltage -112 976 R0
WINDOW 3 24 160 Left 0
```

```
WINDOW 123 24 132 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V2
SYMATTR Value SINE(.5 .5 1e5)
SYMATTR Value2 AC 1
TEXT -96 1240 Left 0 !.tran 5e-5
TEXT -96 1208 Left 0 !.params w0=2*pi*1K Q=5
```

>What would it look like on a spectrum analyzer?

```
| |
| | | |
--------+--------------------+-------+------+----
100kHz 0.9MHz 1MHz 1.1MHz
```

>Then suppose you have a 1.1 MHz sine wave added
>to a 0.9 MHz sine wave.
>What would that look like on an oscilloscope?

LTSPICE circuit list:

```
Version 4
SHEET 1 880 680
WIRE 240 64 176 64
WIRE 432 64 320 64
WIRE 352 144 224 144
WIRE 352 160 352 144
WIRE 16 176 -208 176
WIRE 160 176 96 176
WIRE 176 176 176 64
WIRE 176 176 160 176
WIRE 320 176 176 176
WIRE 432 192 432 64
WIRE 432 192 384 192
WIRE 320 208 288 208
WIRE 288 256 288 208
WIRE 16 288 -48 288
WIRE 160 288 160 176
WIRE 160 288 96 288
WIRE 224 320 224 144
WIRE 352 320 352 224
WIRE -208 336 -208 176
WIRE -48 336 -48 288
WIRE -208 448 -208 416
WIRE -48 448 -48 416
WIRE -48 448 -208 448
```

```
WIRE 224 448 224 400
WIRE 224 448 -48 448
WIRE 352 448 352 400
WIRE 352 448 224 448
WIRE -208 496 -208 448
FLAG -208 496 0
FLAG 288 256 0
SYMBOL voltage -208 320 R0
WINDOW 0 -42 5 Left 0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V1
SYMATTR Value SINE(0 .1 1.1e6)
SYMBOL res 112 160 R90
WINDOW 0 -33 56 VBottom 0
WINDOW 3 -31 61 VTop 0
SYMATTR InstName R1
SYMATTR Value 1000
SYMBOL voltage -48 320 R0
WINDOW 0 -39 4 Left 0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V2
SYMATTR Value SINE(0 .1 .9e6)
SYMBOL res 112 272 R90
WINDOW 0 -38 56 VBottom 0
WINDOW 3 -31 59 VTop 0
SYMATTR InstName R2
SYMATTR Value 1000
SYMBOL res 336 48 R90
WINDOW 0 -36 59 VBottom 0
WINDOW 3 -36 61 VTop 0
SYMATTR InstName R3
SYMATTR Value 10k
SYMBOL voltage 352 416 R180
WINDOW 0 14 106 Left 0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V3
SYMATTR Value 12
SYMBOL voltage 224 304 R0
WINDOW 0 -44 4 Left 0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName V4
SYMATTR Value 12
```

```
SYMBOL Opamps\\UniversalOpamp 352 192 R0
SYMATTR InstName U2
TEXT -252 520 Left 0 !.tran 3e-5
```

Tricky!!!

It looks like AM but it isn't, it's just the phases sliding past each other slowly and algebraically adding which creates the illusion.

>What would that look like on a spectrum analyzer?

```
| |
| |
-----------------------------+--------------+----
0.9MHz 1.1MHz
```

--
JF

2752. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 17:17:19 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <MaudnRbM29ySGBfbnZ2dnUVZ8vSdnZ2d@bt.com>
Source record: 39210

```
"art" <aunwin@insightbb.com> wrote in message
news:1183480853.128507.286160@o61g2000hsh.googlegroups.com...
> On 17 Jun, 16:13, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> > "John Smith I" <assemblywiz...@gmail.com> wrote in
messagenews:f54d8p$ok$1@nnrp.linuxfan.it...
> >
> > > Actually, old news from 3 years ago ...
> >
> > >http://www.eetimes.com/showArticle.jhtml?articleID=21600147
> >
> > > JS
> >
> > The guy doesn't even seem to realise that height is one of the prime
factors
> > in optimising propogation, particularly at medium wave frequencies and
vhf.
> > Building a tall mast costs plenty of money and if commercial radio
stations
> > could broadcast efficiently from an antenna the size of a bean can, they
> > would have done it years ago.
> >
> > This is surely just a couple of coils wound in opposite directions with
> > capacitive coupling and a capacity top hat to prevent coronal discharge
and
> > maximise current in the top half of the antenna. Basically a form of top
> > loaded, inductively wound whip antenna tapped somewhere up from the base
in
> > order to pick up a 50 ohm matching impedence at the design frequency. I
> > don't see any new or innovative principles at work here.
> >
> > Now if he could make it work efficiently on all frequencies with 50 ohms
> > impedence and with no requirement for further matching or adjustment of
any
> > sort, I would be impressed. :-)
> >
> > Mike G0ULI
>
> Mike
> The antenna is based on confirmed scientific findings of the masters
> and can be proved mathematically as one would expect from such an
> antenna.
> It is true that what happens to radiation when it is formed is
> important
```

> but what is more important is to understand radiation in its formative
> stage.
> When this is understood then miniturisation comes to the fore that
> may
> well be more important than the TOA but then even this antenna can be
> raised in height. There is a lesson to be learned here. The Yagi was
> invented by the Japanese in the early 1920 where America embraced the
> invention
> and where Japan did not. That same invention proved to be one of
> Japans
> undoing as they never caught on to the importance possibly by
> beurocracy.
> This new antenna has been pushed aside by America where I am positive
> other Countries are moving fast ahead and now have 3 years lead to
> play with.
> It is America this time that is complacent. The antenna is there,
> the mathematics is there and Maxwells laws are still there, all of
> which conform with each other both with this antenna and my Gaussian
> antenna but who cares.
> Art Unwin KB9MZ.......XG
>
Art

There is a place for miniaturised antennas, particularly for military applications where size and weight of the antenna outweigh other considerations which are important to commercial and amateur users e.g bandwidth and efficiency.

The yagi has great front to back ratios and makes for a great if slightly narrow band antenna for UHF TV reception here in the UK. These antennas are generally sold tuned to cover the local TV frequency channels rather than the whole of the UHF TV band. A lot of people will need to buy new antennas when the switch over to digital TV broadcasting takes place as the digital channels have been arranged to be at the opposite ends of the band to analogue TV in most areas.

The yagi was probably the first antenna that did not conform to antenna theory as it was understood at the time it was developed. Small loops and E-H antennas also appear to defy logic at first glance but careful analysis of their performance has revealed how they work with higher efficiencies than previously believed possible.

Unfortunately for some, there is no magic or defiance of the accepted laws of physics involved in the way they work.

There are still areas which provide fertile areas for experimentation, particularly at the extremes of the radio frequency spectrum.

Regards

Mike

2753. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 17:49:21 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183484961.820406.146740@w5g2000hsg.googlegroups.com>
Source record: 39211

On 3 Jul, 09:40, art <aun...@insightbb.com> wrote:
> On 17 Jun, 16:13, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
>
>
>
>
> > "John Smith I" <assemblywiz...@gmail.com> wrote in
messagenews:f54d8pok1@nnrp.linuxfan.it...
>
> > > Actually, old news from 3 years ago ...
>
> > >http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> > > JS
>
> > The guy doesn't even seem to realise that height is one of the prime factors
> > in optimising propogation, particularly at medium wave frequencies and vhf.
> > Building a tall mast costs plenty of money and if commercial radio stations
> > could broadcast efficiently from an antenna the size of a bean can, they
> > would have done it years ago.
>
> > This is surely just a couple of coils wound in opposite directions with
> > capacitive coupling and a capacity top hat to prevent coronal discharge and
> > maximise current in the top half of the antenna. Basically a form of top
> > loaded, inductively wound whip antenna tapped somewhere up from the base in
> > order to pick up a 50 ohm matching impedence at the design frequency. I
> > don't see any new or innovative principles at work here.
>
> > Now if he could make it work efficiently on all frequencies with 50 ohms
> > impedence and with no requirement for further matching or adjustment of any
> > sort, I would be impressed. :-)
>
> > Mike G0ULI
>
> Mike
> The antenna is based on confirmed scientific findings of the masters
> and can be proved mathematically as one would expect from such an
> antenna.
> It is true that what happens to radiation when it is formed is
> important
> but what is more important is to understand radiation in its formative
> stage.

> When this is understood then miniturisation comes to the fore that
> may
> well be more important than the TOA but then even this antenna can be
> raised in height. There is a lesson to be learned here. The Yagi was
> invented by the Japanese in the early 1920 where America embraced the
> invention
> and where Japan did not. That same invention proved to be one of
> Japans
> undoing as they never caught on to the importance possibly by
> beurocracy.
> This new antenna has been pushed aside by America where I am positive
> other Countries are moving fast ahead and now have 3 years lead to
> play with.
> It is America this time that is complacent. The antenna is there,
> the mathematics is there and Maxwells laws are still there, all of
> which conform with each other both with this antenna and my Gaussian
> antenna but who cares.
> Art Unwin KB9MZ.......XG- Hide quoted text -
>
> - Show quoted text -

Mike,
As a Londoner you will appreciate the following. When the war finished
I started my first real schooling at a school that was surrounded by
blocks of debris
but the school was still standing. It was destroyed in WW1 with about
30+ kids dead.
Finally dad got demobbed and came home to our house which was a bomb
damaged house
because the other house was flattened.We as a pair went to Petticote
lane on Sundays
because dad had a interest in radio and I had to get the water
batteries to run it.
One day dad came back from Petticoat lane and brought home with him a
coil of wire
that you plugged into an outlet and that was the new antenna. I had
not had much
schooling up to that time and at the age of 14 had only one year
before one had
to leave and go to work. Mum got me into a school at dockside for
ships
engineers and navigators and tho a year late I at least got two years
of
education despite the war which followed by years
and years of night school I got the education that any college kid
even tho
I was 10 years older. Now I have the mantra that if it is" resonant
and in a
state of equilibrium" it is what I call a Gaussian antenna. So here
at near

the end of my life I finally got to the bottom of the science that
dad
put before me as peace settled on the East End of London. What dad
plugged into the wall was an antenna that was "resonant and in a
state
of equilibrium" and where its resonance was in the AM band.
60 years later his son resolved the question because of the pursuit
of an education.
Shame he isn't alive to hear 'the rest of the story'
Cheers and beers
Art Unwin KB9MZ.......XG

2754. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 18:07:56 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183486076.455454.209720@i38g2000prf.googlegroups.com>
Source record: 39212
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
> On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>
> <t...@aint.me> wrote:
>
> >"John Smith I" <assemblywiz...@gmail.com> wrote in message
> >news:f64hg5$d3j$1@nnrp.linuxfan.it...
> >> Radium wrote:
>
> ><snip>
>
> >Suppose you have a 1 MHz sine wave whose amplitude
> >is multiplied by a 0.1 MHz sine wave.
> >What would it look like on an oscilloscope?
>
<snip>
>
> >What would it look like on a spectrum analyzer?
>
> | |
> | | | |
> --------+--------------------+-------+------+----
> 100kHz 0.9MHz 1MHz 1.1MHz
>
> >Then suppose you have a 1.1 MHz sine wave added
> >to a 0.9 MHz sine wave.
> >What would that look like on an oscilloscope?
>
<snip>
>
> Tricky!!!
>
> It looks like AM but it isn't, it's just the phases sliding past
> each other slowly and algebraically adding which creates the
> illusion.
>
> >What would that look like on a spectrum analyzer?
>
> | |
> | |
> ----------------------------+--------------+----
> 0.9MHz 1.1MHz
```

>
> --
> JF

But if you remove the half volt bias you put on the
100 kHz signal in the multiplier version, the results
look exactly like the summed version, so I suggest
that results are the same when a 4 quadrant multiplier
is used.

And since the original request was for a "1 MHz sine
wave whose amplitude is multiplied by a 0.1 MHz sine
wave" I think a 4 quadrant multiplier is in order.

...Keith

2755. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 18:51:21 UTC
From: Eric <none@none.nowhere.nnn>
Message-ID: <468a9ab3$0$12209$4c368faf@roadrunner.com>
Source record: 39213
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

WWVB stands for W's World Vengeance Bureau

Giving, so-called, accurate time is a trick to get people to wear WWVB watches and have WWVB clocks in their homes.

They are actually AMPLIFIERS and REPEATERS! They amplify and repeat the hidden embedded mind-control signal that originates from Bush's Hurricane and Earthquake Machine.

2756. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 19:05:52 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183489552.088116.51340@g4g2000hsf.googlegroups.com>
Source record: 39214
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
>
>
>
>
>
> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>
> > <t...@aint.me> wrote:
>
> > >"John Smith I" <assemblywiz...@gmail.com> wrote in message
> > >news:f64hg5$d3j$1@nnrp.linuxfan.it...
> > >> Radium wrote:
>
> > ><snip>
>
> > >Suppose you have a 1 MHz sine wave whose amplitude
> > >is multiplied by a 0.1 MHz sine wave.
> > >What would it look like on an oscilloscope?
>
> <snip>
>
> > >What would it look like on a spectrum analyzer?
>
> > | |
> > | | | |
> > --------+--------------------+-------+------+----
> > 100kHz 0.9MHz 1MHz 1.1MHz
>
> > >Then suppose you have a 1.1 MHz sine wave added
> > >to a 0.9 MHz sine wave.
> > >What would that look like on an oscilloscope?
>
> <snip>
>
> > Tricky!!!
>
> > It looks like AM but it isn't, it's just the phases sliding past
> > each other slowly and algebraically adding which creates the
> > illusion.
>
```

> > >What would that look like on a spectrum analyzer?
>
> > | |
> > | |
> > ----------------------------+--------------+----
> > 0.9MHz 1.1MHz
>
> > --
> > JF
>
> But if you remove the half volt bias you put on the
> 100 kHz signal in the multiplier version, the results
> look exactly like the summed version, so I suggest
> that results are the same when a 4 quadrant multiplier
> is used.
>
> And since the original request was for a "1 MHz sine
> wave whose amplitude is multiplied by a 0.1 MHz sine
> wave" I think a 4 quadrant multiplier is in order.
>
> ...Keith-

Ooops. I misspoke. They are not quite the same.

The spectrum is the same, but if you want to get exactly
the same result, the lower frequency needs a 90 degree
offset and the upper frequency needs a -90 degree offset.

And the amplitudes of the the sum and difference
frequencies need to be one half of the amplitude of
the frequencies being multiplied.

...Keith

2757. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 19:23:56 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183490636.974679.222530@57g2000hsv.googlegroups.com>
Source record: 39215

On 26 Jun, 13:34, John Smith I <assemblywiz...@gmail.com> wrote:
> Buck wrote:
>
> > ...
>
> > The section below with pictures made a difference. I saw that the
> > patent is in concept, that is the arrangement of the coils for the
> > desired effect and the design of coils which can be helical, squared
> > off, etc.
>
> > Thanks.
>
> > Buck
>
> Buck:
>
> Yeah, all that alright.
>
> However, he also claims the "arrangement" he has increases the impedance
> of the 1/4 wave shortened antenna to 72-100 ohms. This is interesting
> in and of itself, shortened antennas tend to have impedances in the
> single digits and are difficult to match efficiently ...
>
> I am just beginning to toy with this version, maybe can get serious this
> weekend ...
>
> Regards,
> JS

What Buck has stated as well as what the inventor has stated
is in full agreement to what I have always stated and proved.
"The radiator can be any shape or size or angle etc.as long as
it is in equilibrium and resonant which is buried in the laws
of the masters" The question of apurture is purely a reflection
of efficiency which when included in a closed circle shows that
vividly with repect to enclosed area. The same antenna arrangement
is a reflection of Gaussian law and as such can be removed
from any ground assumptions that is inferred by those who have
done this and done that. That same element can be duplicated
to form a dipole of any shape to remove the inefficiencies of
ground and can even be multiplied in number to form an array in
accordance with the Gaussian antenna. It all comes down to actually
understanding the underpinnings of the formation of radiation

rather than learned laws where one is not interested in advancing
for the good of science. Once upon a time I saw an experiment formed
where a bunch of coils placed on a paper plate was placed on top of a
car
where radiation lit a fluerescent lamp.....same buried law.
And then we come to the fractal antenna.....same buried law
of which the mathematics given thoroughly proves tho rejected by ham
radio.
I know you can smell it.
Art Unwin KB9MZ......XG

2758. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 20:03:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183493023.837996.307740@57g2000hsv.googlegroups.com>
Source record: 39217

On 2 Jul, 17:52, "J. Mc Laughlin" <j...@power-net.net> wrote:
> Dear Rick: Sorry to have received the call-sign incorrectly. Your
> Father's call does not ring any bells.
>
> The main reason for two sections above a house bracket is because of the
> significantly greater probability of greater wind pressure on the two
> sections compared to three sections that start at ground level. You also
> expect to have more effective area for the greater wind pressure to work on.
>
> I have become convinced that the reason few urban TV/FM antennas and
> Rohn 20 (no cross braces) towers fail is because of a dramatic reduction in
> wind pressure up to about 35 feet above ground in a typical urban
> environment.
>
> The real limitation (for you) may turn out to be due to the building
> code used in your area. When the time comes to have a serious antenna tower
> for HF, do find a professional engineer licensed in your State who's advice
> about how to satisfy the building code and 222G will be worth every penny
> you pay to him or her.
>
> Warm regards, Mac N8TT
>
> P.S. My neighbor K8DO still does things that give me the willies. Even
> when I was young, I sure would not climb 50 feet of un-guyed Rohn 25.
> Medical school instills rather more "confidence" than engineering schools
> do.
> --
> J. Mc Laughlin; Michigan U.S.A.
> Home: J...@Power-Net.Net"Rick (W-A-one-R-K-T)" <get.my.em...@from.qrz.com> wrote in
message
>
> news:pan.2007.07.01.21.14.53.717482@from.qrz.com...
>
>
>
> > On Sun, 01 Jul 2007 16:39:37 -0500, J. Mc Laughlin wrote:
>
> > > Two sections above guys next to the house is pushing prudence. With a
> > > clear area next to the proposed tower in the back, three sections with
> > > just a VHF antenna seems reasonable in view of your description.
>
> > I'm curious why two sections above the guys, next to the house, is
> > marginal but three sections self-supporting out in the open seems OK.
>

> > Actually the three sections self-supporting would be as close to the house
> > on one end as the guyed tower is on the other end.
>
> > Perhaps the tribander on the guyed tower makes the difference, but in
> > truth I think the chances are fairly slim that I'll end up doing that. I
> > have two inverted vees and two NVIS dipoles, which together cover 160
> > through 40, which these days are the only HF bands that really hold my
> > interest... I never was much of a DX hound and with the Internet and
> > satellite phones, it doesn't seem like hardly anybody wants to pass any
> > traffic or run phone patches anymore. Perhaps when the sunspots get more
> > favorable I'll re-think the notion of the tribander but until then it's
> > probably pretty low on the priority list.- Hide quoted text -
>
> - Show quoted text -

Hey Mac,
ask that medical neigbour of yours why a lot of disease of the
body are not encapsulated in their own little prison instead of
medics
resorting to the knife? I, like many, was born in the industrial era
where many caught T.B. and other disease and suffered from hunger.
In my case when I got T.B. the pollutants I breathed created a
calcinated shell around it thus rendering it harmless via prison.
Now a days we move to the knife or drugs too often where
accepting possesion of the disease is better by placing it in
quarantean..
Seems like surgeons also have information but also reject under the
"all is known"
mantra.
Art Unwin KB9MZ....XG

2759. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 20:19:37 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <gc9l83dr2o6c6uok8b3uaco8ec7q7psei1@4ax.com>
Source record: 39218
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Tue, 03 Jul 2007 12:05:52 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
>> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
>>
>>
>>
>>
>>
>> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>>
>> > <t...@aint.me> wrote:
>>
>> > >"John Smith I" <assemblywiz...@gmail.com> wrote in message
>> > >news:f64hg5$d3j$1@nnrp.linuxfan.it...
>> > >> Radium wrote:
>>
>> > ><snip>
>>
>> > >Suppose you have a 1 MHz sine wave whose amplitude
>> > >is multiplied by a 0.1 MHz sine wave.
>> > >What would it look like on an oscilloscope?
>>
>> <snip>
>>
>> > >What would it look like on a spectrum analyzer?
>>
>> > | |
>> > | | | |
>> > --------+--------------------+-------+------+----
>> > 100kHz 0.9MHz 1MHz 1.1MHz
>>
>> > >Then suppose you have a 1.1 MHz sine wave added
>> > >to a 0.9 MHz sine wave.
>> > >What would that look like on an oscilloscope?
>>
>> <snip>
>>
>> > Tricky!!!
>>
>> > It looks like AM but it isn't, it's just the phases sliding past
```

>> > each other slowly and algebraically adding which creates the
>> > illusion.
>>
>> > >What would that look like on a spectrum analyzer?
>>
>> > | |
>> > | |
>> > ------------------------------+--------------+----
>> > 0.9MHz 1.1MHz
>>
>> > --
>> > JF
>>
>> But if you remove the half volt bias you put on the
>> 100 kHz signal in the multiplier version, the results
>> look exactly like the summed version, so I suggest
>> that results are the same when a 4 quadrant multiplier
>> is used.
>>
>> And since the original request was for a "1 MHz sine
>> wave whose amplitude is multiplied by a 0.1 MHz sine
>> wave" I think a 4 quadrant multiplier is in order.
>>
>> ...Keith-
>
>Ooops. I misspoke. They are not quite the same.

That's right. They can't possibly be because the first instance
was multiplication and the second instance addition.

>The spectrum is the same, but if you want to get exactly
>the same result, the lower frequency needs a 90 degree
>offset and the upper frequency needs a -90 degree offset.

That makes no sense since the frequencies are different and,
consequently, the phase difference between the signals will be
constantly changing.

--
JF

2760. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 20:28:08 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <bcKdnSARj-pLPxfbnZ2dnUVZ_gqdnZ2d@bright.net>
Source record: 39216

Dear Neighbor Roger:

Oh my, and I clean forgot that the two of us fly little airplanes into
and out-of strange places. Perhaps it is just antenna people in this part
of Michigan. No. I am convinced that for DO it is the residue of surviving
in a factory and medical school.

Warm regards, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net
"Roger (K8RI)" <validaddress@my.com> wrote in message
news:ql7j839auhp1for6elgbpuhec19iu2u7bf@4ax.com...
> On Mon, 2 Jul 2007 19:52:24 -0500,
<snip>
> >
> >P.S. My neighbor K8DO still does things that give me the willies. Even
> >when I was young, I sure would not climb 50 feet of un-guyed Rohn 25.
> >Medical school instills rather more "confidence" than engineering schools
> >do.
>
> Shucks, I met him way before he became so conservative.
>

2761. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 20:47:49 UTC
From: Bill Kearney <wkearney-99@hot-mail-com>
Message-ID: <b8WdnR-mGcVoKBfbnZ2dnUVZ_t2tnZ2d@speakeasy.net>
Source record: 39219
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.

Then leave out the conspiracy garbage, idiot. Or you'll get the probing...
again.

2762. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 21:08:45 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183496925.284834.262610@w5g2000hsg.googlegroups.com>
Source record: 39220

On 3 Jul, 10:17, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1183480853.128507.286160@o61g2000hsh.googlegroups.com...> On 17 Jun, 16:13, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> > > "John Smith I" <assemblywiz...@gmail.com> wrote in
>
> messagenews:f54d8pok1@nnrp.linuxfan.it...
>
>
>
>
>
> > > > Actually, old news from 3 years ago ...
>
> > > >http://www.eetimes.com/showArticle.jhtml?articleID=21600147
>
> > > > JS
>
> > > The guy doesn't even seem to realise that height is one of the prime
> factors
> > > in optimising propogation, particularly at medium wave frequencies and
> vhf.
> > > Building a tall mast costs plenty of money and if commercial radio
> stations
> > > could broadcast efficiently from an antenna the size of a bean can, they
> > > would have done it years ago.
>
> > > This is surely just a couple of coils wound in opposite directions with
> > > capacitive coupling and a capacity top hat to prevent coronal discharge
> and
> > > maximise current in the top half of the antenna. Basically a form of top
> > > loaded, inductively wound whip antenna tapped somewhere up from the base
> in
> > > order to pick up a 50 ohm matching impedence at the design frequency. I
> > > don't see any new or innovative principles at work here.
>
> > > Now if he could make it work efficiently on all frequencies with 50 ohms
> > > impedence and with no requirement for further matching or adjustment of
> any
> > > sort, I would be impressed. :-)
>
> > > Mike G0ULI

>
> > Mike
> > The antenna is based on confirmed scientific findings of the masters
> > and can be proved mathematically as one would expect from such an
> > antenna.
> > It is true that what happens to radiation when it is formed is
> > important
> > but what is more important is to understand radiation in its formative
> > stage.
> > When this is understood then miniturisation comes to the fore that
> > may
> > well be more important than the TOA but then even this antenna can be
> > raised in height. There is a lesson to be learned here. The Yagi was
> > invented by the Japanese in the early 1920 where America embraced the
> > invention
> > and where Japan did not. That same invention proved to be one of
> > Japans
> > undoing as they never caught on to the importance possibly by
> > beurocracy.
> > This new antenna has been pushed aside by America where I am positive
> > other Countries are moving fast ahead and now have 3 years lead to
> > play with.
> > It is America this time that is complacent. The antenna is there,
> > the mathematics is there and Maxwells laws are still there, all of
> > which conform with each other both with this antenna and my Gaussian
> > antenna but who cares.
> > Art Unwin KB9MZ.......XG
>
> Art
>
> There is a place for miniaturised antennas, particularly for military
> applications where size and weight of the antenna outweigh other
> considerations which are important to commercial and amateur users e.g
> bandwidth and efficiency.
>
> The yagi has great front to back ratios and makes for a great if slightly
> narrow band antenna for UHF TV reception here in the UK. These antennas are
> generally sold tuned to cover the local TV frequency channels rather than
> the whole of the UHF TV band. A lot of people will need to buy new antennas
> when the switch over to digital TV broadcasting takes place as the digital
> channels have been arranged to be at the opposite ends of the band to
> analogue TV in most areas.
>
> The yagi was probably the first antenna that did not conform to antenna
> theory as it was understood at the time it was developed. Small loops and
> E-H antennas also appear to defy logic at first glance but careful analysis
> of their performance has revealed how they work with higher efficiencies
> than previously believed possible.
>
> Unfortunately for some, there is no magic or defiance of the accepted laws

> of physics involved in the way they work.
>
> There are still areas which provide fertile areas for experimentation,
> particularly at the extremes of the radio frequency spectrum.
>
> Regards
>
> Mike- Hide quoted text -
>
> - Show quoted text -

Interesting that you mentioned efficiency. Radiation in itself is very
efficient
i.e. in the 98% region It is how we use it is where the efficiency
goes down.
But if initial efficiency starts of with 98% and with a superconductor
we
gain two percent it becomes very obvious that loss of efficiency even
if
large is minor when compared to the reduction in size. As far as
narrow bandedness is concerned of the yagi this has little to do with
efficiency
but with what we do with the radiation which by coupling as a method
of
focussing to get a major lobe. True this is an advantage to some but
the
penalty is narrow banded because of compromises that are forced upon
one where
the desirables do not appear in sync with each other. So yes a very
small
antenna may be less efficient but how much does that loss in
efficiency
match up to the advantage in size and where the final shape provides
desirables that are in sync with each other. Amateurs have long
thought that
bigger is better and if it doesn't fall down then it is not big
enough!
All of which is not based on radiation itself but on the basis of
Yagi
technique on how we use that radiation. Times have changed from the
old
days where gain was everything. Miniturization has become so important
as well as equal surrounding coverage that the cell phone has become
an instantaneous replacement for long distance transmission in the
commercial world. As I read in this latest quarterly magazine for the
antenna trade
the biggest hold up today in communications is to design drivers with
low impedance levels such as 5 ohms where this in fact misuses modern
day science.
We now can obtain miniturised design with minimul reduction of

bandwidth and minimul
loss of comparitive efficiency where higher impedance feed is so more
electrically efficient
that it makes low impedance a lost cause. I am quite sure that other
countries are not discarding such logic and thus taking advantage of
the intervening years
for advances in the military field where secrecy can be adhered to.
Well at least for a while.
Best regards
Art Unwin KB9MZ.....XG

2763. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 21:27:28 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <0jrql4-4gd.ln1@p400bob.personal.cox.net>
Source record: 39224
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Hi Chris

Much has already been said about your problem. I just have a few more points to add..

- One of the initial "reasons" for masthead preamps was to reduce/remove the loss of the coax run. Quoting the preamp gain in this case is useful but in reality it is much more important to have a preamp device that is low noise or will give you a better signal to noise ratio at low signal levels. There is actually a hard limit based on Boltzmanns constant and the system bandwidth that is the thermal noise on Earth. (ie you can use it mathematically to check your system) If it is spec'd look for the lowest preamp noise figure (NF).

Unfortunately low NF tends to go hand in hand with not so good large (undesired) signal performance. If however you don't have other strong signals around you it works well. Some bad preamp designs even "take off" producing their own interference and contributing towards the problem.

- One of the killers for low level signal reception is that the local noise near your antenna varies above the "constant" mentioned above. Although rare on UHF, electrical interfering sources can "raise the noise floor" such that the s/n of the wanted signal gets smaller. Ways around this include a good antenna install with very good directivity to the signal source. In some cases you can use the antenna nulls and polarization to reduce interfering signal and of course finding and fixing the interfering source.

Your "couple of channels" dropping out could be a local noise problem or equally a propagation/bending/reflection issue. (Reflection problems tend to be short lived though) It may be worth logging the failures to see if they fit a pattern. What frequency the channels are on can also help in the hunt. (eg someone using a 900MHz cordless phone while your weak signal is at the top of the UHF band...)

It might be worthwhile finding out what channels the distant stations are on, then purchasing an antenna more centered on that frequency. As a general rule high gain is inverse to bandwidth so for the same amount of metal/size an antenna made to cover (say) 5 channels may have 5dB more forward gain and better f/b performance than a wide band one. A narrower band antenna may also have better undesirable lobes so a local noise problem may be helped. I realize that you are more after a commercially available system but your own design/build may even be an option.

In a perfect world an antenna would receive nothing from everywhere except the desired direction! Unfortunately most radiation patterns look like wildflowers on steroids! Wide band antennas are especially horrible. The front to back ratio is not the only important figure. Some antennas have lobes maybe 30 degrees off the back that are only a few dB down from a dipole!

Hope this helps.

Cheers Bob W5/VK2YQA

szilagyic wrote:
>
> Hello:
>
> I have been trying to find the answer to my question on the front-to-
> back ratio on UHF antennas, and so far have been unsuccessful.
>
..
> I really appreciate the help and feedback on this!!

2764. Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 21:59:03 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.03.21.59.03.308612@from.qrz.com>
Source record: 39221

How many of you who have towers in your yard have an anti-climbing shield around the lower 6 feet or so of the tower to prevent neighborhood kids from doing Tarzan impersonations on your tower?

2765. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 22:02:39 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.03.22.02.39.17618@from.qrz.com>
Source record: 39222

On Tue, 03 Jul 2007 15:28:08 -0500, J. Mc Laughlin wrote:

> Oh my, and I clean forgot that the two of us fly little airplanes into
> and out-of strange places.

Oh, man, and to think I've been LISTENING to you daredevils... :-)

Rick <Bonanza N122X (KASH)>

2766. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 22:02:59 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183500179.530166.299300@m36g2000hse.googlegroups.com>
Source record: 39223
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 3, 4:19 pm, John Fields <jfie...@austininstruments.com> wrote:
> On Tue, 03 Jul 2007 12:05:52 -0700, Keith Dysart
>
>
>
>
>
> <Keith.Dys...@gmail.com> wrote:
> >On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
> >> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
>
> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>
> >> > <t...@aint.me> wrote:
>
> >> > >"John Smith I" <assemblywiz...@gmail.com> wrote in message
> >> > >news:f64hg5$d3j$1@nnrp.linuxfan.it...
> >> > >> Radium wrote:
>
> >> > ><snip>
>
> >> > >Suppose you have a 1 MHz sine wave whose amplitude
> >> > >is multiplied by a 0.1 MHz sine wave.
> >> > >What would it look like on an oscilloscope?
>
> >> <snip>
>
> >> > >What would it look like on a spectrum analyzer?
>
> >> > | |
> >> > | | | |
> >> > --------+--------------------+-------+------+----
> >> > 100kHz 0.9MHz 1MHz 1.1MHz
>
> >> > >Then suppose you have a 1.1 MHz sine wave added
> >> > >to a 0.9 MHz sine wave.
> >> > >What would that look like on an oscilloscope?
>
> >> <snip>
>
> >> > Tricky!!!
>
```

> >> > It looks like AM but it isn't, it's just the phases sliding past
> >> > each other slowly and algebraically adding which creates the
> >> > illusion.
>
> >> > >What would that look like on a spectrum analyzer?
>
> >> > | |
> >> > | |
> >> > ------------------------------+--------------+----
> >> > 0.9MHz 1.1MHz
>
> >> > --
> >> > JF
>
> >> But if you remove the half volt bias you put on the
> >> 100 kHz signal in the multiplier version, the results
> >> look exactly like the summed version, so I suggest
> >> that results are the same when a 4 quadrant multiplier
> >> is used.
>
> >> And since the original request was for a "1 MHz sine
> >> wave whose amplitude is multiplied by a 0.1 MHz sine
> >> wave" I think a 4 quadrant multiplier is in order.
>
> >> ...Keith-
>
> >Ooops. I misspoke. They are not quite the same.
>
> ---
> That's right. They can't possibly be because the first instance
> _was_ multiplication and the second instance addition.

Quite counter intuitive, I agree, but none-the-less true.
To convince myself, I once created an Excel spreadsheet
to demonstrate the fact.

It along with some other discussion and plots are available
here http://keith.dysart.googlepages.com/radio5

> >The spectrum is the same, but if you want to get exactly
> >the same result, the lower frequency needs a 90 degree
> >offset and the upper frequency needs a -90 degree offset.
>
> ---
> That makes no sense since the frequencies are different and,
> consequently, the phase difference between the signals will be
> constantly changing.

To get exactly the same results, if, at time t0, the phases
for the signals being multiplied together are 0, then at
time t0, the initial phases for the signals being added

must be 90 and -90.

...Keith

2767. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 23:12:28 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <wJAii.3649$tj6.3270@newsread4.news.pas.earthlink.net>
Source record: 39225
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Eric wrote:
> WWVB stands for W's World Vengeance Bureau
>
> Giving, so-called, accurate time is a trick to get people to wear WWVB
> watches and have WWVB clocks in their homes.
>
> They are actually AMPLIFIERS and REPEATERS! They amplify and repeat the
> hidden embedded mind-control signal that originates from Bush's Hurricane
> and Earthquake Machine.

And proof can be found in the movie, "The President's Analyst"

2768. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-03 23:31:29 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <f1ll83dja0l8slmn4lfngbbbkoj62do63s@4ax.com>
Source record: 39226
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Tue, 03 Jul 2007 15:02:59 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 3, 4:19 pm, John Fields <jfie...@austininstruments.com> wrote:
>> On Tue, 03 Jul 2007 12:05:52 -0700, Keith Dysart
>>
>>
>>
>>
>>
>> <Keith.Dys...@gmail.com> wrote:
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>> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
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>> >> > >> Radium wrote:
>>
>> >> > ><snip>
>>
>> >> > >Suppose you have a 1 MHz sine wave whose amplitude
>> >> > >is multiplied by a 0.1 MHz sine wave.
>> >> > >What would it look like on an oscilloscope?
>>
>> >> <snip>
>>
>> >> > >What would it look like on a spectrum analyzer?
>>
>> >> > | |
>> >> > | | | |
>> >> > --------+--------------------+-------+------+----
>> >> > 100kHz 0.9MHz 1MHz 1.1MHz
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>> >> > >Then suppose you have a 1.1 MHz sine wave added
>> >> > >to a 0.9 MHz sine wave.
>> >> > >What would that look like on an oscilloscope?
>>
>> >> <snip>
```

>>
>> >> > Tricky!!!
>>
>> >> > It looks like AM but it isn't, it's just the phases sliding past
>> >> > each other slowly and algebraically adding which creates the
>> >> > illusion.
>>
>> >> > >What would that look like on a spectrum analyzer?
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>> >> > | |
>> >> > | |
>> >> > ------------------------------+--------------+----
>> >> > 0.9MHz 1.1MHz
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>> >> > --
>> >> > JF
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>> >> But if you remove the half volt bias you put on the
>> >> 100 kHz signal in the multiplier version, the results
>> >> look exactly like the summed version, so I suggest
>> >> that results are the same when a 4 quadrant multiplier
>> >> is used.
>>
>> >> And since the original request was for a "1 MHz sine
>> >> wave whose amplitude is multiplied by a 0.1 MHz sine
>> >> wave" I think a 4 quadrant multiplier is in order.
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>> >> ...Keith-
>>
>> >Ooops. I misspoke. They are not quite the same.
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>> ---
>> That's right. They can't possibly be because the first instance
>> _was_ multiplication and the second instance addition.
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>Quite counter intuitive, I agree, but none-the-less true.
>To convince myself, I once created an Excel spreadsheet
>to demonstrate the fact.
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>It along with some other discussion and plots are available
>here http://keith.dysart.googlepages.com/radio5
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>> >The spectrum is the same, but if you want to get exactly
>> >the same result, the lower frequency needs a 90 degree
>> >offset and the upper frequency needs a -90 degree offset.
>>
>> ---
>> That makes no sense since the frequencies are different and,
>> consequently, the phase difference between the signals will be
>> constantly changing.

>
>To get exactly the same results, if, at time t0, the phases
>for the signals being multiplied together are 0, then at
>time t0, the initial phases for the signals being added
>must be 90 and -90.

OK, but that's just for the single slice in time where the circuit
reactances for both frequencies are complex conjugates, and cancel,
leaving only pure resistance for both signals to drive at that
instant.

--
JF

2769. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:11:11 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <x4udnRixn6Y-eBfbnZ2dnUVZ8v-dnZ2d@bt.com>
Source record: 39227

<snip>
> Mike,
> As a Londoner you will appreciate the following. When the war finished
> I started my first real schooling at a school that was surrounded by
> blocks of debris
> but the school was still standing. It was destroyed in WW1 with about
> 30+ kids dead.
> Finally dad got demobbed and came home to our house which was a bomb
> damaged house
> because the other house was flattened.We as a pair went to Petticote
> lane on Sundays
> because dad had a interest in radio and I had to get the water
> batteries to run it.
> One day dad came back from Petticoat lane and brought home with him a
> coil of wire
> that you plugged into an outlet and that was the new antenna. I had
> not had much
> schooling up to that time and at the age of 14 had only one year
> before one had
> to leave and go to work. Mum got me into a school at dockside for
> ships
> engineers and navigators and tho a year late I at least got two years
> of
> education despite the war which followed by years
> and years of night school I got the education that any college kid
> even tho
> I was 10 years older. Now I have the mantra that if it is" resonant
> and in a
> state of equilibrium" it is what I call a Gaussian antenna. So here
> at near
> the end of my life I finally got to the bottom of the science that
> dad
> put before me as peace settled on the East End of London. What dad
> plugged into the wall was an antenna that was "resonant and in a
> state
> of equilibrium" and where its resonance was in the AM band.
> 60 years later his son resolved the question because of the pursuit
> of an education.
> Shame he isn't alive to hear 'the rest of the story'
> Cheers and beers
> Art Unwin KB9MZ.......XG
>
Art

Even though I was born some years after the war ended, I do have some old magazines and articles that mention such an antenna. I believe that there were two or three (perhaps more) rival designs around in the 50's possibly into the early 60's that claimed to improve radio reception dramatically. The arrival and shift of interest into television seems to have sounded the death knell for these devices.

As I recall, some of the pundits at the time were rather disparaging about these miracle antennas and indeed most designs were proved to be fraudulant, but one design did actually work and genuinely provided improved performance. I would guess that this was probably the one your dad acquired. I believe the design that worked did so because it achieved a genuine impedence match wereas the others were just devices that hooked up the radio to the house mains and used that to provide an antenna. Not very safe at all!!! One device proved to be just a high resistance wirewound resistor connected to the mains.

So the genuine device did achieve provide a proper match and achieved a kind of what might be termed equilibrium with the receiver. These devices weren't particularly cheap to buy either. Looking at antenna prices today, I see that hundreds of dollars can be spent on a couple of dollars worth of fibreglass, aluminium and a bit of wire, so things haven't changed that much I guess. That is surely why rec.radio.amateur.antenna exists and is so popular; to provide an alternative to those people that do want to think for themselves rather than blindly following the path commercial manufacturers dictate.

Regards

Mike G0ULI

2770. Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:14:56 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <4EBii.3183$fw2.1666@trnddc04>
Source record: 39228

Looks like I'll have to use a horizontal loop in the attic for a few months.
Any opinions on how to best feed it?
--open wire
--coax coil balun
--ferrite bead balun
--straight coax

The loop is about 13 feet per side, and I want to operate 20 meters and up.
In the past I have simply used a coax feed without a balun. It worked OK,
but there was a lot of stray RF around the house.

TIA

2771. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:15:34 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <8qudnamz_a4-exfbnZ2dnUVZ_oCmnZ2d@comcast.com>
Source record: 39229
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

WHAT IS THIS CRAP????

"DTC" <no_spam@move_along_folks.foob> wrote in message
news:wJAii.3649$tj6.3270@newsread4.news.pas.earthlink.net...
> Eric wrote:
>> WWVB stands for W's World Vengeance Bureau
>>
>> Giving, so-called, accurate time is a trick to get people to wear WWVB
>> watches and have WWVB clocks in their homes.
>>
>> They are actually AMPLIFIERS and REPEATERS! They amplify and repeat the
>> hidden embedded mind-control signal that originates from Bush's Hurricane
>> and Earthquake Machine.
>
> And proof can be found in the movie, "The President's Analyst"

2772. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:16:56 UTC
From: mcalhoun@ksu.edu
Message-ID: <f6eoto$mm2@unix1.cc.ksu.edu>
Source record: 39230

>How many of you who have towers in your yard have an anti-climbing shield
>around the lower 6 feet or so of the tower to prevent neighborhood kids
>from doing Tarzan impersonations on your tower?

I do. Made it out of chicken wire (about one-inch hexagonal holes).
Just wrapped it around the tower and tied it to the legs a few times
with twists of wire cut close. First thing I did after erecting the
tower. (In fact, haven't even put an antenna on it yet!)

--W0PBV
--
--Myron A. Calhoun.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

2773. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:34:02 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <jLKdnadr9oxjdxfbnZ2dnUVZ8vSdnZ2d@bt.com>
Source record: 39031

"Wayne" <mygarbagecan@verizon.net> wrote in message
news:4EBii.3183$fw2.1666@trnddc04...
> Looks like I'll have to use a horizontal loop in the attic for a few
months.
> Any opinions on how to best feed it?
> --open wire
> --coax coil balun
> --ferrite bead balun
> --straight coax
>
> The loop is about 13 feet per side, and I want to operate 20 meters and
up.
> In the past I have simply used a coax feed without a balun. It worked OK,
> but there was a lot of stray RF around the house.
>
> TIA
>
>
Wayne

Personally I would try feeding the loop with open wires from the balun output of an ATU. You don't state what sort of power you want to use, but I would think that this method would be okay up to a miximum of 100W. It depends on how much wiring you have running parallel to sections of the antenna up in the attic.

If you must use coax, winding as many turns of coax as possible on an old 6-8 inch ferrite rod just before the loop will keep most of the RF off the outer shield of the coax.

Winding coax around ferrite rods or large toroids is usually much easier and more efficient than using loads of ferrite beads as a balun.

Straight coax is okay for powers less than 20W but a few turns around a bit of ferrite would still be advisable.

Mike G0ULI

2774. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:36:54 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183509414.396804.6860@w5g2000hsg.googlegroups.com>
Source record: 39032

On 18 Jun, 12:01, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> J. Mc Laughlin wrote:
> > Dear Group:
>
> > Details of the patent applications may be found on the USPTO's site.
>
> > Robert J. Vincent (Electronics Technician II, Physics-URI)
>
> > Application 20060022883; published Feb. 2, 2006
> > Application 20070132647; published June 14, 2007
>
> I think that ends in ..649
> filed 25 Jan 2007
>
> one might note that claims 1-23 were cancelled...
>
> The second application is basically a revision of the first amd has more
> details of why it has priority over earlier applications (presumably
> over other inventors?)
>
> The first is a continuation application as well.
>
> I'm going to guess that the examiner came back on the first app and
> said: Uh,uh, you need to update to establish why a)you're first and b)
> why you're novel
>
> If you've got significant time available, compare the two applications
> and it may be revealed
>
>
>
>
>
>
> > 73, Mac N8TT
>
> > --
> > J. Mc Laughlin; Michigan U.S.A.
> > Home: J...@Power-Net.Net- Hide quoted text -
>
> - Show quoted text -

Jim,
I just looked at the patent application and I feel the University

has not been a service to the inventor. The university did not supply
or did not have the mathematical underpinning of the design. The whole
patent
evolves about one antenna arrived in experimental form. As normal
additional claims were made in an effort to cover other possibilites
of that empirically found antenna without the mathematical
underpinnings
to guide for additional claims. Yes he has numourous claims but
without
the underminnings the claims are severely hampered. I would have
thought
that any University after being presented emperical results would
have
followed the lines of any scientific institution until the
underlining
mathematics could be solved to provide a firm basis for the
application
based on science or mathematics of which the antenna was just one
sample to validate the request. At least the University gave him an
avenue to pursue the patent in the hope that something of value would
rub of
as some sort of esteem but without scientific backing from extensions
of
laws of past masters I cannot see that comming about. For instance he
has made no reference to the makings of radiation, it's pulsatic form
or a connection to all other laws of the masters other than laymans
terms of what a inductance does other than refering to the current
bucking.
Both of the patents will come out together and the combination will be
instructive.
My request publishing date will be held back until at least the first
review since
I wrote it myself together with the request for examiner help, a given
proviso
that is provided for inventors who have not handed all power to an
attorney
and who relies on direct comunication with the examiners by the
inventor himself.
This way the claims which is really the only guts that count with a
patent are a
cooperative development between the examiner and the patentee which
gives it
a perceived advantage if litigation is followed. In one past
application
there was numourous intercomunications between the examiner as well as
his boss
before a particular claim was formulated as the first claim that
satisfied all
based on given information and around which other claims were made.
Since my claim was not of a commercial nature some errors were agreed

to
but as a learning exersize which is how I treat anything I do, it was
a extremely
good learning experience. One patent I pulled or let it run out before
review
because of so many doubting thomases and now I can't even remember
what is was
and what I did with the paperwork. That also was a learning experience
that I will not duplicate. As far as the tests applied to the new
invention
from the University where the testing was against another antenna
under the
same conditions. This totally nullified ground conditions and other
environmetal
conditions that can change the attributes of the test in both an
disadvantegous
way as well as advantageous allowing for a apples
and apples comparison where very questionable observables were
cancelled out.
With reference to Jim Lux comments with respect to the testing
procedure.
I certainly see that as a reputable test if one accepts the validity
of the
specs assigned to that which it is being compared to. Which is tested
in the
very same environment and using the very same equipment. As an
engineer I see
no better way to test an antenna for the military. Trust but verify
which
is often beyond the amateur who often relies on smell.
Best regards
Art Unwin KB9MZ.....XG.

2775. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:45:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ln6rl4-rte.ln1@mail.specsol.com>
Source record: 39033
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

In rec.radio.amateur.antenna John Doe <hgorden@adelphia.net> wrote:
> WHAT IS THIS CRAP????

Didn't you get the memo from the Grand Master that said it was OK
to let Radium in on the secrets?

--
Jim Pennino

Remove .spam.sux to reply.

2776. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 00:47:21 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <hKudnejfp6OBcxfbnZ2dnUVZ8qGdnZ2d@bt.com>
Source record: 39034

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.03.21.59.03.308612@from.qrz.com...
>
> How many of you who have towers in your yard have an anti-climbing shield
> around the lower 6 feet or so of the tower to prevent neighborhood kids
> from doing Tarzan impersonations on your tower?
>

Surely only a necessity if the tower is not in an enclosed area. Criminal trespass laws can be used to prosecute persons entering an enclosed or fenced area of private property. Or you could probably legally shoot them in Texas. :-)

Failing that, a few feet of chequer plate padlocked to the tower will generally do the trick.

Mike G0ULI

2777. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 01:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <oq8rl4-i3l.ln1@mail.specsol.com>
Source record: 39035

Mike Kaliski <michael.kaliski@tesco.net> wrote:

> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> news:pan.2007.07.03.21.59.03.308612@from.qrz.com...
> >
> > How many of you who have towers in your yard have an anti-climbing shield
> > around the lower 6 feet or so of the tower to prevent neighborhood kids
> > from doing Tarzan impersonations on your tower?
> >

> Surely only a necessity if the tower is not in an enclosed area. Criminal
> trespass laws can be used to prosecute persons entering an enclosed or
> fenced area of private property. Or you could probably legally shoot them in
> Texas. :-)

> Failing that, a few feet of chequer plate padlocked to the tower will
> generally do the trick.

That may work in a few states for adults, but not for kids.

If it would attract an 8 year old, and they climb it and fall off,
guess who gets sued.

A couple of sheets of plywood is a lot cheaper than getting sued.

--
Jim Pennino

Remove .spam.sux to reply.

2778. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:00:36 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <6pvl839k3kbes4aufn0pblir4cj0e9rvoe@4ax.com>
Source record: 39036

On Fri, 29 Jun 2007 20:56:52 GMT, Walter Maxwell <walt@w2du.com>
wrote:

>Hello to all my antenna friends. I've just now returned home after nine weeks in the
hospital following major
>spinal surgery. The surgery was successful, but I contracted hideous intestinal infection
C Diff, or colitis,
>in the hospital. Forty nine days were required to clear the infection, after which I could
begin physical
>therapy. I'm still recuperating very slowly, learning to regain my balance and walk again.
Have you ever
>wondered what it would feel like to stand up, but needing to hang onto something
stationary to avoid falling
>down? And have you ever wondered what it would feel like to stand up, but unable to move a
foot to start
>walking? I'm still learning how to walk, with the aid of both a walker and a cane. Long
and tough, but I'm
>making it.
>
>Hope to join you great guys again occasionally as I continue to recover.
>
>73 to All,
>
>Walt, W2DU

I know I am late, but God bless you and I'll be praying for you for a
complete recovery.

73
Buck
N4PGW
--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2779. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:05:55 UTC
From: Buck <usenet01@lumpuckeroo.com>
Message-ID: <e20m83l7ciih6ukg71uu03mv34jqq7mbno@4ax.com>
Source record: 39037

On Wed, 04 Jul 2007 01:15:02 GMT, jimp@specsol.spam.sux.com wrote:

>Mike Kaliski <michael.kaliski@tesco.net> wrote:
>
>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
>> news:pan.2007.07.03.21.59.03.308612@from.qrz.com...
>> >
>> > How many of you who have towers in your yard have an anti-climbing shield
>> > around the lower 6 feet or so of the tower to prevent neighborhood kids
>> > from doing Tarzan impersonations on your tower?
>> >
>
>> Surely only a necessity if the tower is not in an enclosed area. Criminal
>> trespass laws can be used to prosecute persons entering an enclosed or
>> fenced area of private property. Or you could probably legally shoot them in
>> Texas. :-)
>
>> Failing that, a few feet of chequer plate padlocked to the tower will
>> generally do the trick.
>
>That may work in a few states for adults, but not for kids.
>
>If it would attract an 8 year old, and they climb it and fall off,
>guess who gets sued.
>
>A couple of sheets of plywood is a lot cheaper than getting sued.

In Georgia, if there is a swimming pool in the enclosed area, it is
considered an 'irresistible temptation' or something to that effect
for kids.

--
73 for now
Buck, N4PGW

www.lumpuckeroo.com

"Small - broadband - efficient: pick any two."

2780. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:25:48 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <MyDii.84662$1i1.7259@pd7urf3no>
Source record: 39038

Walter Maxwell wrote:

> Hello to all my antenna friends. I've just now returned home after nine weeks in the hospital

Welcome Home Walt (meaning not only your house, but this group too). Here's wishing you a speedy and comfortable recovery. Don't let some of the posts on this group get your dander up! :-)

Irv VE6BP

2781. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:29:38 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <mCDii.85346$xq1.748@pd7urf1no>
Source record: 39039

Rick (W-A-one-R-K-T) wrote:

> How many of you who have towers in your yard have an anti-climbing shield
> around the lower 6 feet or so of the tower to prevent neighborhood kids
> from doing Tarzan impersonations on your tower?
>
Hang a dummy wasp nest at about 10 ft!

Irv VE6BP

2782. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:31:30 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <0v0m83t34gh264q4e2a3v5bflde9lop89b@4ax.com>
Source record: 39040
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On Tue, 3 Jul 2007 14:51:21 -0400, "Eric" <none@none.nowhere.nnn>
wrote:

>WWVB stands for W's World Vengeance Bureau
>
>Giving, so-called, accurate time is a trick to get people to wear WWVB
>watches and have WWVB clocks in their homes.
>
>They are actually AMPLIFIERS and REPEATERS! They amplify and repeat the
>hidden embedded mind-control signal that originates from Bush's Hurricane
>and Earthquake Machine.

Well, it's not exactly a conspiracy, but it's close. The problems
caused by excessive radio clock accuracy are quite serious. After
all, time is natures way of keeping everything from happening at once.
That's exactly what's happening when everyone carries an accurate time
piece. Instead of a random timing of events caused mainly by the wide
variations in older mechanical and power line sync clocks, we how have
nanosecond accuracy on our wrists. Instead of a wide dispersion of
event timing, such as arriving late to work, we have everyone arriving
at exactly the same time. This has resulted in parking lot crunch,
the packing of the elevators, collisions in the doorways, and instant
depletion of the office coffee dispenser. This is repeated at
quitting time, when everyone leaves at the exact same nanosecond.

The obvious solution is to reduce the accuracy of WWVB or introduce a
random dither (selective availability?) into the watch timing. Time
accuracy will vary a few minutes one way or the other, and the peak
load on the facilities will be reduced and dispersed over a wider time
period.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558 jeffl@comix.santa-cruz.ca.us
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

2783. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:33:51 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183516431.791674.322670@57g2000hsv.googlegroups.com>
Source record: 39041
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On 3 Jul, 04:43, Christopher Cox <chrisTOPHER...@coboxincORORATED.com>
wrote:
> > I start to believe only the CIA/FBI could be doing something like this
> > because they are the smartest and most evil bastards in the universe.
> > Cold-hearted CIA f-kfoams.
>
> > I get the feeling that the exploitative sadistic CIA/FBI know about
> > science that ordinary USA citizens are not allowed to know about.
>
> > I then want the CIA/FBI to suffer for what I perceive as their
> > "stinginess".
>
> > Anyways...
>
> > So I guess it is possible to have analog AM cell phones operating
> > between 40 KHz and 285 KHz that are the same small size as today's
> > cell phones. Right? If it's not possible then why not? If a wrist
> > watch can do it, then why not a cell phone?
>
> All this for 245kHz of band space in a frequency area of high noise and
> long propagation paths.
>
> Engineering would dictate looking elsewhere.
>
> But hey, you want to try, go ahead. I believe there are allocations in
> the above spectrum for transmitting a couple watts into a antenna less
> than three feet long. I would think a wrist watch transmitter would qualify.
>
> Google up VLF, melt some solder, and let us know how you do.
>
> Chris- Hide quoted text -
>
> - Show quoted text -

Chris, the antenna used in wrist watches can only be used to store
information.
Since the antenna is based on superconductors the watch has to be
cooled to a extremely low temperature
before the data becomes accessable.That method has not been made
public outside the military.
One can consider the analogy of cold weather antennas generally known
where under certain environmental conditions transmission can be

stored, and with the onset of warm weather ice particles in the shape of dots and dashes gradually emerge in data form so the transmission can be decoded.
If you wash your arms and hands with your watch strapped on then time is on your side as decoding is near impossible.
Art

2784. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 02:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <andrl4-sj3.ln1@mail.specsol.com>
Source record: 39042

Buck <usenet01@lumpuckeroo.com> wrote:
> On Wed, 04 Jul 2007 01:15:02 GMT, jimp@specsol.spam.sux.com wrote:

> >Mike Kaliski <michael.kaliski@tesco.net> wrote:
> >
> >> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> >> news:pan.2007.07.03.21.59.03.308612@from.qrz.com...
> >> >
> >> > How many of you who have towers in your yard have an anti-climbing shield
> >> > around the lower 6 feet or so of the tower to prevent neighborhood kids
> >> > from doing Tarzan impersonations on your tower?
> >> >
> >
> >> Surely only a necessity if the tower is not in an enclosed area. Criminal
> >> trespass laws can be used to prosecute persons entering an enclosed or
> >> fenced area of private property. Or you could probably legally shoot them in
> >> Texas. :-)
> >
> >> Failing that, a few feet of chequer plate padlocked to the tower will
> >> generally do the trick.
> >
> >That may work in a few states for adults, but not for kids.
> >
> >If it would attract an 8 year old, and they climb it and fall off,
> >guess who gets sued.
> >
> >A couple of sheets of plywood is a lot cheaper than getting sued.

> In Georgia, if there is a swimming pool in the enclosed area, it is
> considered an 'irresistible temptation' or something to that effect
> for kids.

The term you are looking for is "attractive nuisance".

Basically, if a kid can see it and would think it might be fun to
play on or in, and can get to it even if it requires climbing a
fence, then gets hurt, you're screwed.

Most people with pools around here put up block walls to make it
harder to climb and not visible to passing kids. Chain link won't
cut it on either count.

--
Jim Pennino

Remove .spam.sux to reply.

2785. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 03:55:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <52irl4-qdg.ln1@mail.specsol.com>
Source record: 39043

Irv Finkleman <finkirv@shaw.ca> wrote:
> Rick (W-A-one-R-K-T) wrote:

> > How many of you who have towers in your yard have an anti-climbing shield
> > around the lower 6 feet or so of the tower to prevent neighborhood kids
> > from doing Tarzan impersonations on your tower?
> >
> Hang a dummy wasp nest at about 10 ft!

That's just going to make it more attractive to kids who will be
hanging around throwing rocks at it and climbing up to poke it
with sticks.

--
Jim Pennino

Remove .spam.sux to reply.

2786. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 05:27:52 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <sdGii.3971$zA4.3272@newsread3.news.pas.earthlink.net>
Source record: 39044
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

John Doe wrote:
> WHAT IS THIS CRAP????
>
> "DTC" <no_spam@move_along_folks.foob> wrote in message
>> And proof can be found in the movie, "The President's Analyst"

http://en.wikipedia.org/wiki/The_President's_Analyst

2787. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 05:42:20 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-656111.22422003072007@newsgroups.comcast.net>
Source record: 39045
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <gc9l83dr2o6c6uok8b3uaco8ec7q7psei1@4ax.com>,
John Fields <jfields@austininstruments.com> wrote:

> On Tue, 03 Jul 2007 12:05:52 -0700, Keith Dysart
> <Keith.Dysart@gmail.com> wrote:
>
> >On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
> >> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
> >>
> >>
> >>
> >>
> >>
> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
> >>
> >> > <t...@aint.me> wrote:
> >>
> >> > >"John Smith I" <assemblywiz...@gmail.com> wrote in message
> >> > >news:f64hg5$d3j$1@nnrp.linuxfan.it...
> >> > >> Radium wrote:
> >>
> >> > ><snip>
> >>
> >> > >Suppose you have a 1 MHz sine wave whose amplitude
> >> > >is multiplied by a 0.1 MHz sine wave.
> >> > >What would it look like on an oscilloscope?
> >>
> >> <snip>
> >>
> >> > >What would it look like on a spectrum analyzer?
> >>
> >> > | |
> >> > | | | |
> >> > --------+--------------------+-------+------+----
> >> > 100kHz 0.9MHz 1MHz 1.1MHz
> >>
> >> > >Then suppose you have a 1.1 MHz sine wave added
> >> > >to a 0.9 MHz sine wave.
> >> > >What would that look like on an oscilloscope?
> >>
> >> <snip>
> >>
```

> >> > Tricky!!!
> >>
> >> > It looks like AM but it isn't, it's just the phases sliding past
> >> > each other slowly and algebraically adding which creates the
> >> > illusion.
> >>
> >> > >What would that look like on a spectrum analyzer?
> >>
> >> > | |
> >> > | |
> >> > ------------------------------+--------------+----
> >> > 0.9MHz 1.1MHz
> >>
> >> > --
> >> > JF
> >>
> >> But if you remove the half volt bias you put on the
> >> 100 kHz signal in the multiplier version, the results
> >> look exactly like the summed version, so I suggest
> >> that results are the same when a 4 quadrant multiplier
> >> is used.
> >>
> >> And since the original request was for a "1 MHz sine
> >> wave whose amplitude is multiplied by a 0.1 MHz sine
> >> wave" I think a 4 quadrant multiplier is in order.
> >>
> >> ...Keith-
> >
> >Ooops. I misspoke. They are not quite the same.
>
> ---
> That's right. They can't possibly be because the first instance
> _was_ multiplication and the second instance addition.
> ---
>
> >The spectrum is the same, but if you want to get exactly
> >the same result, the lower frequency needs a 90 degree
> >offset and the upper frequency needs a -90 degree offset.
>
> ---
> That makes no sense since the frequencies are different and,
> consequently, the phase difference between the signals will be
> constantly changing.

After you get done talking about modulation and sidebands, somebody might want to take a stab at explaining why, if you tune a receiver to the second harmonic (or any other harmonic) of a modulated carrier (AM or FM; makes no difference), the audio comes out sounding exactly as it does if you tune to the fundamental? That is, while the second harmonic of the carrier is twice the frequency of the fundamental, the sidebands

of the second harmonic are *not* located at twice the frequencies of the sidebands of the fundamental, but rather precisely as far from the second harmonic of the carrier as they are from the fundamental.

Isaac

2788. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 06:08:31 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <CrydnYtS7fDGpBbbnZ2dnUVZ_vumnZ2d@giganews.com>
Source record: 39046
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-656111.22422003072007@newsgroups.comcast.net...
>
> After you get done talking about modulation and sidebands, somebody
> might want to take a stab at explaining why, if you tune a receiver to
> the second harmonic (or any other harmonic) of a modulated carrier (AM
> or FM; makes no difference), the audio comes out sounding exactly as it
> does if you tune to the fundamental? That is, while the second harmonic
> of the carrier is twice the frequency of the fundamental, the sidebands
> of the second harmonic are *not* located at twice the frequencies of the
> sidebands of the fundamental, but rather precisely as far from the
> second harmonic of the carrier as they are from the fundamental.
>
> Isaac

I can't speak to second harmonics of a received signal, though I can't think why they would be any different than an internal signal.. but:

When you frequency multiply and FM signal in a transmitter (As used to be done on most FM transmitters in the days before PLL came along), you not only multiplied the extant frequency, but the modulation swing as well. i.e. if you start with a 1 MHz FM modualated crystal oscillator, and manage to get 500 Hz swing from the crystal (using this only as a simple example), then if you double that signal's carrier frequency, you also double the FM swing to 1 KHz. Tripling it from there would give you a 6 MHz carrier with a 3 KHz swing, and so on.

2789. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 06:44:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138mgem8plihu6b@corp.supernews.com>
Source record: 39047

The real problem in making a shielded area like you propose isn't so much the material as the seams and wires. Connection between panels has to be virtually continuous, or you'll have very ineffective shielding no matter what material you use. You need a completely sealed box, floor and ceiling included, with no unbonded hole or seam larger than a very small fraction of a wavelength in size. Aluminum is hard to bond well, so that's a poor choice. Doorways are particularly problematic - make a visit to a local EMC lab to see what measures are typically taken. The sealing requirements become more stringent as frequency increases.

An equally or even more difficult problem is getting power, telephone, and any other conductors through the shield without allowing unwanted signals to come in with them.

Roy Lewallen, W7EL

merlin-7 wrote:
> When I build my new shack, I was thinking about lining the inside of the
> plywood with something, before it is installed, that would block outside
> radio transmissions inside the shack.
> Mostly in the 2 meter range and higher.
>
> Would simple aluminum foil work?
>
> If so what frequency range could I expect it to work in?
>
> If not any suggestions on material? The cheaper the better.
>
> I know there is a term for a room like this but I can not rember it..faraday
> chamber?
>
> The shack will be 12 foot by 16 foot, right next to my 60' tower, with HF
> and 2m antennas on it. I have no idea how they will interact with such a
> building...
>
>
>
> Thanks
> Joe
>
>

2790. Re: Length of Dipole / Inverted Vee with Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 06:49:17 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9963AB1775B32nonenowhere@61.9.191.5>
Source record: 39048

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.03.12.20.01.189575@from.qrz.com:

>
> I think I asked this question before some months ago but can't find it
> with google / dejanews and anyway I'm not entirely certain I fully
> understood the answer.

<news:csupr2phvr9agtma38ga6m5rrg2rifi1id@4ax.com>

2791. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 08:06:11 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <qtlBZyDzT1iGFwEF@g3ohx.demon.co.uk>
Source record: 39049
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In message <CrydnYtS7fDGpBbbnZ2dnUVZ_vumnZ2d@giganews.com>, Brenda Ann
<brendad@shinbiro.com> writes
>
>"isw" <isw@witzend.com> wrote in message
>news:isw-656111.22422003072007@newsgroups.comcast.net...
>>
>> After you get done talking about modulation and sidebands, somebody
>> might want to take a stab at explaining why, if you tune a receiver to
>> the second harmonic (or any other harmonic) of a modulated carrier (AM
>> or FM; makes no difference), the audio comes out sounding exactly as it
>> does if you tune to the fundamental? That is, while the second harmonic
>> of the carrier is twice the frequency of the fundamental, the sidebands
>> of the second harmonic are *not* located at twice the frequencies of the
>> sidebands of the fundamental, but rather precisely as far from the
>> second harmonic of the carrier as they are from the fundamental.
>>
>> Isaac
>
>I can't speak to second harmonics of a received signal, though I can't think
>why they would be any different than an internal signal.. but:
>
>When you frequency multiply and FM signal in a transmitter (As used to be
>done on most FM transmitters in the days before PLL came along), you not
>only multiplied the extant frequency, but the modulation swing as well. i.e.
>if you start with a 1 MHz FM modualated crystal oscillator, and manage to
>get 500 Hz swing from the crystal (using this only as a simple example),
>then if you double that signal's carrier frequency, you also double the FM
>swing to 1 KHz. Tripling it from there would give you a 6 MHz carrier with a
>3 KHz swing, and so on.
>

For multiplying FM, yes, of course, this is exactly what happens. And as
it happens for FM, it must also happen for AM.

However, I feel that the subject of the effects of harmonics of an AM
signal needs to be investigated. I think what you hear depends on how
and where the harmonic is produced, and the characteristics of the
receiver.

In the good old days of AM, on those occasions when I listened to the
2nd harmonic of my transmissions, I got the impression that the quality
of the audio was not very good, and that the mod depth was lower than on
the fundamental.

Assuming that the signal is coming from a 'normal' AM transmitter, you could have two scenarios:

(a) In the first scenario, the signal is initially clean, but gets multiplied by two, along with the sidebands. [This may occur in the transmitter itself, or in the receiver, or in some external device.] In this case, the frequencies and bandwidth of the sidebands will be doubled (like FM multiplication). The signal should definitely be of poor quality (it should sound rather 'toppy'), but may still be fairly intelligible. If the bandwidth of the receiver is be insufficient to embrace the full (doubled) bandwidth of the signal, you will only hear the lower part of the audio spectrum. This will limit the toppiness, and the level will be rather low, but, in practice, the signal quality may be quite 'acceptable'.

(b) In the second scenario, the 2nd harmonic is effectively present BEFORE modulation, so it gets modulated along with the fundamental. In this case, the lower frequencies of sidebands of the 2nd harmonic will be 'normal', and the signal will sound normal.

In practice, both (a) and (b) probably occur together (certainly in the transmitter). Again, as the receiver will only select the lower part of the audio spectrum, what you hear might sound OK. I suspect that, if you 'off-tune' a bit, you will find a lot of sideband 'splash' either side of the signal.

It should not be difficult to set up a simulation of the above, and do some quantitative tests. Any volunteers?

Ian.
--

2792. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 12:14:02 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6g2unqch1@aioe.org>
Source record: 39050

"art" wrote
>... I have always stated and proved. "The radiator can be
> any shape or size or angle etc.as long as it is in equilibrium
> and resonant which is buried in the laws of the masters"

A distinction needs to be made between the ability of a conductor of any size/shape to efficiently produce EM fields from the r-f current flowing along it, and the capability of the associated transmitter and transmission line to deliver that r-f current.

A good conductor of EVERY size/shape (including even a point source) will radiate virtually ALL the r-f power that can be made to flow into it -- which quantity equals the product of the square of the r-f current at the feedpoint, and the resistive term of the impedance there (ie, the radiation resistance).

If the radiating structure (antenna) is not self-resonant, there will be an impedance mismatch between it and the transmission line connected to its feedpoint. This means that the antenna will not accept all of the transmitter power that could be delivered it to by the transmission line. But whatever power does transfer into the antenna will be radiated with the same high efficiency as if the match was perfect.

There are many examples of non-resonant (highly reactive) antenna structures that, with proper system design, radiate a very high percentage the power available from the transmitter. Common examples of this are the monopole radiators used by MW AM broadcast stations -- very few of which are self-resonant.

High radiation efficiency is achieved in these non-resonant antennas by the use of a matching network at the antenna feedpoint, which cancels the reactance of the monopole, and transforms the r-f resistance term there to match the Zo of the transmission line in use.

This results in an impedance match capable of passing nearly all the power available from the transmission line, despite the fact that the antenna itself remains non-resonant, and without setting up high standing waves on the transmission line.

The only significant losses.then are the attenuation of the transmission line, the loss in the matching network, and the loss in the r-f ground system. In normal broadcast station practice these losses are small enough for the groundwave field at 1 km to be 90% or better of the theoretical value for a perfect radiator of that electrical height and applied power,

over a perfect ground plane.

Bottom line (N.B. Art): antennas do not need to be resonant to perform as very efficient radiators.

RF

2793. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 12:53:08 UTC
From: Bishoop <none@nowhere.none>
Message-ID: <BsydneP_O_4PBRbbnZ2dnUVZ_gadnZ2d@giganews.com>
Source record: 39051
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

<snip>

> 10 or 12 db of forward gain means your recieved signal is about 10 to 16
> times as strong as a dipole hanging in the air. If you interpret the
> negative number as the amount the signal is down from the forward gain,
> the numbers given (9 to 17db) would indicate reception off the back side
> would be somewhere near a dipole in open space (1 db net) to -5db (about
> 1/3 of the signal of a dipole) pickup from the back. I have used aluminum
> sheet (tested prior with aluminum foil) tied to the mesh to completely
> block reception from the back (a near infinite front to back ratio) in an
> extreme case where I had significant multipath reflections coming in from
> the back. It really cleaned things up. In your case you may not need to
> go to this rather severe step.

<snip>

> Good luck!
> --Rick AH7H

10 or 12db of forward gain goes NOT equal 10 "times" the received signal
strength.

2794. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 13:25:06 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183555506.005116.196850@q69g2000hsb.googlegroups.com>
Source record: 39052

On 4 Jul, 05:14, "Richard Fry" <r...@adams.net> wrote:
> "art" wrote>... I have always stated and proved. "The radiator can be
> > any shape or size or angle etc.as long as it is in equilibrium
> > and resonant which is buried in the laws of the masters"
>
> ____________
>
> A distinction needs to be made between the ability of a conductor of any
> size/shape to efficiently produce EM fields from the r-f current flowing
> along it, and the capability of the associated transmitter and transmission
> line to deliver that r-f current.
>
> A good conductor of EVERY size/shape (including even a point source) will
> radiate virtually ALL the r-f power that can be made to flow into it --
> which quantity equals the product of the square of the r-f current at the
> feedpoint, and the resistive term of the impedance there (ie, the radiation
> resistance).
>
> If the radiating structure (antenna) is not self-resonant, there will be an
> impedance mismatch between it and the transmission line connected to its
> feedpoint. This means that the antenna will not accept all of the
> transmitter power that could be delivered it to by the transmission line.
> But whatever power does transfer into the antenna will be radiated with the
> same high efficiency as if the match was perfect.
>
> There are many examples of non-resonant (highly reactive) antenna structures
> that, with proper system design, radiate a very high percentage the power
> available from the transmitter. Common examples of this are the monopole
> radiators used by MW AM broadcast stations -- very few of which are
> self-resonant.
>
> High radiation efficiency is achieved in these non-resonant antennas by the
> use of a matching network at the antenna feedpoint, which cancels the
> reactance of the monopole, and transforms the r-f resistance term there to
> match the Zo of the transmission line in use.
>
> This results in an impedance match capable of passing nearly all the power
> available from the transmission line, despite the fact that the antenna
> itself remains non-resonant, and without setting up high standing waves on
> the transmission line.
>
> The only significant losses.then are the attenuation of the transmission
> line, the loss in the matching network, and the loss in the r-f ground

> system. In normal broadcast station practice these losses are small enough
> for the groundwave field at 1 km to be 90% or better of the theoretical
> value for a perfect radiator of that electrical height and applied power,
> over a perfect ground plane.
>
> Bottom line (N.B. Art): antennas do not need to be resonant to perform as
> very efficient radiators.
>
> RF

All very true. But the bottomline is not just efficient antennas but
also
having the radiation field where you want it at an inexpensive way,
that is compatible with your lot size and in cluster form i.e. array.
The antenna from the University is resonant tho less efficient than
ideal
But many hams with small lots place in high esteem an antenna that tho
a
bit less in efficiency gets the job done. But with all that said
I have no problem with anything that you have stated. Lets face it,
if a ham can get on the air with a small antenna tho losses may be 1-2
db
he has achieved all he wanted to do and other hams who are positioned
in the right
places will certainly view his signal as an equal.
Best regards
Art

2795. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 13:49:41 UTC
From: Bill Otten <harpman54@tampabay.rr.com>
Message-ID: <468ba593$0$20626$4c368faf@roadrunner.com>
Source record: 39053

Besides some sheet metal on the sides of the tower to discourage any
adventurous
climbers (even though my backyard is fully fenced since I also have a pool),
I have
signs on the tower warning that it should not be climbed, and another that
it is an
electrical shock hazard. No problems in 18 years.

bill

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.03.21.59.03.308612@from.qrz.com...
>
> How many of you who have towers in your yard have an anti-climbing shield
> around the lower 6 feet or so of the tower to prevent neighborhood kids
> from doing Tarzan impersonations on your tower?
>

2796. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 13:56:34 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <mGNii.3453$rR.973@newsread2.news.pas.earthlink.net>
Source record: 39054
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"Bishoop" <none@nowhere.none> wrote in message
news:BsydneP_O_4PBRbbnZ2dnUVZ_gadnZ2d@giganews.com...
> <snip>
>
>> 10 or 12 db of forward gain means your recieved signal is about 10 to 16
>> times as strong as a dipole hanging in the air. If you interpret the
>> negative number as the amount the signal is down from the forward gain,
>> the numbers given (9 to 17db) would indicate reception off the back side
>> would be somewhere near a dipole in open space (1 db net) to -5db (about
>> 1/3 of the signal of a dipole) pickup from the back. I have used
>> aluminum sheet (tested prior with aluminum foil) tied to the mesh to
>> completely block reception from the back (a near infinite front to back
>> ratio) in an extreme case where I had significant multipath reflections
>> coming in from the back. It really cleaned things up. In your case you
>> may not need to go to this rather severe step.
>
> <snip>
>
>> Good luck!
>> --Rick AH7H
>
> 10 or 12db of forward gain goes NOT equal 10 "times" the received signal
> strength.

Then what do you think it is equal to ?

2797. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 14:52:10 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468bb3c0$0$24780$4c368faf@roadrunner.com>
Source record: 39055
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Keith Dysart" <Keith.Dysart@gmail.com> wrote in message
news:1183489552.088116.51340@g4g2000hsf.googlegroups.com...
> On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
>> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
>>
>>
>>
>>
>>
>> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>>
>> > <t...@aint.me> wrote:
>>
>> > >"John Smith I" <assemblywiz...@gmail.com> wrote in message
>> > >news:f64hg5$d3j$1@nnrp.linuxfan.it...
>> > >> Radium wrote:
>>
>> > ><snip>
>>
>> > >Suppose you have a 1 MHz sine wave whose amplitude
>> > >is multiplied by a 0.1 MHz sine wave.
>> > >What would it look like on an oscilloscope?
>>
>> <snip>
>>
>> > >What would it look like on a spectrum analyzer?
>>
>> > | |
>> > | | | |
>> > --------+--------------------+-------+------+----
>> > 100kHz 0.9MHz 1MHz 1.1MHz
>>
>> > >Then suppose you have a 1.1 MHz sine wave added
>> > >to a 0.9 MHz sine wave.
>> > >What would that look like on an oscilloscope?
>>
>> <snip>
>>
>> > Tricky!!!
>>
>> > It looks like AM but it isn't, it's just the phases sliding past
>> > each other slowly and algebraically adding which creates the

>> > illusion.
>>
>> > >What would that look like on a spectrum analyzer?
>>
>> > | |
>> > | |
>> > ------------------------------+--------------+----
>> > 0.9MHz 1.1MHz
>>
>> > --
>> > JF
>>
>> But if you remove the half volt bias you put on the
>> 100 kHz signal in the multiplier version, the results
>> look exactly like the summed version, so I suggest
>> that results are the same when a 4 quadrant multiplier
>> is used.
>>
>> And since the original request was for a "1 MHz sine
>> wave whose amplitude is multiplied by a 0.1 MHz sine
>> wave" I think a 4 quadrant multiplier is in order.
>>
>> ...Keith-
>
> Ooops. I misspoke. They are not quite the same.
>
> The spectrum is the same, but if you want to get exactly
> the same result, the lower frequency needs a 90 degree
> offset and the upper frequency needs a -90 degree offset.
>
> And the amplitudes of the the sum and difference
> frequencies need to be one half of the amplitude of
> the frequencies being multiplied.
>
> ...Keith
>

You win. :)

When I conceived the problem I was thinking
cosines actually. In which case there are no
phase shifts to worry about in the result.

I also forgot the half amplitude factor.

While it might not be obvious, the two cases I
described are basically identical. And this
situation occurs in real life, i.e. in radio signals,
oceanography, and guitar tuning.

It follows from what is taught in high school
geometry.

cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])

Basically: multiplying two sine waves is
the same as adding the (half amplitude)
sum and difference frequencies.

(For sines it is
sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
= 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
= 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
)

--
rb

2798. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:07:01 UTC
From: richardharrison@webtv.net
Message-ID: <11195-468BB795-62@storefull-3255.bay.webtv.net>
Source record: 39058

Art, KB9MZ.....XG wrote:
"The Yagi was invented by Japanese in the early 1920 where America
embraced the invention and where Japan did not."

Close but no cigar. Truth Squad time again.

The 3rd edition of Kraus` "Antennas" has the Yagi-Uda Story beginning on
page 246. It Says:
"This led to the publication of a series of articles from March 1926 to
July 1929) in the Journal of the Institute of Electrical Engineers of
Japan titled "On the Wireless Beam of Short Electric Waves." (Uda-1)."

Best regards, Richard Harrison, KB5WZI

2799. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:14:15 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <LoadnVT-kZ_ZJBbbnZ2dnUVZ_gGdnZ2d@comcast.com>
Source record: 39056

In most states (check with your lawyer) the age of reasoning is 7 years old - so the kids are supposed to know right from wrong. With that in mind in a lot of states (check with your lawyer), the parents are also responsible for the TORTS of their children till about the age of 18 or so. The best bet is really to use some heavy gauge metal up to the first 14 feet (Most children can't lift a ladder larger than 10 feet) on all sides, of the tower and locked in place with key locks or chains thru the metal around the leg of the tower and then a key lock!
Then a fence around your property, with signs posted KEEP OUT, BEWARE OF THE DOG (SNAKES), DANGER 1,000,000 MA HI-VOLTAGE, NO TRESPASSING, TRESPASSERS WILL BE PERSECUTED! You could also send a letter to all of the parents of your kid's friends, telling them that if their child climbs the tower and gets hurt, and that since you have taken great strides to thwart unauthorized access - (signs/fence, anti-climbing devices) - that the parents will be responsible for any damage their kids do to the tower, antennas & cables, and/or to themselves.

73's

<mcalhoun@ksu.edu> wrote in message news:f6eoto$mm2@unix1.cc.ksu.edu...
> >How many of you who have towers in your yard have an anti-climbing shield
>>around the lower 6 feet or so of the tower to prevent neighborhood kids
>>from doing Tarzan impersonations on your tower?
>

2800. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:14:31 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6gdh4qtc1@aioe.org>
Source record: 39057

"art" wrote
> The antenna from the University is resonant,
> tho less efficient than ideal.

Reprise for Art: The efficiency of an antenna system in radiating the power available at the antenna end of the transmission line connected to its feedpoint does not depend on whether or not the radiator itself is naturally resonant.

It depends on...

1) the ratio of the radiation resistance of the radiating sections of the antenna to the sum of that radiation resistance with all other r-f resistances in the antenna system. The pure radiation resistance of an antenna depends on the effective length//configuration of, and the r-f current distribution along the conductors exposed to space -- but not those of any matching devices used in the system design (wherever located).

2) the degree of impedance match existing between the antenna feedpoint and the source (normally, a transmission line, including any matching network there).

The DLM uses matching components within the length of a short vertical radiator with the goals of canceling the high capacitive reactance of this electrically short radiator, and changing the current distribution along the radiator for an average value higher than provided by base loading.

So for the same losses in the r-f ground system, the DLM could have somewhat better system radiation efficiency than a base-loaded monopole of the same physical height. But good system efficiency would still be heavily dependent on the quality of the r-f ground used with it (just as in a "standard" monopole).

This is not a revolutionary concept, as mid- and top-loading techniques have been used with vertical monopoles for many decades.

RF

2801. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:25:51 UTC
From: richardharrison@webtv.net
Message-ID: <11195-468BBBFF-66@storefull-3255.bay.webtv.net>
Source record: 39059

Art wrote:
"I suppose ham radio reflects the veterans of WW2 there many of those who were doers are gradually dying off leaving former CBers in the majority."
I qualify for all of the above, WW-2 overseas veteran, radio amateur, CBer, but I`m not dead yet. I also had a 1st class phone license and an E.E. degree, among others.

Best regards, Richard Harrison, KB5WZI1

2802. Re: How can such a small device -- a wrist watch -- receive suchlong-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:42:04 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <468BBFCE.F73522E4@earthlink.net>
Source record: 39060
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Jim - NN7K wrote:
>
> ! BTW, THAT signal is also used to sync
> generators on the Power Grid (wonder what
> would happen in a power co got even 1%
> out of phase? Answer: Meltdown!

No, if they are trying to run too fast, the current output will
increase, and the paower plant's breakers will disconnect it from the
grid. If it slows down, it will draw current, and become a motor. The
only "meltdown" is the customer's. If too many generators go off line
there is a massive brown out, or blackout.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

2803. Re: How can such a small device -- a wrist watch -- receive suchlong-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:44:14 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <468BC051.82F85595@earthlink.net>
Source record: 39061
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Christopher Cox wrote:
>
> > I start to believe only the CIA/FBI could be doing something like this
> > because they are the smartest and most evil bastards in the universe.
> > Cold-hearted CIA f-kfoams.
> >
> > I get the feeling that the exploitative sadistic CIA/FBI know about
> > science that ordinary USA citizens are not allowed to know about.
> >
> > I then want the CIA/FBI to suffer for what I perceive as their
> > "stinginess".
> >
> > Anyways...
> >
> > So I guess it is possible to have analog AM cell phones operating
> > between 40 KHz and 285 KHz that are the same small size as today's
> > cell phones. Right? If it's not possible then why not? If a wrist
> > watch can do it, then why not a cell phone?
> >
>
> All this for 245kHz of band space in a frequency area of high noise and
> long propagation paths.
>
> Engineering would dictate looking elsewhere.
>
> But hey, you want to try, go ahead. I believe there are allocations in
> the above spectrum for transmitting a couple watts into a antenna less
> than three feet long. I would think a wrist watch transmitter would qualify.
>
> Google up VLF, melt some solder, and let us know how you do.
>
> Chris

170 to 190 KHZ, with limits on power and antenna size.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

2804. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 15:44:31 UTC
From: richardharrison@webtv.net
Message-ID: <11196-468BC05F-13@storefull-3255.bay.webtv.net>
Source record: 39062

Art wrote:
"Now I have a mantra that if it is "resonant and in a state of
equilibriun" it is what I call a Gaussian antenna."

Yes, and the question still remains, are the lyrics sung because they
are too silly to be repeated without the music?

Best regards, Richard Harrison. KB5WZI

2805. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:02:21 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B1129D.6D573%dbowey@comcast.net>
Source record: 39063
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com, "Ron
Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Keith Dysart" <Keith.Dysart@gmail.com> wrote in message
> news:1183489552.088116.51340@g4g2000hsf.googlegroups.com...
>> On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
>>> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
>>>
>>>
>>>
>>>
>>>
>>>> On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>>>
>>>> <t...@aint.me> wrote:
>>>
>>>>> "John Smith I" <assemblywiz...@gmail.com> wrote in message
>>>>> news:f64hg5$d3j$1@nnrp.linuxfan.it...
>>>>>> Radium wrote:
>>>
>>>>> <snip>
>>>
>>>>> Suppose you have a 1 MHz sine wave whose amplitude
>>>>> is multiplied by a 0.1 MHz sine wave.
>>>>> What would it look like on an oscilloscope?
>>>
>>> <snip>
>>>
>>>>> What would it look like on a spectrum analyzer?
>>>
>>>> | |
>>>> | | | |
>>>> --------+--------------------+-------+------+----
>>>> 100kHz 0.9MHz 1MHz 1.1MHz
>>>
>>>>> Then suppose you have a 1.1 MHz sine wave added
>>>>> to a 0.9 MHz sine wave.
>>>>> What would that look like on an oscilloscope?
>>>
>>> <snip>
>>>
```

>>>> Tricky!!!
>>>
>>>> It looks like AM but it isn't, it's just the phases sliding past
>>>> each other slowly and algebraically adding which creates the
>>>> illusion.
>>>
>>>>> What would that look like on a spectrum analyzer?
>>>
>>>> | |
>>>> | |
>>>> ----------------------------+--------------+----
>>>> 0.9MHz 1.1MHz
>>>
>>>> --
>>>> JF
>>>
>>> But if you remove the half volt bias you put on the
>>> 100 kHz signal in the multiplier version, the results
>>> look exactly like the summed version, so I suggest
>>> that results are the same when a 4 quadrant multiplier
>>> is used.
>>>
>>> And since the original request was for a "1 MHz sine
>>> wave whose amplitude is multiplied by a 0.1 MHz sine
>>> wave" I think a 4 quadrant multiplier is in order.
>>>
>>> ...Keith-
>>
>> Ooops. I misspoke. They are not quite the same.
>>
>> The spectrum is the same, but if you want to get exactly
>> the same result, the lower frequency needs a 90 degree
>> offset and the upper frequency needs a -90 degree offset.
>>
>> And the amplitudes of the the sum and difference
>> frequencies need to be one half of the amplitude of
>> the frequencies being multiplied.
>>
>> ...Keith
>>
>
> You win. :)
>
> When I conceived the problem I was thinking
> cosines actually. In which case there are no
> phase shifts to worry about in the result.
>
> I also forgot the half amplitude factor.
>
> While it might not be obvious, the two cases I

> described are basically identical. And this
> situation occurs in real life, i.e. in radio signals,
> oceanography, and guitar tuning.
>
> It follows from what is taught in high school
> geometry.
>
> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>
> Basically: multiplying two sine waves is
> the same as adding the (half amplitude)
> sum and difference frequencies.

No, they aren't the same at all, they only appear to be the same before
they are examined. The two sidebands will not have the correct phase
relationship.

One could, temporarily, mistake the added combination for a full carrier
with independent sidebands, however.

>
> (For sines it is
> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>)
>
> --
> rb
>

2806. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:09:03 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-75A6EE.09090304072007@newsgroups.comcast.net>
Source record: 39064
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <qtlBZyDzT1iGFwEF@g3ohx.demon.co.uk>,
Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk> wrote:

> In message <CrydnYtS7fDGpBbbnZ2dnUVZ_vumnZ2d@giganews.com>, Brenda Ann
> <brendad@shinbiro.com> writes
> >
> >"isw" <isw@witzend.com> wrote in message
> >news:isw-656111.224220030720072007@newsgroups.comcast.net...
> >>
> >> After you get done talking about modulation and sidebands, somebody
> >> might want to take a stab at explaining why, if you tune a receiver to
> >> the second harmonic (or any other harmonic) of a modulated carrier (AM
> >> or FM; makes no difference), the audio comes out sounding exactly as it
> >> does if you tune to the fundamental? That is, while the second harmonic
> >> of the carrier is twice the frequency of the fundamental, the sidebands
> >> of the second harmonic are *not* located at twice the frequencies of the
> >> sidebands of the fundamental, but rather precisely as far from the
> >> second harmonic of the carrier as they are from the fundamental.
> >>
> >> Isaac
> >
> >I can't speak to second harmonics of a received signal, though I can't think
> >why they would be any different than an internal signal.. but:
> >
> >When you frequency multiply and FM signal in a transmitter (As used to be
> >done on most FM transmitters in the days before PLL came along), you not
> >only multiplied the extant frequency, but the modulation swing as well. i.e.
> >if you start with a 1 MHz FM modualated crystal oscillator, and manage to
> >get 500 Hz swing from the crystal (using this only as a simple example),
> >then if you double that signal's carrier frequency, you also double the FM
> >swing to 1 KHz. Tripling it from there would give you a 6 MHz carrier with a
> >3 KHz swing, and so on.
> >
>
> For multiplying FM, yes, of course, this is exactly what happens. And as
> it happens for FM, it must also happen for AM.

If you start with, say, a 1 MHz carrier AM modulated at 1 KHz, tuning to
the second harmonic gives you a 2 MHz carrier AM modulated at 1 KHz; not
2 KHz as your "must also happen for AM" would suggest.

Isaac

2807. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:11:58 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-E4EFAD.09115804072007@newsgroups.comcast.net>
Source record: 39065
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "Keith Dysart" <Keith.Dysart@gmail.com> wrote in message
> news:1183489552.088116.51340@g4g2000hsf.googlegroups.com...
> > On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
> >> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
> >>
> >>
> >>
> >>
> >>
> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
> >>
> >> > <t...@aint.me> wrote:
> >>
> >> >>"John Smith I" <assemblywiz...@gmail.com> wrote in message
> >> >>news:f64hg5$d3j$1@nnrp.linuxfan.it...
> >> >> >> Radium wrote:
> >>
> >> >> ><snip>
> >>
> >> >> >Suppose you have a 1 MHz sine wave whose amplitude
> >> >> >is multiplied by a 0.1 MHz sine wave.
> >> >> >What would it look like on an oscilloscope?
> >>
> >> >> <snip>
> >>
> >> >> >What would it look like on a spectrum analyzer?
> >>
> >> >> | |
> >> >> | | | |
> >> >> --------+--------------------+-------+------+----
> >> >> 100kHz 0.9MHz 1MHz 1.1MHz
> >>
> >> >> >Then suppose you have a 1.1 MHz sine wave added
> >> >> >to a 0.9 MHz sine wave.
> >> >> >What would that look like on an oscilloscope?
> >>
> >> >> <snip>
> >>
> >> >> Tricky!!!
```

> >>
> >> > It looks like AM but it isn't, it's just the phases sliding past
> >> > each other slowly and algebraically adding which creates the
> >> > illusion.
> >>
> >> > >What would that look like on a spectrum analyzer?
> >>
> >> > | |
> >> > | |
> >> > ------------------------------+--------------+----
> >> > 0.9MHz 1.1MHz
> >>
> >> > --
> >> > JF
> >>
> >> But if you remove the half volt bias you put on the
> >> 100 kHz signal in the multiplier version, the results
> >> look exactly like the summed version, so I suggest
> >> that results are the same when a 4 quadrant multiplier
> >> is used.
> >>
> >> And since the original request was for a "1 MHz sine
> >> wave whose amplitude is multiplied by a 0.1 MHz sine
> >> wave" I think a 4 quadrant multiplier is in order.
> >>
> >> ...Keith-
> >
> > Ooops. I misspoke. They are not quite the same.
> >
> > The spectrum is the same, but if you want to get exactly
> > the same result, the lower frequency needs a 90 degree
> > offset and the upper frequency needs a -90 degree offset.
> >
> > And the amplitudes of the the sum and difference
> > frequencies need to be one half of the amplitude of
> > the frequencies being multiplied.
> >
> > ...Keith
> >
>
> You win. :)
>
> When I conceived the problem I was thinking
> cosines actually. In which case there are no
> phase shifts to worry about in the result.
>
> I also forgot the half amplitude factor.
>
> While it might not be obvious, the two cases I
> described are basically identical. And this

> situation occurs in real life, i.e. in radio signals,
> oceanography, and guitar tuning.

The beat you hear during guitar tuning is not modulation; there is no non-linear process involved (i.e. no multiplication).

Isaac

2808. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:32:27 UTC
From: dplatt@radagast.org
Message-ID: <rlusl4-o2r.ln1@radagast.org>
Source record: 39069
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <qtlBZyDzT1iGFwEF@g3ohx.demon.co.uk>,
Ian Jackson <IanJackson@REMOVE-THIS-BITg3ohx.demon.co.uk> wrote:

>(b) In the second scenario, the 2nd harmonic is effectively present
>BEFORE modulation, so it gets modulated along with the fundamental. In
>this case, the lower frequencies of sidebands of the 2nd harmonic will
>be 'normal', and the signal will sound normal.

I believe that will be the likely scenario for any AM transmitter
which uses plate modulation or a similar "high level modulation"
system. If the RF finals are running in a single-ended configuration
(rather than push-pull) even the unmodulated carrier is likely to have
a significant amount of second-harmonic distortion in it... and I'd
think that this would tend to grow worse as the audio peaks push the
finals up towards their maximum output power.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2809. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:57:04 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468bd109$0$31234$4c368faf@roadrunner.com>
Source record: 39066
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-656111.22422003072007@newsgroups.comcast.net...

<snip>

>
> After you get done talking about modulation and sidebands, somebody
> might want to take a stab at explaining why, if you tune a receiver to
> the second harmonic (or any other harmonic) of a modulated carrier (AM
> or FM; makes no difference), the audio comes out sounding exactly as it
> does if you tune to the fundamental? That is, while the second harmonic
> of the carrier is twice the frequency of the fundamental, the sidebands
> of the second harmonic are *not* located at twice the frequencies of the
> sidebands of the fundamental, but rather precisely as far from the
> second harmonic of the carrier as they are from the fundamental.
>
> Isaac

Whoa. I thought you were smoking something but
my curiosity is piqued.
I tried shortwave stations and heard no harmonics.
But that could be blamed on propagation.
There is an AM station here at 1.21 MHz that is s9+20dB.
Tuned to 2.42 MHz. Nothing. Generally the lowest
harmonics should be strongest. Then I remembered
that many types of non-linearity favor odd harmonics.
Tuned to 3.63 MHz. Holy harmonics, batman.
There it was and the modulation was not multiplied!
Voices sounded normal pitch. When music was
played the pitch was the same on the original and
the harmonic.

One clue is that the effect comes and goes rather
abruptly. It seems to switch in and out rather
than fade in an out. Maybe the coming and going
is from switching the audio material source?

This is strange. If a signal is multiplied then the sidebands
should be multiplied too.
Maybe the carrier generator is generating a
harmonic and the harmonic is also being modulated
with the normal audio in the modulator.
But then that signal would have to make it through

the power amp and the antenna. Possible, but
why would it come and go?
Strange.

--
rb

2810. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 16:57:08 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183568228.515184.113530@r34g2000hsd.googlegroups.com>
Source record: 39067

On 4 Jul, 08:07, richardharri...@webtv.net (Richard Harrison) wrote:
> Art, KB9MZ.....XG wrote:
>
> "The Yagi was invented by Japanese in the early 1920 where America
> embraced the invention and where Japan did not."
>
> Close but no cigar. Truth Squad time again.
>
> The 3rd edition of Kraus` "Antennas" has the Yagi-Uda Story beginning on
> page 246. It Says:
> "This led to the publication of a series of articles from March 1926 to
> July 1929) in the Journal of the Institute of Electrical Engineers of
> Japan titled "On the Wireless Beam of Short Electric Waves." (Uda-1)."
>
> Best regards, Richard Harrison, KB5WZI

The truth!
Where is the lie?

2811. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:07:02 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183568822.681664.188290@57g2000hsv.googlegroups.com>
Source record: 39068

On 4 Jul, 08:14, "Richard Fry" <r...@adams.net> wrote:
> "art" wrote> The antenna from the University is resonant,
> > tho less efficient than ideal.
>
> _____
>
> Reprise for Art: The efficiency of an antenna system in radiating the
> power available at the antenna end of the transmission line connected to its
> feedpoint does not depend on whether or not the radiator itself is naturally
> resonant.
>
> It depends on...
>
> 1) the ratio of the radiation resistance of the radiating sections of the
> antenna to the sum of that radiation resistance with all other r-f
> resistances in the antenna system. The pure radiation resistance of an
> antenna depends on the effective length//configuration of, and the r-f
> current distribution along the conductors exposed to space -- but not those
> of any matching devices used in the system design (wherever located).
>
> 2) the degree of impedance match existing between the antenna feedpoint and
> the source (normally, a transmission line, including any matching network
> there).
>
> The DLM uses matching components within the length of a short vertical
> radiator with the goals of canceling the high capacitive reactance of this
> electrically short radiator, and changing the current distribution along the
> radiator for an average value higher than provided by base loading.
>
> So for the same losses in the r-f ground system, the DLM could have somewhat
> better system radiation efficiency than a base-loaded monopole of the same
> physical height. But good system efficiency would still be heavily
> dependent on the quality of the r-f ground used with it (just as in a
> "standard" monopole).
>
> This is not a revolutionary concept, as mid- and top-loading techniques have
> been used with vertical monopoles for many decades.
>
> RF

The term " cancelling " is not correct tho people seem to be happy
with it.
In fact is it is not CANCELLING anything as it is actually adding to

provide
a state of equilibrium. Big difference
Art

2812. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:11:19 UTC
From: richardharrison@webtv.net
Message-ID: <8695-468BD4B7-74@storefull-3253.bay.webtv.net>
Source record: 39071

Art wrote:
"Where is the lie?"
The inventors were not without honor on their own land!

Best regards, Richard Harrison, KB5WZI

2813. Re: AM electromagnetic waves: 20 KHz modulation frequency on anastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:16:55 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468bd5ad$0$16531$4c368faf@roadrunner.com>
Source record: 39070
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B1129D.6D573%dbowey@comcast.net...
> On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com,
> "Ron
> Baker, Pluralitas!" <this@aint.me> wrote:

<snip>

>>
>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>
>> Basically: multiplying two sine waves is
>> the same as adding the (half amplitude)
>> sum and difference frequencies.
>
> No, they aren't the same at all, they only appear to be the same before
> they are examined. The two sidebands will not have the correct phase
> relationship.

What do you mean? What is the "correct"
relationship?

>
> One could, temporarily, mistake the added combination for a full carrier
> with independent sidebands, however.
>
>
>
>>
>> (For sines it is
>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>)
>>
>> --
>> rb
>>
>

2814. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:32:10 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <uQQii.2972$Np2.1287@trnddc07>
Source record: 39072

"Wayne" <mygarbagecan@verizon.net> wrote in message
news:4EBii.3183$fw2.1666@trnddc04...
> Looks like I'll have to use a horizontal loop in the attic for a few
> months. Any opinions on how to best feed it?
> --open wire
> --coax coil balun
> --ferrite bead balun
> --straight coax
>
> The loop is about 13 feet per side, and I want to operate 20 meters and
> up. In the past I have simply used a coax feed without a balun. It worked
> OK, but there was a lot of stray RF around the house.
>
> TIA

If the antenna is in the attic you are going to have RF in the house because
the antenna is IN the house.
Dale W4OP
>

2815. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:39:02 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468bdadd$0$20558$4c368faf@roadrunner.com>
Source record: 39073
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-E4EFAD.09115804072007@newsgroups.comcast.net...
> In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "Keith Dysart" <Keith.Dysart@gmail.com> wrote in message
>> news:1183489552.088116.51340@g4g2000hsf.googlegroups.com...
>> > On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
>> >> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
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>> >>
>> >>
>> >>
>> >>
>> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
>> >>
>> >> > <t...@aint.me> wrote:
>> >>
>> >> >"John Smith I" <assemblywiz...@gmail.com> wrote in message
>> >> >news:f64hg5$d3j$1@nnrp.linuxfan.it...
>> >> > >> Radium wrote:
>> >>
>> >> > ><snip>
>> >>
>> >> > >Suppose you have a 1 MHz sine wave whose amplitude
>> >> > >is multiplied by a 0.1 MHz sine wave.
>> >> > >What would it look like on an oscilloscope?
>> >>
>> >> <snip>
>> >>
>> >> > >What would it look like on a spectrum analyzer?
>> >>
>> >> > | |
>> >> > | | | |
>> >> > --------+--------------------+-------+------+----
>> >> > 100kHz 0.9MHz 1MHz 1.1MHz
>> >>
>> >> > >Then suppose you have a 1.1 MHz sine wave added
>> >> > >to a 0.9 MHz sine wave.
>> >> > >What would that look like on an oscilloscope?
>> >>
>> >> <snip>
```

>> >>
>> >> > Tricky!!!
>> >>
>> >> > It looks like AM but it isn't, it's just the phases sliding past
>> >> > each other slowly and algebraically adding which creates the
>> >> > illusion.
>> >>
>> >> > >What would that look like on a spectrum analyzer?
>> >>
>> >> > | |
>> >> > | |
>> >> > ------------------------------+--------------+----
>> >> > 0.9MHz 1.1MHz
>> >>
>> >> > --
>> >> > JF
>> >>
>> >> But if you remove the half volt bias you put on the
>> >> 100 kHz signal in the multiplier version, the results
>> >> look exactly like the summed version, so I suggest
>> >> that results are the same when a 4 quadrant multiplier
>> >> is used.
>> >>
>> >> And since the original request was for a "1 MHz sine
>> >> wave whose amplitude is multiplied by a 0.1 MHz sine
>> >> wave" I think a 4 quadrant multiplier is in order.
>> >>
>> >> ...Keith-
>> >
>> > Ooops. I misspoke. They are not quite the same.
>> >
>> > The spectrum is the same, but if you want to get exactly
>> > the same result, the lower frequency needs a 90 degree
>> > offset and the upper frequency needs a -90 degree offset.
>> >
>> > And the amplitudes of the the sum and difference
>> > frequencies need to be one half of the amplitude of
>> > the frequencies being multiplied.
>> >
>> > ...Keith
>> >
>>
>> You win. :)
>>
>> When I conceived the problem I was thinking
>> cosines actually. In which case there are no
>> phase shifts to worry about in the result.
>>
>> I also forgot the half amplitude factor.
>>

>> While it might not be obvious, the two cases I
>> described are basically identical. And this
>> situation occurs in real life, i.e. in radio signals,
>> oceanography, and guitar tuning.
>
> The beat you hear during guitar tuning is not modulation; there is no
> non-linear process involved (i.e. no multiplication).
>
> Isaac

In short, the human auditory system is not linear.
It has a finite resolution bandwidth. It can't resolve
two tones separted by a few Hertz as two separate tones.
(But if they are separted by 100 Hz they can easily
be separated without hearing a beat.)

The same affect can be seen on a spectrum analyzer.
Give it two frequencies separated by 1 Hz. Set the
resolution bandwidth to 10 Hz. You'll see the peak
rise and fall at 1 Hz.

2816. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:39:04 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183570744.903750.193650@n2g2000hse.googlegroups.com>
Source record: 39074

On 4 Jul, 10:11, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "Where is the lie?"
> The inventors were not without honor on their own land!
>
> Best regards, Richard Harrison, KB5WZI

Bull, They were ignored.Japan had not implimented the idea
up till such time that one was captured from the Allies.
Pretty much the same as with the inventor of the concept
"Just in time" for Industry. Reverred in Japan and
ignored in the U.S.until the Japanese "invasion."
What I said is NOT A LIE. Unfortunately Kraus must have died
thus preventing its addition to his book. Seems like you need
to get a book that is up to date and relavent before you call
me a LIAR.

2817. Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 17:49:24 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1183571364.141664.209940@r34g2000hsd.googlegroups.com>
Source record: 39075

Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on
windows Vista ?, and if so, did it work ?

If it did not run as expected, could you tell me what went wrong ?

Because 4nec2 being freeware I do not (yet) have the funds to buy me a
new computer and/or OS, so maybe I can get some small answers this
way.

Greetings,
Arie.

2818. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 18:34:00 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <sKRii.5994$q12.3407@trnddc08>
Source record: 39076

"Dale Parfitt" <par@parelectronics.com> wrote in message
news:uQQii.2972$Np2.1287@trnddc07...
>
> "Wayne" <mygarbagecan@verizon.net> wrote in message
> news:4EBii.3183$fw2.1666@trnddc04...
>> Looks like I'll have to use a horizontal loop in the attic for a few
>> months. Any opinions on how to best feed it?
>> --open wire
>> --coax coil balun
>> --ferrite bead balun
>> --straight coax
>>
>> The loop is about 13 feet per side, and I want to operate 20 meters and
>> up. In the past I have simply used a coax feed without a balun. It
>> worked OK, but there was a lot of stray RF around the house.
>>
>> TIA
>
> If the antenna is in the attic you are going to have RF in the house
> because the antenna is IN the house.
> Dale W4OP
>>
I wouldn't expect otherwise. It was just a comment about what was
previously observed. In fact, the RF got into the computerized thermostat
and burned out the computer. The new thermostat has ferrite chokes on the
leads, and it has survived nicely.

2819. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 18:45:12 UTC
From: richardharrison@webtv.net
Message-ID: <9291-468BEAB8-149@storefull-3257.bay.webtv.net>
Source record: 39078

Art wrote:
"Bull. They were ignored. Japan had not implemented the idea up till such time that one was captured from the allies."

Wikiipedia history confirms Art`s version of the Yagi`s story. I was wrong. I appologize. The Japanese paid little attention to their own invention. How did we get so lucky? Sorry for accusing Art of Yagi misinformation.

Now, I think we are agreed that resonance is a nonreactive load. I don`t know what Art means by "equilibrium" in regard to the dynamic electrical characteristics of an antenna. We know that the same quantity can be added to both sides of an equation and just like a scale balance, no change in value occurs. Twenty questions should not be required to get an answer.

Best regards, Richard Harrison, KB5WZI

2820. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 18:46:52 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6gpv5$7bi$1@aioe.org>
Source record: 39077

"art" wrote

> The term " cancelling " is not correct tho people seem to be happy
> with it. In fact is it is not CANCELLING anything as it is actually
> adding to provide a state of equilibrium. Big difference.

That's what you meant by equilibrium !

Kindly note that "equilibrium" (or resonance) does not need to be an attribute of the radiator itself, only a desirable attribute of the complete antenna system.

RF

2821. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 19:23:48 UTC
From: Rick Frazier <rickf@rickfrazier.com>
Message-ID: <468bf38d$0$31220$4c368faf@roadrunner.com>
Source record: 39079
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Bishoop wrote:
> <snip>
>
>>10 or 12 db of forward gain means your recieved signal is about 10 to 16
>>times as strong as a dipole hanging in the air. If you interpret the
>>negative number as the amount the signal is down from the forward gain,
>>the numbers given (9 to 17db) would indicate reception off the back side
>>would be somewhere near a dipole in open space (1 db net) to -5db (about
>>1/3 of the signal of a dipole) pickup from the back. I have used aluminum
>>sheet (tested prior with aluminum foil) tied to the mesh to completely
>>block reception from the back (a near infinite front to back ratio) in an
>>extreme case where I had significant multipath reflections coming in from
>>the back. It really cleaned things up. In your case you may not need to
>>go to this rather severe step.
>
>
> <snip>
>
>>Good luck!
>>--Rick AH7H
>
>
> 10 or 12db of forward gain goes NOT equal 10 "times" the received signal
> strength.
>
>
OK, so it's semantics.
a 3 3db positive change is a doubling of "power", which I relate to
signal strength on reception, hence my use of the term above.
3db ix 2x power
6db is 4x power
9db is 8x power
10db is essentially 10x power.... (and a generally accepted
approximation).

Given the nebulous measurement methods used, stating that 10-12db of an
antenna gain is nearly the same isn't that far off, assuming the stated
10-12db is even remotely accurate to begin with....

--Rick AH7H

2822. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 19:36:05 UTC
From: Kadin2048 <usenet.kadin@nospam.xoxy.net>
Message-ID: <usenet.kadin-64249D.15360504072007@comcast.dca.giganews.com>
Source record: 39080
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In article <mGNii.3453$rR.973@newsread2.news.pas.earthlink.net>,
"Ralph Mowery" <rmowery28146@earthlink.net> wrote:

> "Bishoop" <none@nowhere.none> wrote in message
> > (snip)
> > 10 or 12db of forward gain goes NOT equal 10 "times" the received signal
> > strength.
>
> Then what do you think it is equal to ?

Well, 10dB of gain is a 10x increase in absolute signal, but 12dB of
gain would be about 16x the signal.

dB = 10 * log(S1/S2)
where S1 and S2 are the absolute strengths of two signals you're
finding the dB of difference between.

The regular absolute-value scale and logarithmic scale of dB "cross" at
the factor of 10; so 10dB = 10x, but that's the only place that's true
(at least, I think it is, off the top of my head).

-Kadin.

2823. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 20:23:27 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <pIOdnRCDvOxfnBHbnZ2dnUVZ8qaqnZ2d@pipex.net>
Source record: 39081

Wayne wrote:
> Looks like I'll have to use a horizontal loop in the attic for a few months.
> Any opinions on how to best feed it?
> --open wire
> --coax coil balun
> --ferrite bead balun
> --straight coax
>
> The loop is about 13 feet per side, and I want to operate 20 meters and up.
> In the past I have simply used a coax feed without a balun. It worked OK,
> but there was a lot of stray RF around the house.
>
> TIA
>
>

Another option is the one that I use which is a fan dipole - it would be simple for 20 metres up - mine is from 80m up. It's fed by co-ax via a balun. You can see details at http://www.radiowymsey.org/FanDipole/fandiploe.htm . The only interference I have had was to my son's amplified computer speakers which was easily cured by winding it's input lead on a piece of ferrite road. If you checkout the slinky dipole page you will see how easy it is to make co-ax balun.

Charlie.

--
M0WYM
www.radiowymsey.org

2824. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 20:27:51 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>
Source record: 39082
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:

>In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:

>> You win. :)
>>
>> When I conceived the problem I was thinking
>> cosines actually. In which case there are no
>> phase shifts to worry about in the result.
>>
>> I also forgot the half amplitude factor.
>>
>> While it might not be obvious, the two cases I
>> described are basically identical. And this
>> situation occurs in real life, i.e. in radio signals,
>> oceanography, and guitar tuning.
>
>The beat you hear during guitar tuning is not modulation; there is no
>non-linear process involved (i.e. no multiplication).

That's not true.

The human ear has a logarithmic amplitude response and the beat note
(the difference frequency) is generated there. The sum frequency is
too, but when unison is achieved it'll be at precisely twice the
frequency of either fundamental and won't be noticed.

--
JF

2825. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 20:39:29 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <5ATii.3412$bO2.12@trnddc05>
Source record: 39083

"charlie" <wehatespam@wymsey.co.uk> wrote in message
news:pIOdnRCDvOxfnBHbnZ2dnUVZ8qaqnZ2d@pipex.net...
> Wayne wrote:
>> Looks like I'll have to use a horizontal loop in the attic for a few
>> months.
>> Any opinions on how to best feed it?
>> --open wire
>> --coax coil balun
>> --ferrite bead balun
>> --straight coax
>>
>> The loop is about 13 feet per side, and I want to operate 20 meters and
>> up.
>> In the past I have simply used a coax feed without a balun. It worked
>> OK,
>> but there was a lot of stray RF around the house.
>>
>> TIA
>>
>>
>
> Another option is the one that I use which is a fan dipole - it
> would be simple for 20 metres up - mine is from 80m up. It's fed by
> co-ax via a balun. You can see details at
> http://www.radiowymsey.org/FanDipole/fandiploe.htm . The only
> interference I have had was to my son's amplified computer speakers
> which was easily cured by winding it's input lead on a piece of
> ferrite road. If you checkout the slinky dipole page you will see
> how easy it is to make co-ax balun.
>
> Charlie.
>
> --
> M0WYM
> www.radiowymsey.org

Thanks, I'll check it out.

2826. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 21:07:37 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183583257.664014.111800@c77g2000hse.googlegroups.com>
Source record: 39084

On 4 Jul, 11:45, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "Bull. They were ignored. Japan had not implemented the idea up till
> such time that one was captured from the allies."
>
> Wikiipedia history confirms Art`s version of the Yagi`s story. I was
> wrong. I appologize. The Japanese paid little attention to their own
> invention. How did we get so lucky? Sorry for accusing Art of Yagi
> misinformation.
>
> Now, I think we are agreed that resonance is a nonreactive load. I don`t
> know what Art means by "equilibrium" in regard to the dynamic electrical
> characteristics of an antenna. We know that the same quantity can be
> added to both sides of an equation and just like a scale balance, no
> change in value occurs. Twenty questions should not be required to get
> an answer.
>
> Best regards, Richard Harrison, KB5WZI

Place your complaint to David not I.

I had to supply specific answers without
embelishment to specific questions created
and composed by David who
maintained total control.
I got scolded when I attempted to
give guidance
and my hands were tied
Those questions did me no favours since some used
those answers given without correlating context
to ellicit cheap guffaws of contempt in my direction

2827. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 21:54:00 UTC
From: Mark@TayleorRobesin.org
Message-ID: <8n5o831ffppl85h8rb62hspbactlfqo5k5@4ax.com>
Source record: 39085
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
just something the needs saying again IMO

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

2828. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 21:58:55 UTC
From: Not Roger <anon@anon>
Message-ID: <12dqns.f6k.17.1@news.alt.net>
Source record: 39086
Cross-posted to: alt.ham-radio.vhf-uhf,alt.satellite.direcpc,rec.radio.amateur.antenna,rec.radio.amateur.policy

<Mark@TayleorRobesin.org> wrote in message
news:8n5o831ffppl85h8rb62hspbactlfqo5k5@4ax.com...
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
> <assemblywizard@gmail.com> wrote:
>
> >K4YZ wrote:
> >> Nope.
> >>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
> >>
> >> Sounds like Lennie, to me....
> >>
> >> Steve, K4YZ
> >>
> >
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
> >
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
> >
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
> >
> >JS
> just something the needs saying again IMO
>
> "one useless man is disgrace 2 become a law firm 3 or more become a
congress"
> adams
>
> woger you are a Congress all in your own head
>
> http://kb9rqz.bravejournal.com/
>

> G
>
> --
> Posted via a free Usenet account from http://www.teranews.com
>
>

2829. Re: AM electromagnetic waves: 20 KHz modulation frequency on anastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 22:19:01 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B16AE5.6D5BC%dbowey@comcast.net>
Source record: 39087
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B1129D.6D573%dbowey@comcast.net...
>> On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com,
>> "Ron
>> Baker, Pluralitas!" <this@aint.me> wrote:
>
> <snip>
>
>>>
>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>
>>> Basically: multiplying two sine waves is
>>> the same as adding the (half amplitude)
>>> sum and difference frequencies.
>>
>> No, they aren't the same at all, they only appear to be the same before
>> they are examined. The two sidebands will not have the correct phase
>> relationship.
>
> What do you mean? What is the "correct"
> relationship?
>
>>
>> One could, temporarily, mistake the added combination for a full carrier
>> with independent sidebands, however.
>>
>>
>>
>>>
>>> (For sines it is
>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>> )
>>>
>>> --
>>> rb
>>>
```

>>
>
>

When AM is correctly accomplished (a single voiceband signal is modulated onto a carrier via a non-linear process), at an envelope detector the two sidebands will be additive. But if you independe ntly place a carrier at frequency (c), another carrier at (c-1 khz) and another carrier at (c+ 1 kHz), the composite can look like an AM signal, but it is not, and only by the most extreme luck will the sidebands be additive at the detector. They would probably cycle between additive and subtractive since they have no real relationship and were not the result of amplitude modulation.

2830. Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 22:56:54 UTC
From: WA4SZE@gmail.com
Message-ID: <1183589814.366696.214530@q75g2000hsh.googlegroups.com>
Source record: 39088

I have installed a FAA approved NDB beacon here at our private airport located in Manchester,TN .

The Beacon is transmitting on 529 KHZ Carrier power is 50 watts the facility Id is : LYQ

I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8 dia aluminum 'power line' cable) is at the 90 foot level runs down the face of the tower with 24 inch spacing to the matching network.

I am using the 'Gamma' match network : the SWR is down to 1.2 or so.

The top of the tower has 4 ten foot radials

The base of the tower has 8 200 foot 3/ 8 inch aluminum cable radials we plan to add more.

The tower has a 3/8 'power line' type cable from the top to the base to ensure bonding of each section.

When I fly the Company's Jetstar from 1000 to 41,000 feet, I get solid points on the RMI indicator:

when I pass right over the beacon tower the RMI needle swings to the tail indicating positive station passage.

The problem is the range of the LYQ beacon it seems to work 10 miles or less??? The airplane has dual ADF systems that work perfect.

As an aside, 10 miles away, is another ADF beacon on 332 KHZ 25 watts! using the traditional three strand 'flat top' suspended between two telephone poles. The vertical radiator for this beacon is less than 60 feet high : I can track the beacon out to 70 miles or so!

Is a shunt feed tower lossy??? poor radiator??? comments???

I am a Ham op WA4SZE : by the way, we will QSL the beacon when we get it commissioned.

Thanks!!

2831. Re: AM electromagnetic waves: 20 KHz modulation frequency on anastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-04 23:53:00 UTC
From: craigm <none@domain.invalid>
Message-ID: <5lWii.39$Pk3.191676@news.sisna.com>
Source record: 39089
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

```
>>
>
> When AM is correctly accomplished (a single voiceband signal is modulated
> onto a carrier via a non-linear process), at an envelope detector the two
> sidebands will be additive. But if you independe ntly place a carrier at
> frequency ( c ), another carrier at ( c-1 khz) and another carrier at (c+
> 1 kHz), the composite can look like an AM signal, but it is not, and only
> by
> the most extreme luck will the sidebands be additive at the detector.
> They would probably cycle between additive and subtractive since they have
> no real relationship and were not the result of amplitude modulation.

A peak detector is best understood in the time domain, try to create a
simple description in the frequency domain and you can only cause confusion
and incorrect conclusions.
```

2832. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 00:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <c0rtl4-la3.ln1@mail.specsol.com>
Source record: 39090

WA4SZE@gmail.com wrote:
> I have installed a FAA approved NDB beacon here at our private
> airport located in Manchester,TN .

> The Beacon is transmitting on 529 KHZ Carrier power is 50 watts the
> facility Id is : LYQ

> I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8
> dia aluminum 'power line' cable) is at the 90 foot level runs down
> the face of the tower with 24 inch spacing to the matching network.

> I am using the 'Gamma' match network : the SWR is down to 1.2 or so.

> The top of the tower has 4 ten foot radials

> The base of the tower has 8 200 foot 3/ 8 inch aluminum cable
> radials we plan to add more.

> The tower has a 3/8 'power line' type cable from the top to the base
> to ensure bonding of each section.

> When I fly the Company's Jetstar from 1000 to 41,000 feet, I get
> solid points on the RMI indicator:

> when I pass right over the beacon tower the RMI needle swings to the
> tail indicating positive station passage.

> The problem is the range of the LYQ beacon it seems to work 10 miles
> or less??? The airplane has dual ADF systems that work perfect.

> As an aside, 10 miles away, is another ADF beacon on 332 KHZ 25
> watts! using the traditional three strand 'flat top' suspended
> between two telephone poles. The vertical radiator for this beacon is
> less than 60 feet high : I can track the beacon out to 70 miles or so!

> Is a shunt feed tower lossy??? poor radiator??? comments???

> I am a Ham op WA4SZE : by the way, we will QSL the beacon when we
> get it commissioned.

> Thanks!!

More radials certainly won't hurt, especially since at this freq 200
feet is short.

What's the ground around it like?

--
Jim Pennino

Remove .spam.sux to reply.

2833. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 00:59:08 UTC
From: WA4SZE@gmail.com
Message-ID: <1183597148.288780.325870@m36g2000hse.googlegroups.com>
Source record: 39091

On Jul 4, 8:45 pm, j...@specsol.spam.sux.com wrote:
> WA4...@gmail.com wrote:
> > I have installed a FAA approved NDBbeaconhere at our private
> > airport located in Manchester,TN .
> > TheBeaconis transmitting on 529 KHZ Carrier power is 50 watts the
> > facility Id is : LYQ
> > I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8
> > dia aluminum 'power line' cable) is at the 90 foot level runs down
> > the face of the tower with 24 inch spacing to the matching network.
> > I am using the 'Gamma' match network : the SWR is down to 1.2 or so.
> > The top of the tower has 4 ten foot radials
> > The base of the tower has 8 200 foot 3/ 8 inch aluminum cable
> > radials we plan to add more.
> > The tower has a 3/8 'power line' type cable from the top to the base
> > to ensure bonding of each section.
> > When I fly the Company's Jetstar from 1000 to 41,000 feet, I get
> > solid points on the RMI indicator:
> > when I pass right over thebeacontower the RMI needle swings to the
> > tail indicating positive station passage.
> > The problem is the range of the LYQ beaconit seems to work 10 miles
> > or less??? The airplane has dual ADF systems that work perfect.
> > As an aside, 10 miles away, is another ADFbeaconon 332 KHZ 25
> > watts! using the traditional three strand 'flat top' suspended
> > between two telephone poles. The vertical radiator for thisbeaconis
> > less than 60 feet high : I can track thebeaconout to 70 miles or so!
> > Is a shunt feed tower lossy??? poor radiator??? comments???
> > I am a Ham op WA4SZE : by the way, we will QSL thebeaconwhen we
> > get it commissioned.
> > Thanks!!
>
> More radials certainly won't hurt, especially since at this freq 200
> feet is short.
>
> What's the ground around it like?
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

open land flat, somewhat damp covered with grass the radials lay on
top of the ground The beacon is on air right now going to leave it
on tonight for reception reports do you think a shunt feed tower is
not good?? I could jack up the tower and insulate from ground it

then series feed do you think that would be better??? lots of work
but might be worth the effort!

2834. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 01:08:12 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9963D71BE539Dmcoslocomcastnet@216.196.97.136>
Source record: 39092

4nec2 <4nec2@gmx.net> wrote in news:1183571364.141664.209940
@r34g2000hsd.googlegroups.com:

> Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on
> windows Vista ?, and if so, did it work ?
>
> If it did not run as expected, could you tell me what went wrong ?
>
> Because 4nec2 being freeware I do not (yet) have the funds to buy me a
> new computer and/or OS, so maybe I can get some small answers this
> way.

Not a direct answer, but M$ can barely get Vista to run on Vista. I
shudder to think of people actually trying to develop apps in that buggy,
slow and freeze prone environment.

- 73 de Mike KB3EIA -

2835. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 01:15:15 UTC
From: WA4SZE@gmail.com
Message-ID: <1183598115.622117.109320@q75g2000hsh.googlegroups.com>
Source record: 39093

On Jul 4, 8:59 pm, WA4...@gmail.com wrote:
> On Jul 4, 8:45 pm, j...@specsol.spam.sux.com wrote:
>
>
>
> > WA4...@gmail.com wrote:
> > > I have installed a FAA approved NDBbeaconhere at our private
> > > airport located in Manchester,TN .
> > > TheBeaconis transmitting on 529 KHZ Carrier power is 50 watts the
> > > facility Id is : LYQ
> > > I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8
> > > dia aluminum 'power line' cable) is at the 90 foot level runs down
> > > the face of the tower with 24 inch spacing to the matching network.
> > > I am using the 'Gamma' match network : the SWR is down to 1.2 or so.
> > > The top of the tower has 4 ten foot radials
> > > The base of the tower has 8 200 foot 3/ 8 inch aluminum cable
> > > radials we plan to add more.
> > > The tower has a 3/8 'power line' type cable from the top to the base
> > > to ensure bonding of each section.
> > > When I fly the Company's Jetstar from 1000 to 41,000 feet, I get
> > > solid points on the RMI indicator:
> > > when I pass right over thebeacontower the RMI needle swings to the
> > > tail indicating positive station passage.
> > > The problem is the range of the LYQ beaconit seems to work 10 miles
> > > or less??? The airplane has dual ADF systems that work perfect.
> > > As an aside, 10 miles away, is another ADFbeaconon 332 KHZ 25
> > > watts! using the traditional three strand 'flat top' suspended
> > > between two telephone poles. The vertical radiator for thisbeaconis
> > > less than 60 feet high : I can track thebeaconout to 70 miles or so!
> > > Is a shunt feed tower lossy??? poor radiator??? comments???
> > > I am a Ham op WA4SZE : by the way, we will QSL thebeaconwhen we
> > > get it commissioned.
> > > Thanks!!
>
> > More radials certainly won't hurt, especially since at this freq 200
> > feet is short.
>
> > What's the ground around it like?
>
> > --
> > Jim Pennino
>
> > Remove .spam.sux to reply.
>

> open land flat, somewhat damp covered with grass the radials lay on
> top of the ground Thebeaconis on air right now going to leave it
> on tonight for reception reports do you think a shunt feed tower is
> not good?? I could jack up the tower and insulate from ground it
> then series feed do you think that would be better??? lots of work
> but might be worth the effort!

As an aside, I wonder if this is proof that a shunt feed tower is no good??? I can SEE the tower (runway) over the nose of the airplane at 15 miles out! yet the RMI indicator is wandering! The beacon ID is in the noise!

I get a good match but the band width is NARROW! this indicates to me that the Q is high just as it should be? the RF amp meter is showing current thru the vertical run up the tower face if your careless around the 2300 pf vac cap you get a nice RF burn.

By the way, I made a mistake, I am using an omega match the values of the caps:

C-1 500 pf (from 50 ohm coax center conductor to 2300 PF Vac Var cap)

C-2 2300 pf vertical wire run thru C-2 2300 pf cap then ground

thanks!!!!

2836. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 03:38:54 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <btpo83hkujdmpb7fd8qpl78jbbsko7u5e7@4ax.com>
Source record: 39094

Welcome back and good luck. We never know what nature has in store
just around the corner.

2837. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 03:41:31 UTC
From: nm5k@wt.net
Message-ID: <1183606891.277851.254190@k79g2000hse.googlegroups.com>
Source record: 39096

On Jul 4, 5:56 pm, WA4...@gmail.com wrote:

> Is a shunt feed tower lossy??? poor radiator??? comments???
>
> I am a Ham op WA4SZE : by the way, we will QSL the beacon when we
> get it commissioned.
>
> Thanks!!

The tower would not be the most efficient thing, being a 1/4 wave at
that
freq is about 442 ft. The four 10 ft radials, which I assume are a top
hat,
will be fairly useless at that freq. Too short to really do any good.
How long is the top horizontal wire is the "T" they are using at the
other
airport? I bet it's pretty long across.
What I would do if possible, is lengthen the top hat wires to be as
long
as you can. There does not really have to be four.. Two is enough, as
you can see from the other station. I don't know what the current
distribution
is with that setup, but it would seem that max current is at your
matching
device. The longer you can make that tower look electrically, the
better.
I'm not sure what the norm is for the usual NDB antenna systems..
I would basically use the same measures I would running a short mobile
whip.. Longer top hat wires would greatly help current distribution if
they
are long enough. To resonate the tower at that freq with no coil
loading, you would need wires about 315 ft... :/
But you could use shorter, and compromise a bit.
The ground is pretty important, but I think the current distribution
across
the tower equally so. I think all your current is huddled up around
your
matching device, and ground area.. Not really where you want it.
MK

2838. Re: AM electromagnetic waves: 20 KHz modulation frequency onanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 03:42:10 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468c6838$0$4664$4c368faf@roadrunner.com>
Source record: 39095
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B16AE5.6D5BC%dbowey@comcast.net...
> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2B1129D.6D573%dbowey@comcast.net...
>>> On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>> "Ron
>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>
>> <snip>
>>
>>>>
>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>
>>>> Basically: multiplying two sine waves is
>>>> the same as adding the (half amplitude)
>>>> sum and difference frequencies.
>>>
>>> No, they aren't the same at all, they only appear to be the same before
>>> they are examined. The two sidebands will not have the correct phase
>>> relationship.
>>
>> What do you mean? What is the "correct"
>> relationship?
>>
>>>
>>> One could, temporarily, mistake the added combination for a full carrier
>>> with independent sidebands, however.
>>>
>>>
>>>
>>>>
>>>> (For sines it is
>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>> )
>>>>
>>>> --
```

>>>> rb
>>>>
>>>
>>
>>
>
> When AM is correctly accomplished (a single voiceband signal is modulated

The questions I posed were not about AM. The
subject could have been viewed as DSB but that
wasn't the specific intent either.

> onto a carrier via a non-linear process), at an envelope detector the two
> sidebands will be additive. But if you independe ntly place a carrier at
> frequency (c), another carrier at (c-1 khz) and another carrier at (c+
> 1
> kHz), the composite can look like an AM signal, but it is not, and only by
> the most extreme luck will the sidebands be additive at the detector.
> They
> would probably cycle between additive and subtractive since they have no
> real relationship and were not the result of amplitude modulation.
>

2839. AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 03:44:15 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183607055.886963.207560@o11g2000prd.googlegroups.com>
Source record: 39097
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hi:

Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
distant AM radio signals in which the carrier frequency is 150 KHz?
What if the carrier frequency is 44.1 KHz [for the same reason CDs use
a 44.1 KHz sample rate]? 40 KHz?

Thanks a bunch,

Radium

2840. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 04:00:31 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183608031.950705.108170@i13g2000prf.googlegroups.com>
Source record: 39098
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 4, 8:44 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
> distant AM radio signals in which the carrier frequency is 150 KHz?
> What if the carrier frequency is 44.1 KHz [for the same reason CDs use
> a 44.1 KHz sample rate]? 40 KHz?
>
> Thanks a bunch,
>
> Radium

Radium,

Please note that 150 kHz, 44.1 kHz and 40 kHz
are technically not in the High Frequency (HF)
Spectrum and can not be called Shortwaves
http://en.wikipedia.org/wiki/High_frequency
http://en.wikipedia.org/wiki/Shortwave

-REMOVE- This Cross-Posted Message from
the "Rec.Radio.Shortwave" Newgroup.

Responders - Please Do Not Post Any Replies
to the the "Rec.Radio.Shortwave" Newgroup.
- - - Put A Check On Your Cross Posting Please.

tyvm ~ RHF
.
.
. .

2841. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 04:41:29 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183610489.910411.79440@i38g2000prf.googlegroups.com>
Source record: 39099
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 4, 8:44 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
> distant AM radio signals in which the carrier frequency is 150 KHz?
> What if the carrier frequency is 44.1 KHz [for the same reason CDs use
> a 44.1 KHz sample rate]? 40 KHz?
>
> Thanks a bunch,
>
> Radium

OOPS! Totally forget bout da link!

http://72.14.253.104/search?q=cache:mPB_toACpbgJ:www.atomic.princeton.edu/romalis/magnetometer/+http://www.atomic.princeton.edu/romalis/magnetometer/&hl=en&gl=us&strip=1

2842. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 05:01:18 UTC
From: Frank <ve6cb@spamfree.telus.net>
Message-ID: <yW_ii.28206$xk5.1658@edtnps82>
Source record: 39100

> As an aside, I wonder if this is proof that a shunt feed tower is no
> good??? I can SEE the tower (runway) over the nose of the airplane
> at 15 miles out! yet the RMI indicator is wandering! The beacon
> ID is in the noise!
>
> I get a good match but the band width is NARROW! this indicates to
> me that the Q is high just as it should be? the RF amp meter is
> showing current thru the vertical run up the tower face if your
> careless around the 2300 pf vac cap you get a nice RF burn.
>
> By the way, I made a mistake, I am using an omega match the values of
> the caps:
>
> C-1 500 pf (from 50 ohm coax center conductor to 2300 PF Vac Var
> cap)
>
> C-2 2300 pf vertical wire run thru C-2 2300 pf cap then ground
>
>
> thanks!!!!

I have just run a preliminary NEC model. I am showing a gain of
-9 dBi at an elevation angle of 10 deg. at 530 kHz. Directly overhead the
gain is about -26 dBi. A typical matching network should
have a loss of about 4 dB, for a TRP of around 1 W or so.
The input impedance will be about 0.2+j176. You should have about
10 A RMS in the base of the gamma match vertical wire and, 1.7 kV RMS ,
assuming a 4 dB loss in the matching network.

My model needs some refinement, but should give a ball
park idea of what to expect. I did not understand exactly how you
are using two capacitors to match the antenna.

Regards,

Frank (VE6CB)

2843. snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group from the Newsgroups {Distribution} Header - please, Please. PLEASE ! - Before You Reply and Post

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 06:08:54 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183615734.664514.162850@e16g2000pri.googlegroups.com>
Source record: 39101
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless
Body handling: HTML body converted to readable text

On Jul 4, 9:41 pm, Radium wrote:
On Jul 4, 8:44 pm, Radium wrote:

Hi:

Can the Spin Exchange Relaxation Free Magnetometer
be used to receiver distant AM radio signals in which the
carrier frequency is 150 KHz?

What if the carrier frequency is 44.1 KHz [for the same
reason CDs use a 44.1 KHz sample rate]? 40 KHz?

Thanks a bunch,

Radium

OOPS! Totally forget bout da link!

http://72.14.253.104/search?q=cache:mPB_toACpbgJ:www.atomic.princeton...
.
.
snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group
from the Newsgroups {Distribution} Header - please,
Please. PLEASE ! - Before You Reply and Post .
.

2844. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 06:10:29 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183615829.135103.229350@z28g2000prd.googlegroups.com>
Source record: 39102
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless
Body handling: HTML body converted to readable text

On Jul 4, 8:44 pm, Radium wrote:
Hi:

Can the Spin Exchange Relaxation Free Magnetometer
be used to receiver distant AM radio signals in which the
carrier frequency is 150 KHz?

What if the carrier frequency is 44.1 KHz [for the same
reason CDs use a 44.1 KHz sample rate]? 40 KHz?

Thanks a bunch,

Radium

.
.
snip, Snip. SNIP ! the "Rec.Radio.Shortwave" Group
from the Newsgroups {Distribution} Header - please,
Please. PLEASE ! - Before You Reply and Post .
.

2845. Re: AM electromagnetic waves: 20 KHz modulation frequency onanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 06:37:19 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B1DFAF.6D6BD%dbowey@comcast.net>
Source record: 39103
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com, "Ron
Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>> On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>> "Ron
>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>
>>> <snip>
>>>
>>>>>
>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>
>>>>> Basically: multiplying two sine waves is
>>>>> the same as adding the (half amplitude)
>>>>> sum and difference frequencies.
>>>>
>>>> No, they aren't the same at all, they only appear to be the same before
>>>> they are examined. The two sidebands will not have the correct phase
>>>> relationship.
>>>
>>> What do you mean? What is the "correct"
>>> relationship?
>>>
>>>>
>>>> One could, temporarily, mistake the added combination for a full carrier
>>>> with independent sidebands, however.
>>>>
>>>>
>>>>
>>>>>
>>>>> (For sines it is
>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
```

>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>)
>>>>>
>>>>> --
>>>>> rb
>>>>>
>>>>
>>>
>>>
>>
>> When AM is correctly accomplished (a single voiceband signal is modulated
>
> The questions I posed were not about AM. The
> subject could have been viewed as DSB but that
> wasn't the specific intent either.

What was the subject of your question?

>
>> onto a carrier via a non-linear process), at an envelope detector the two
>> sidebands will be additive. But if you independe ntly place a carrier at
>> frequency (c), another carrier at (c-1 khz) and another carrier at (c+
>> 1
>> kHz), the composite can look like an AM signal, but it is not, and only by
>> the most extreme luck will the sidebands be additive at the detector.
>> They
>> would probably cycle between additive and subtractive since they have no
>> real relationship and were not the result of amplitude modulation.
>>
>
>

2846. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:00:45 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468c96c3$0$16567$4c368faf@roadrunner.com>
Source record: 39104
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B1DFAF.6D6BD%dbowey@comcast.net...
> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
> "Ron
> Baker, Pluralitas!" <this@aint.me> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>
>>>>
>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>> On 7/4/07 7:52 AM, in article
>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>> "Ron
>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>> <snip>
>>>>
>>>>>>
>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>
>>>>>> Basically: multiplying two sine waves is
>>>>>> the same as adding the (half amplitude)
>>>>>> sum and difference frequencies.
>>>>>
>>>>> No, they aren't the same at all, they only appear to be the same
>>>>> before
>>>>> they are examined. The two sidebands will not have the correct phase
>>>>> relationship.
>>>>
>>>> What do you mean? What is the "correct"
>>>> relationship?
>>>>
>>>>>
>>>>> One could, temporarily, mistake the added combination for a full
>>>>> carrier
>>>>> with independent sidebands, however.
>>>>>
```

>>>>>
>>>>>
>>>>>>
>>>>>> (For sines it is
>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>>)
>>>>>>
>>>>>> --
>>>>>> rb
>>>>>>
>>>>>
>>>>
>>>>
>>>
>>> When AM is correctly accomplished (a single voiceband signal is
>>> modulated
>>
>> The questions I posed were not about AM. The
>> subject could have been viewed as DSB but that
>> wasn't the specific intent either.
>
> What was the subject of your question?

Copying from my original post:

Suppose you have a 1 MHz sine wave whose amplitude
is multiplied by a 0.1 MHz sine wave.
What would it look like on an oscilloscope?
What would it look like on a spectrum analyzer?

Then suppose you have a 1.1 MHz sine wave added
to a 0.9 MHz sine wave.
What would that look like on an oscilloscope?
What would that look like on a spectrum analyzer?

2847. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:06:02 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-150A2B.00060205072007@newsgroups.comcast.net>
Source record: 39105
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>,
John Fields <jfields@austininstruments.com> wrote:

> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
>
> >In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
> >> You win. :)
> >>
> >> When I conceived the problem I was thinking
> >> cosines actually. In which case there are no
> >> phase shifts to worry about in the result.
> >>
> >> I also forgot the half amplitude factor.
> >>
> >> While it might not be obvious, the two cases I
> >> described are basically identical. And this
> >> situation occurs in real life, i.e. in radio signals,
> >> oceanography, and guitar tuning.
> >
> >The beat you hear during guitar tuning is not modulation; there is no
> >non-linear process involved (i.e. no multiplication).
>
> ---
> That's not true.
>
> The human ear has a logarithmic amplitude response and the beat note
> (the difference frequency) is generated there. The sum frequency is
> too, but when unison is achieved it'll be at precisely twice the
> frequency of either fundamental and won't be noticed.

Now you get to explain why the beat is measurable with instrumentation,
and can can be viewed in the waveform of a high-quality recording.

Then go on to show why all other multi-frequency-component signals (e.g.
a full orchestra) don't produce similar intermodulation effects in ears
under normal conditions.

Isaac

2848. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:09:39 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-FB6C92.00093805072007@newsgroups.comcast.net>
Source record: 39106
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-E4EFAD.09115804072007@newsgroups.comcast.net...
> > In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "Keith Dysart" <Keith.Dysart@gmail.com> wrote in message
> >> news:1183489552.088116.51340@g4g2000hsf.googlegroups.com...
> >> > On Jul 3, 2:07 pm, Keith Dysart <Keith.Dys...@gmail.com> wrote:
> >> >> On Jul 3, 12:50 pm, John Fields <jfie...@austininstruments.com> wrote:
> >> >>
> >> >>
> >> >>
> >> >>
> >> >>
> >> >> > On Mon, 2 Jul 2007 23:03:36 -0700, "Ron Baker, Pluralitas!"
> >> >>
> >> >> > <t...@aint.me> wrote:
> >> >>
> >> >> >"John Smith I" <assemblywiz...@gmail.com> wrote in message
> >> >> >news:f64hg5$d3j$1@nnrp.linuxfan.it...
> >> >> >> Radium wrote:
> >> >>
> >> >> ><snip>
> >> >>
> >> >> >Suppose you have a 1 MHz sine wave whose amplitude
> >> >> >is multiplied by a 0.1 MHz sine wave.
> >> >> >What would it look like on an oscilloscope?
> >> >>
> >> >> <snip>
> >> >>
> >> >> >What would it look like on a spectrum analyzer?
> >> >>
> >> >> > | |
> >> >> > | | | |
> >> >> > --------+--------------------+-------+------+----
> >> >> > 100kHz 0.9MHz 1MHz 1.1MHz
> >> >>
> >> >> >Then suppose you have a 1.1 MHz sine wave added
> >> >> >to a 0.9 MHz sine wave.
```

> >> >> > >What would that look like on an oscilloscope?
> >> >>
> >> >> <snip>
> >> >>
> >> >> > Tricky!!!
> >> >>
> >> >> > It looks like AM but it isn't, it's just the phases sliding past
> >> >> > each other slowly and algebraically adding which creates the
> >> >> > illusion.
> >> >>
> >> >> > >What would that look like on a spectrum analyzer?
> >> >>
> >> >> > | |
> >> >> > | |
> >> >> > ----------------------------+-------------+----
> >> >> > 0.9MHz 1.1MHz
> >> >>
> >> >> > --
> >> >> > JF
> >> >>
> >> >> But if you remove the half volt bias you put on the
> >> >> 100 kHz signal in the multiplier version, the results
> >> >> look exactly like the summed version, so I suggest
> >> >> that results are the same when a 4 quadrant multiplier
> >> >> is used.
> >> >>
> >> >> And since the original request was for a "1 MHz sine
> >> >> wave whose amplitude is multiplied by a 0.1 MHz sine
> >> >> wave" I think a 4 quadrant multiplier is in order.
> >> >>
> >> >> ...Keith-
> >> >
> >> > Ooops. I misspoke. They are not quite the same.
> >> >
> >> > The spectrum is the same, but if you want to get exactly
> >> > the same result, the lower frequency needs a 90 degree
> >> > offset and the upper frequency needs a -90 degree offset.
> >> >
> >> > And the amplitudes of the the sum and difference
> >> > frequencies need to be one half of the amplitude of
> >> > the frequencies being multiplied.
> >> >
> >> > ...Keith
> >> >
> >>
> >> You win. :)
> >>
> >> When I conceived the problem I was thinking
> >> cosines actually. In which case there are no
> >> phase shifts to worry about in the result.

> >>
> >> I also forgot the half amplitude factor.
> >>
> >> While it might not be obvious, the two cases I
> >> described are basically identical. And this
> >> situation occurs in real life, i.e. in radio signals,
> >> oceanography, and guitar tuning.
> >
> > The beat you hear during guitar tuning is not modulation; there is no
> > non-linear process involved (i.e. no multiplication).
> >
> > Isaac
>
> In short, the human auditory system is not linear.
> It has a finite resolution bandwidth. It can't resolve
> two tones separted by a few Hertz as two separate tones.
> (But if they are separted by 100 Hz they can easily
> be separated without hearing a beat.)

Two tones 100 Hz apart may or may not be perceived separately; depends
on a lot of other factors. MP3 encoding, for example, depends on the
ear's (very predictable) inability to discern tones "nearby" to other,
louder ones.

> The same affect can be seen on a spectrum analyzer.
> Give it two frequencies separated by 1 Hz. Set the
> resolution bandwidth to 10 Hz. You'll see the peak
> rise and fall at 1 Hz.

Yup. And the spectrum analyzer is (hopefully) a very linear system,
producing no intermodulation of its own.

Isaac

2849. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:11:14 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-A5E71F.00111305072007@newsgroups.comcast.net>
Source record: 39107
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468bd109$0$31234$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-656111.22422003072007@newsgroups.comcast.net...
>
> <snip>
>
> >
> > After you get done talking about modulation and sidebands, somebody
> > might want to take a stab at explaining why, if you tune a receiver to
> > the second harmonic (or any other harmonic) of a modulated carrier (AM
> > or FM; makes no difference), the audio comes out sounding exactly as it
> > does if you tune to the fundamental? That is, while the second harmonic
> > of the carrier is twice the frequency of the fundamental, the sidebands
> > of the second harmonic are *not* located at twice the frequencies of the
> > sidebands of the fundamental, but rather precisely as far from the
> > second harmonic of the carrier as they are from the fundamental.
> >
> > Isaac
>
> Whoa. I thought you were smoking something but
> my curiosity is piqued.
> I tried shortwave stations and heard no harmonics.
> But that could be blamed on propagation.
> There is an AM station here at 1.21 MHz that is s9+20dB.
> Tuned to 2.42 MHz. Nothing. Generally the lowest
> harmonics should be strongest. Then I remembered
> that many types of non-linearity favor odd harmonics.
> Tuned to 3.63 MHz. Holy harmonics, batman.
> There it was and the modulation was not multiplied!
> Voices sounded normal pitch. When music was
> played the pitch was the same on the original and
> the harmonic.
>
> One clue is that the effect comes and goes rather
> abruptly. It seems to switch in and out rather
> than fade in an out. Maybe the coming and going
> is from switching the audio material source?
>
> This is strange. If a signal is multiplied then the sidebands
> should be multiplied too.

> Maybe the carrier generator is generating a
> harmonic and the harmonic is also being modulated
> with the normal audio in the modulator.
> But then that signal would have to make it through
> the power amp and the antenna. Possible, but
> why would it come and go?
> Strange.

Hint: Modulation is a "rate effect".

Isaac

2850. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:23:51 UTC
From: 4nec2 <4nec2@gmx.net>
Message-ID: <1183620231.034593.274790@k79g2000hse.googlegroups.com>
Source record: 39108

Mike Coslo wrote:
>
> Not a direct answer, but M$ can barely get Vista to run on Vista. I
> shudder to think of people actually trying to develop apps in that buggy,
> slow and freeze prone environment.

I can also not imagine why we again would need a new and similar OS
(besides filling the pockets of Bill and the hardware suppliers). If
there were real improvements I would say Yes, but till now, I have not
heard of such...

2851. (OT) : Off-Topic "BS" Snipped - Please Do Not Read -or- Re-Post {Radium}

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 07:49:10 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183621750.881277.266080@o11g2000prd.googlegroups.com>
Source record: 39109
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
(OT) : Off-Topic "BS" Snipped - Please Do Not Read -or- Re-Post
{Radium}
.
.
. .
```

2852. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 10:05:02 UTC
From: contrex <mike.j.harvey@gmail.com>
Message-ID: <1183629902.246453.228580@k79g2000hse.googlegroups.com>
Source record: 39110
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

On 3 Jul, 21:47, "Bill Kearney" <wkearney-99@hot-mail-com> wrote:
> > No offense but please respond with reasonable answers & keep out the
> > jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> > really interested in this.
>
> Then leave out the conspiracy garbage, idiot. Or you'll get the probing...
> again.

Radium is a classic Usenet troll. He clearly has mental health issues.
He is probably locked up in an institution for people with ADHD and
autism. They should take his computer access away from him.

DON'T FEED THE TROLL.

2853. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 10:19:52 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <16udnZK15M9TWBHbRVnyuwA@bt.com>
Source record: 39111
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1183607055.886963.207560@o11g2000prd.googlegroups.com...
> Hi:
>
> Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
> distant AM radio signals in which the carrier frequency is 150 KHz?
> What if the carrier frequency is 44.1 KHz [for the same reason CDs use
> a 44.1 KHz sample rate]? 40 KHz?
>
>
> Thanks a bunch,
>
> Radium
>
Radium,

The simplest answer is no. The reason is that you specify 'distant'. The strength of a magnetic field decays rapidly with distance and for most practical purposes, 800 metres would be a maximum typical detection range for man made magnetic fields as opposed to natural fields like the earth's magnetic field. Man made fields can be many times thousands of times stronger than the earth's magnetic field at a local level, but the field strength decays rapidly as you move away from the source. A friends father experimented with a factory machinery control system using induction coils a foot long and about 8 inches in diameter wound with thousands of turns of thin copper wire. The maximum reliable communication distance with this set up was only 200 yards. This was 35+ years ago and detection techniques have improved considerably. The reason for the experiment was to try and develop a control system that could work in the presence of very high strength RF fields. This was superceded by the development of fibre optic cabling which was not susceptible to RF pickup.

Communication using the magnetic field element of electromagnetic waves is best demonstrated by the 'molephone' devices used to communicate with cavers underground. See the following link for details and try googling cave rescue, underground communications, and molephone for more links.

http://www.scavalon.be/avalonuk/technical/radio1.htm

Squids and other highly sensitive magnetic field detectors can be used to detect the most minute distortions or changes in the earths magnetic field but are not suitable for communications use. It is possible to build a magnetometer at home that is so sensitive that it will pick up disturbances

in the earth's magnetic field caused by solar activity for less than $100. This is not however going to be capable of receiving and demodulating 150kHz radio signals.

It doesn't really matter what frequencies you want to receive, 44kHz, 150kHz, 150MHz or what the modulation method is, a diode (or two) and a tuned circuit are essentially at the heart of all receiving and demodulating systems. They are cost effective, reasonably efficient and they work. Why would you want to spend a million dollars to receive signals that can be picked up (probably a lot better) on a ten dollar consumer radio?

Modulation methods, frequencies and bandwidths are chosen by commercial broadcasters to meet specific demands, e.g. limited bandwidth available for broadcasting, high fidelity music broadcasts, high efficiency powerful signals that can punch through interference, etc, etc. The basic rule is to get the job done as cheaply, efficiently and as quickly as possible.

Mike G0ULI

2854. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 11:19:49 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2007.07.05.11.19.25@ME.networksplus.net>
Source record: 39112

On Wed, 04 Jul 2007 17:49:24 +0000, 4nec2 wrote:

> Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on windows
> Vista ?, and if so, did it work ?
>
> If it did not run as expected, could you tell me what went wrong ?
>
> Because 4nec2 being freeware I do not (yet) have the funds to buy me a
> new computer and/or OS, so maybe I can get some small answers this way.

Perhaps rather than shelling out money better spent on ham rigs just to line Bill G's pockets, why not try porting the app to one of the Free OSes? Linux and or Free BSD are just ripe for some excellent ham radio software (although plenty already exists). All of the tools are Free Software and quite well supported, perhaps better supported than that which costs you mucho deniro.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds, the pessimist fears this is true."

2855. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 11:30:42 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2007.07.05.11.30.17@ME.networksplus.net>
Source record: 39113

For a wide range of crimp plugs, check out the RF Industries line at
http://www.rfcoaxconnectors.com and carried by RF Parts,
http://www.rfparts.com I'm not associated with either company, just a
stisfied customer.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds,
the pessimist fears this is true."

2856. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 11:46:13 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6ilmg$j3g$1@aioe.org>
Source record: 39114

<WA4SZE>wrote
>I have installed a FAA approved NDB beacon here at our private
> airport located in Manchester,TN .... Is a shunt feed tower lossy???
>poor radiator??? comments???

Other things equal, a shunt fed MW vertical monopole can produce
essentially the same radiation pattern shape and gain as when series fed.

The link below leads to an analysis of what might be expected for either
case for the system you described.

Assumptions made in the analysis:

1) The four top-hat radials added 10 feet to the electrical height of the
tower

2) The ground radials described have a net r-f resistance of 25 ohms at the
operating frequency.

The analysis shows that for 50 watts of available power, this system could
generate an inverse-distance groundwave field strength of better than 700
ï¿½V/m at a radius of about 15 miles.

Of course, earth losses along the groundwave path will reduce that value,
but even with 6 dB of additional loss the field should still be better than
350 ï¿½V/m, and higher than that for higher elevations above the earth at that
distance (as would be true for airborne receive systems).

The performance you are describing indicates that the antenna is not
radiating much of the available power, which may point to problems with the
feed system.

http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiator.gif

RF

2857. URL Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 11:57:16 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6imb6lfa1@aioe.org>
Source record: 39115

Apologies, the link in my first post was an analysis
for 25 watts instead of 50 watts.

Here is the correct one:

http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiator-1.gif

RF

2858. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 13:42:09 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468cf4d8$0$12241$4c368faf@roadrunner.com>
Source record: 39116
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-A5E71F.00111305072007@newsgroups.comcast.net...
> In article <468bd109$0$31234$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-656111.22422003072007@newsgroups.comcast.net...
>>
>> <snip>
>>
>> >
>> > After you get done talking about modulation and sidebands, somebody
>> > might want to take a stab at explaining why, if you tune a receiver to
>> > the second harmonic (or any other harmonic) of a modulated carrier (AM
>> > or FM; makes no difference), the audio comes out sounding exactly as it
>> > does if you tune to the fundamental? That is, while the second harmonic
>> > of the carrier is twice the frequency of the fundamental, the sidebands
>> > of the second harmonic are *not* located at twice the frequencies of
>> > the
>> > sidebands of the fundamental, but rather precisely as far from the
>> > second harmonic of the carrier as they are from the fundamental.
>> >
>> > Isaac
>>
>> Whoa. I thought you were smoking something but
>> my curiosity is piqued.
>> I tried shortwave stations and heard no harmonics.
>> But that could be blamed on propagation.
>> There is an AM station here at 1.21 MHz that is s9+20dB.
>> Tuned to 2.42 MHz. Nothing. Generally the lowest
>> harmonics should be strongest. Then I remembered
>> that many types of non-linearity favor odd harmonics.
>> Tuned to 3.63 MHz. Holy harmonics, batman.
>> There it was and the modulation was not multiplied!
>> Voices sounded normal pitch. When music was
>> played the pitch was the same on the original and
>> the harmonic.
>>
>> One clue is that the effect comes and goes rather
>> abruptly. It seems to switch in and out rather
>> than fade in an out. Maybe the coming and going
>> is from switching the audio material source?

>>
>> This is strange. If a signal is multiplied then the sidebands
>> should be multiplied too.
>> Maybe the carrier generator is generating a
>> harmonic and the harmonic is also being modulated
>> with the normal audio in the modulator.
>> But then that signal would have to make it through
>> the power amp and the antenna. Possible, but
>> why would it come and go?
>> Strange.
>
> Hint: Modulation is a "rate effect".
>
> Isaac

Please elaborate. I am so eager to hear the
explanation.

--
rb

2859. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 13:55:29 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468cf7f7$0$16602$4c368faf@roadrunner.com>
Source record: 39117
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
> In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:

<snip>

>> >>
>> >> While it might not be obvious, the two cases I
>> >> described are basically identical. And this
>> >> situation occurs in real life, i.e. in radio signals,
>> >> oceanography, and guitar tuning.
>> >
>> > The beat you hear during guitar tuning is not modulation; there is no
>> > non-linear process involved (i.e. no multiplication).
>> >
>> > Isaac
>>
>> In short, the human auditory system is not linear.
>> It has a finite resolution bandwidth. It can't resolve
>> two tones separted by a few Hertz as two separate tones.
>> (But if they are separted by 100 Hz they can easily
>> be separated without hearing a beat.)
>
> Two tones 100 Hz apart may or may not be perceived separately; depends
> on a lot of other factors. MP3 encoding, for example, depends on the
> ear's (very predictable) inability to discern tones "nearby" to other,
> louder ones.

I'll remember that the next time I'm tuning
an MP3 guitar.

>
>> The same affect can be seen on a spectrum analyzer.
>> Give it two frequencies separated by 1 Hz. Set the
>> resolution bandwidth to 10 Hz. You'll see the peak
>> rise and fall at 1 Hz.
>
> Yup. And the spectrum analyzer is (hopefully) a very linear system,
> producing no intermodulation of its own.
>
> Isaac

What does a spectrum analyzer use to arive at
amplitude values? An envelope detector?
Is that linear?

2860. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 13:57:50 UTC
From: Frank <ve6cb@spamfree.telus.net>
Message-ID: <yN6ji.28248$xk5.20789@edtnps82>
Source record: 39118

"Frank" <ve6cb@spamfree.telus.net> wrote in message
news:yW_ii.28206$xk5.1658@edtnps82...
>> As an aside, I wonder if this is proof that a shunt feed tower is no
>> good??? I can SEE the tower (runway) over the nose of the airplane
>> at 15 miles out! yet the RMI indicator is wandering! The beacon
>> ID is in the noise!
>>
>> I get a good match but the band width is NARROW! this indicates to
>> me that the Q is high just as it should be? the RF amp meter is
>> showing current thru the vertical run up the tower face if your
>> careless around the 2300 pf vac cap you get a nice RF burn.
>>
>> By the way, I made a mistake, I am using an omega match the values of
>> the caps:
>>
>> C-1 500 pf (from 50 ohm coax center conductor to 2300 PF Vac Var
>> cap)
>>
>> C-2 2300 pf vertical wire run thru C-2 2300 pf cap then ground
>>
>>
>> thanks!!!!
>
> I have just run a preliminary NEC model. I am showing a gain of
> -9 dBi at an elevation angle of 10 deg. at 530 kHz. Directly overhead the
> gain is about -26 dBi. A typical matching network should
> have a loss of about 4 dB, for a TRP of around 1 W or so.
> The input impedance will be about 0.2+j176. You should have about
> 10 A RMS in the base of the gamma match vertical wire and, 1.7 kV RMS ,
> assuming a 4 dB loss in the matching network.
>
> My model needs some refinement, but should give a ball
> park idea of what to expect. I did not understand exactly how you
> are using two capacitors to match the antenna.
>
> Regards,
>
> Frank (VE6CB)

The analysis also shows there is virtually no current in the ground
radials, or the top section. Most of the current is confined to
the gamma section, and the vertical radiator between the ground
plane and the gamma attachment point. Base feeding increases
the gain by 10 dB. The input impedance also becomes more

reasonable at 3 - j 1000 ohms.

At 1000 m, between a height of zero meters, and 1000 m
the field strength is in the range of 5 mV/m peak. (i.e. including
ground wave). Not sure why the calculation does not agree
with Richard Fry's analysis, but may be due to the fact that
NEC computes ground losses for the surface wave.

Regards,

Frank

2861. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:01:31 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <8ktp839la05dj6t049kidjbpkj7rkf98ii@4ax.com>
Source record: 39119
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"
<this@aint.me> wrote:

>
>"Don Bowey" <dbowey@comcast.net> wrote in message
>news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>> "Ron
>> Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>> On 7/4/07 7:52 AM, in article
>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>> "Ron
>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>
>>>>> <snip>
>>>>>
>>>>>>>
>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>
>>>>>>> Basically: multiplying two sine waves is
>>>>>>> the same as adding the (half amplitude)
>>>>>>> sum and difference frequencies.
>>>>>>
>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>> before
>>>>>> they are examined. The two sidebands will not have the correct phase
>>>>>> relationship.
>>>>>
>>>>> What do you mean? What is the "correct"
>>>>> relationship?
>>>>>
>>>>>>
```

>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>> carrier
>>>>>> with independent sidebands, however.
>>>>>>
>>>>>>
>>>>>>
>>>>>>>
>>>>>>> (For sines it is
>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>>>)
>>>>>>>
>>>>>>> --
>>>>>>> rb
>>>>>>>
>>>>>>
>>>>>
>>>>>
>>>>
>>>> When AM is correctly accomplished (a single voiceband signal is
>>>> modulated
>>>
>>> The questions I posed were not about AM. The
>>> subject could have been viewed as DSB but that
>>> wasn't the specific intent either.
>>
>> What was the subject of your question?
>
>Copying from my original post:
>
>Suppose you have a 1 MHz sine wave whose amplitude
>is multiplied by a 0.1 MHz sine wave.
>What would it look like on an oscilloscope?
>What would it look like on a spectrum analyzer?
>
>Then suppose you have a 1.1 MHz sine wave added
>to a 0.9 MHz sine wave.
>What would that look like on an oscilloscope?
>What would that look like on a spectrum analyzer?

The first example is amplitude modulation precisely _because_ of the
multiplication, while the second is merely the algebraic summation
of the instantaneous amplitudes of two waveforms.

The circuit lists I posted earlier will, when run using LTSPICE,
show exactly what the signals will look like using an oscilloscope
and, using the "FFT" option on the "VIEW" menu, give you a pretty
good approximation of what they'll look like using a spectrum
analyzer.

If you don't have LTSPICE it's available free at:

http://www.linear.com/designtools/software/

--
JF

2862. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:25:33 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <vvup83pjuva65aivk8mq60n75h3hdlcl67@4ax.com>
Source record: 39120
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 00:06:02 -0700, isw <isw@witzend.com> wrote:

>In article <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>,
> John Fields <jfields@austininstruments.com> wrote:
>
>> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
>>
>> >In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>> >> You win. :)
>> >>
>> >> When I conceived the problem I was thinking
>> >> cosines actually. In which case there are no
>> >> phase shifts to worry about in the result.
>> >>
>> >> I also forgot the half amplitude factor.
>> >>
>> >> While it might not be obvious, the two cases I
>> >> described are basically identical. And this
>> >> situation occurs in real life, i.e. in radio signals,
>> >> oceanography, and guitar tuning.
>> >
>> >The beat you hear during guitar tuning is not modulation; there is no
>> >non-linear process involved (i.e. no multiplication).
>>
>> ---
>> That's not true.
>>
>> The human ear has a logarithmic amplitude response and the beat note
>> (the difference frequency) is generated there. The sum frequency is
>> too, but when unison is achieved it'll be at precisely twice the
>> frequency of either fundamental and won't be noticed.
>
>Now you get to explain why the beat is measurable with instrumentation,
>and can can be viewed in the waveform of a high-quality recording.

Simple. The process isn't totally linear, starting with the musical
instrument itself, so some heterodyning will inevitably occur which
will be detected by the measuring instrumentation.

>Then go on to show why all other multi-frequency-component signals (e.g.
>a full orchestra) don't produce similar intermodulation effects in ears
>under normal conditions.

They do, and why don't you try being a little less of a pompous ass?

--
JF

2863. Joining two antennas question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:31:03 UTC
From: ValveJob <me@privacy.net>
Message-ID: <h00q839dpt6oq0t9vr7ubj9csdlafdm47q@4ax.com>
Source record: 39121

I notice my combo antennas do NOT have a splitter in joining the two antennas.

If I add a UHF antenna to my VHF antenna - 4 feet apart, MUST I use a balum or joiner/splitter 300 to 75 bla bla bla.

What is the result if I just join them with 300 ohm twin lead and then balum to 75 coax for the run to the TV?

2864. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:32:20 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183645940.952008.151450@n60g2000hse.googlegroups.com>
Source record: 39122
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 5, 10:01 am, John Fields <jfie...@austininstruments.com> wrote:
> On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"
>
>
>
>
>
> <t...@aint.me> wrote:
>
> >"Don Bowey" <dbo...@comcast.net> wrote in message
> >news:C2B1DFAF.6D6BD%dbowey@comcast.net...
> >> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368...@roadrunner.com,
> >> "Ron
> >> Baker, Pluralitas!" <t...@aint.me> wrote:
>
> >>> "Don Bowey" <dbo...@comcast.net> wrote in message
> >>>news:C2B16AE5.6D5BC%dbowey@comcast.net...
> >>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368...@roadrunner.com,
> >>>> "Ron Baker, Pluralitas!" <t...@aint.me> wrote:
>
> >>>>> "Don Bowey" <dbo...@comcast.net> wrote in message
> >>>>>news:C2B1129D.6D573%dbowey@comcast.net...
> >>>>>> On 7/4/07 7:52 AM, in article
> >>>>>> 468bb3c0$0$24780$4c368...@roadrunner.com,
> >>>>>> "Ron
> >>>>>> Baker, Pluralitas!" <t...@aint.me> wrote:
>
> >>>>> <snip>
>
> >>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>
> >>>>>>> Basically: multiplying two sine waves is
> >>>>>>> the same as adding the (half amplitude)
> >>>>>>> sum and difference frequencies.
>
> >>>>>> No, they aren't the same at all, they only appear to be the same
> >>>>>> before
> >>>>>> they are examined. The two sidebands will not have the correct phase
> >>>>>> relationship.
>
> >>>>> What do you mean? What is the "correct"
> >>>>> relationship?

>
> >>>>>> One could, temporarily, mistake the added combination for a full
> >>>>>> carrier
> >>>>>> with independent sidebands, however.
>
> >>>>>>> (For sines it is
> >>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
> >>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
> >>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
> >>>>>>>)
>
> >>>>>>> --
> >>>>>>> rb
>
> >>>> When AM is correctly accomplished (a single voiceband signal is
> >>>> modulated
>
> >>> The questions I posed were not about AM. The
> >>> subject could have been viewed as DSB but that
> >>> wasn't the specific intent either.
>
> >> What was the subject of your question?
>
> >Copying from my original post:
>
> >Suppose you have a 1 MHz sine wave whose amplitude
> >is multiplied by a 0.1 MHz sine wave.
> >What would it look like on an oscilloscope?
> >What would it look like on a spectrum analyzer?
>
> >Then suppose you have a 1.1 MHz sine wave added
> >to a 0.9 MHz sine wave.
> >What would that look like on an oscilloscope?
> >What would that look like on a spectrum analyzer?
>
> ---
> The first example is amplitude modulation precisely _because_ of the
> multiplication, while the second is merely the algebraic summation
> of the instantaneous amplitudes of two waveforms.
>
> The circuit lists I posted earlier will, when run using LTSPICE,
> show exactly what the signals will look like using an oscilloscope
> and, using the "FFT" option on the "VIEW" menu, give you a pretty
> good approximation of what they'll look like using a spectrum
> analyzer.
>
> If you don't have LTSPICE it's available free at:
>
> http://www.linear.com/designtools/software/
>

> --
> JF

Since your modulator version has a DC offset applied to the 1e5 signal, some of the 1e6 signal is present in the output, so your spectrum has components at .9e6, 1e6 and 1.1e6.

To generate the same signal with the summing version you need to add in some 1e6 along with the .9e6 and 1.1e6.

The results will be identical and the results of summing will be quite detectable using an envelope detector just as they would be from the modulator version.

Alternatively, remove the bias from the .1e6 signal on the modulator version. The spectrum will have only components at .9e6 and 1.1e6. Of course, an envelope detector will not be able to recover this signal, whether generated by the modulator or summing.

...Keith

2865. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:36:01 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468d0174$0$3183$4c368faf@roadrunner.com>
Source record: 39123
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Fields" <jfields@austininstruments.com> wrote in message
news:8ktp839la05dj6t049kidjbpkj7rkf98ii@4ax.com...
> On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"

<snip>

>>>>>
>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>> modulated
>>>>
>>>> The questions I posed were not about AM. The
>>>> subject could have been viewed as DSB but that
>>>> wasn't the specific intent either.
>>>
>>> What was the subject of your question?
>>
>>Copying from my original post:
>>
>>Suppose you have a 1 MHz sine wave whose amplitude
>>is multiplied by a 0.1 MHz sine wave.
>>What would it look like on an oscilloscope?
>>What would it look like on a spectrum analyzer?
>>
>>Then suppose you have a 1.1 MHz sine wave added
>>to a 0.9 MHz sine wave.
>>What would that look like on an oscilloscope?
>>What would that look like on a spectrum analyzer?
>
> ---
> The first example is amplitude modulation precisely _because_ of the

Is there multiplication in DSB? (double sideband)

> multiplication, while the second is merely the algebraic summation
> of the instantaneous amplitudes of two waveforms.
>
> The circuit lists I posted earlier will, when run using LTSPICE,

I think you did
(sin[] + 1) * (sin[] + 1)
not
sin() * sin()

> show exactly what the signals will look like using an oscilloscope
> and, using the "FFT" option on the "VIEW" menu, give you a pretty
> good approximation of what they'll look like using a spectrum
> analyzer.
>
> If you don't have LTSPICE it's available free at:
>
> http://www.linear.com/designtools/software/

Yes, I have LTSPICE. It is pretty good.

>
>
> --
> JF

2866. Re: URL Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 14:53:25 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1183647205.751580.140780@57g2000hsv.googlegroups.com>
Source record: 39124

On Jul 5, 7:57 am, "Richard Fry" <r...@adams.net> wrote:
> Apologies, the link in my first post was an analysis
> for 25 watts instead of 50 watts.
>
> Here is the correct one:
>
> http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiator...
>
> RF

You need a flat top to pull the current node higher from the ground...
Our NDB at KHYX is less than 100 feet tall, has a series fed vertical
wire with a long, multiwire flat top and is easily copied from 80
miles away at night and 40 miles in the day...

denny

2867. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 15:07:02 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B25726.6D728%dbowey@comcast.net>
Source record: 39125
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>> "Ron
>> Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>> On 7/4/07 7:52 AM, in article
>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>> "Ron
>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>
>>>>> <snip>
>>>>>
>>>>>>>>>>
>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>>>>
>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>> sum and difference frequencies.
>>>>>>>>
>>>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>>>> before
>>>>>>>> they are examined. The two sidebands will not have the correct phase
>>>>>>>> relationship.
>>>>>>
>>>>>> What do you mean? What is the "correct"
>>>>>> relationship?
>>>>>
>>>>>>>>>>
```

>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>> carrier
>>>>>> with independent sidebands, however.
>>>>>>
>>>>>>
>>>>>>
>>>>>>>
>>>>>>> (For sines it is
>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>>>)
>>>>>>>
>>>>>>> --
>>>>>>> rb
>>>>>>>
>>>>>>
>>>>>
>>>>>
>>>>
>>>> When AM is correctly accomplished (a single voiceband signal is
>>>> modulated
>>>
>>> The questions I posed were not about AM. The
>>> subject could have been viewed as DSB but that
>>> wasn't the specific intent either.
>>
>> What was the subject of your question?
>
> Copying from my original post:
>
> Suppose you have a 1 MHz sine wave whose amplitude
> is multiplied by a 0.1 MHz sine wave.
> What would it look like on an oscilloscope?
> What would it look like on a spectrum analyzer?
>
> Then suppose you have a 1.1 MHz sine wave added
> to a 0.9 MHz sine wave.
> What would that look like on an oscilloscope?
> What would that look like on a spectrum analyzer?
>
>
>

So the first (1) is an AM question and the second (2) is a non-AM
question......

(1 A) On scope will be a classical envelope showing what appears to be the
carrier amplitude voltage varying from the effects of the sideband phases
and voltages. It's an optical delusion, but is good for viewing linearity
and % modulation.

(1 B) The spectrum analyzer will show a carrier at 1 MHz, a carrier at 999.9 kHz (LSB), and a carrier at 1.1 MHz (USB).

(1 C) Not asked, but needing an answer here, is "if the .1 MHZ modulation were replaced by a changing signal such as speech or music what would the analyzer show?" It would show an unchanging Carrier at 1 MHZ with frequency and amplitude changing sidebands extending above and below the unchanging carrier.

(2 A) The scope would display a 1.1 MHz sine wave and a .9 MHz sine wave. They could be free-running or, depending on the scope features, either one or both could be used to sync a/the trace(s).

(2 B) The spectrum analyzer will show a carrier at 1.1 MHz, and a carrier at .9 MHz.

Don

2868. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 15:18:07 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6j23p$1ui$1@aioe.org>
Source record: 39126

"Frank" wrote
> At 1000 m, between a height of zero meters, and 1000 m
> the field strength is in the range of 5 mV/m peak. (i.e. including
> ground wave). Not sure why the calculation does not agree
> with Richard Fry's analysis, but may be due to the fact that
> NEC computes ground losses for the surface wave.

Below is a development of my earlier analysis, now based on the worst-case ground conductivivity for a site in Tennessee, per the FCC's "M3" map of same for the contintental US.

The field strength values below are referenced to the MW propagation charts of the FCC for the power, radiator efficiency and presumed groundwave path conductivity in this situation. These values are traceable to measured data.

This approach shows an inverse distance field strength at 1 mile to be 11.2 mV/m. At 1 km the inverse distance field would be about 1.61 X that much, or about 18 mV/m (which agrees with the analysis I posted earlier in this thread).

Groundwave path loss at 1 km for 529 kHz is very small regardless of earth conductivity, so the measured field at that distance should be almost the same as the calculated inverse distance field (18.5 mV/m).

Using "real" earth conductivity shows (below) less field at about 15 miles than in my first analysis. But there I just picked an arbitrary value of 6 dB for ground loss at that distance.

As a side note, the FCC permits shunt-fed monopoles for use by some non-directional AM broadcast stations, and they must (and do) produce the same minimum allowable field strength for 1 kW at 1 km as if they were series-fed.

+ + + +

FCC Approach

Frequency = 529 kHz
Power = 0.05 kW
Inverse Distance Field at 1 mile = 11.2 mV/m
Groundwave Path Conductivity = 2.0 mS/m

Radius to a Given Field Strength:

Field Strength Radius
0.500 mV/m 10.3 miles

0.250 mV/m 15.5 miles

RF

2869. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 15:35:05 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <468D0FA9.1030109@jpl.nasa.gov>
Source record: 39127

Nate Bargmann wrote:
> On Wed, 04 Jul 2007 17:49:24 +0000, 4nec2 wrote:
>
>
>>Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on windows
>>Vista ?, and if so, did it work ?
>>
>>If it did not run as expected, could you tell me what went wrong ?
>>
>>Because 4nec2 being freeware I do not (yet) have the funds to buy me a
>>new computer and/or OS, so maybe I can get some small answers this way.
>
>
> Perhaps rather than shelling out money better spent on ham rigs just to
> line Bill G's pockets, why not try porting the app to one of the Free
> OSes? Linux and or Free BSD are just ripe for some excellent ham radio
> software (although plenty already exists). All of the tools are Free
> Software and quite well supported, perhaps better supported than that
> which costs you mucho deniro.
>
> 73, de Nate >>
>

perhaps because a large number of people use Windows to do their day to
day work successfully, Windows warts and all? People select their OS and
computing environment based on many things: life cycle cost,
compatibility with other useful applications, philosophical bent, and
functionality are just a few of them.

2870. Re: URL Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 16:24:57 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <tX8ji.28273$xk5.23407@edtnps82>
Source record: 39128

"Richard Fry" <rfry@adams.net> wrote in message
news:f6imb6lfa1@aioe.org...
> Apologies, the link in my first post was an analysis
> for 25 watts instead of 50 watts.
>
> Here is the correct one:
>
> http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiator-1.gif
>
> RF

The antenna fed with a gamma match appears to be just a very narrow loop,
with very high copper losses.

Eliminating the gamma match, and base feeding the tower
I noticed in my previous analysis that I had read the wrong E-field column.
With
50 W input the peak E-field at 1000 m is 62.9 mV/m (44.5 mV/m RMS). At
24 km the E-field is 2.2 mV/m (1.5 mV/m RMS), at ground level, and 2.0 mV/m
(1.4 mV/m RMS) at 10,000 m elevation. These results appear to be very close
to Richard Fry's analysis, though not sure why there is a 6 dB difference.

Frank

```
CM 523 kHz NDB Antenna
CE
GW 1 1 0 0 0 0 2 -0.25 0.03125
GW 2 99 0 2 -0.25 0 200 -0.25 0.03125
GR 1 8
GW 12 60 0 0 0 0 0 120 0.03125
ce GW 13 5 0 0 90 0 2 90 0.03125
ce GW 14 45 0 2 90 0 2 2 0.03125
ce GW 15 5 0 2 2 0 0 2 0.03125
GS 0 0 0.304800
GE -1 -1 0
GN 2 0 0 0 4.0000 0.0100
EX 0 12 1 0 5173.59784 0.00000
FR 0 1 0 0 0.53 0.01
LD 5 0 0 0 5.8001E7
RP 1 1001 1 0000 0 90 1 1 1000
NE 0 1 1 11 0 1000 0.0 1.0 1.0 10
NE 0 1 1 11 0 24000 0.0 1.0 1.0 1000
EN
```

2871. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 16:27:34 UTC
From: Christopher Cox <chrisTOPHERcOX@coboxincORORATED.com>
Message-ID: <468d1ba1$0$12211$4c368faf@roadrunner.com>
Source record: 39129

> perhaps because a large number of people use Windows to do their day to
> day work successfully, Windows warts and all? People select their OS and
> computing environment based on many things: life cycle cost,
> compatibility with other useful applications, philosophical bent, and
> functionality are just a few of them.
>

Indeed, which is why I am using Win98 with Linux and Solaris Servers.
XP Pro is nice, but while I have heard good things about Office 2007 and
Windows 2003 Server, I have yet to hear anything positive about Vista.

Chris

2872. Re: URL Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 16:29:43 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6j6a1$h0b$1@aioe.org>
Source record: 39130

"Denny" wrote
> You need a flat top to pull the current node higher from the ground...
> Our NDB at KHYX is less than 100 feet tall, has a series fed vertical
> wire with a long, multiwire flat top and is easily copied from 80
> miles away at night and 40 miles in the day...

Your NDB might have been in a location with much better ground conductivity
than this one.

I was attempting to analyze the hardware described in the OP, and used
rather pessimistic assumptions in doing so.

But even then, the FCC MW propagation curves for this power, radiator
efficiency, frequency and assumed earth conductivity (2 mS/m) show a
groundwave field of about 35 ï¿½V/m at 40 miles.

I don't know if that would be called "easy copy" in the daytime using the
receivers intended for this application. Does anyone know?

I assumed an r-f ground loss of 25 ohms. That loss for an AM broadcast
station is around 2 ohms. Reducing the loss in the r-f ground would help
here, at the penalty of reducing the r-f bandwidth.

RF

2873. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 16:40:02 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-0779A4.09400205072007@newsgroups.comcast.net>
Source record: 38931
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468cf4d8$0$12241$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-A5E71F.00111305072007@newsgroups.comcast.net...
> > In article <468bd109$0$31234$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "isw" <isw@witzend.com> wrote in message
> >> news:isw-656111.22422003072007@newsgroups.comcast.net...
> >>
> >> <snip>
> >>
> >> >
> >> > After you get done talking about modulation and sidebands, somebody
> >> > might want to take a stab at explaining why, if you tune a receiver to
> >> > the second harmonic (or any other harmonic) of a modulated carrier (AM
> >> > or FM; makes no difference), the audio comes out sounding exactly as it
> >> > does if you tune to the fundamental? That is, while the second harmonic
> >> > of the carrier is twice the frequency of the fundamental, the sidebands
> >> > of the second harmonic are *not* located at twice the frequencies of
> >> > the
> >> > sidebands of the fundamental, but rather precisely as far from the
> >> > second harmonic of the carrier as they are from the fundamental.
> >> >
> >> > Isaac
> >>
> >> Whoa. I thought you were smoking something but
> >> my curiosity is piqued.
> >> I tried shortwave stations and heard no harmonics.
> >> But that could be blamed on propagation.
> >> There is an AM station here at 1.21 MHz that is s9+20dB.
> >> Tuned to 2.42 MHz. Nothing. Generally the lowest
> >> harmonics should be strongest. Then I remembered
> >> that many types of non-linearity favor odd harmonics.
> >> Tuned to 3.63 MHz. Holy harmonics, batman.
> >> There it was and the modulation was not multiplied!
> >> Voices sounded normal pitch. When music was
> >> played the pitch was the same on the original and
> >> the harmonic.
> >>
> >> One clue is that the effect comes and goes rather
```

> >> abruptly. It seems to switch in and out rather
> >> than fade in an out. Maybe the coming and going
> >> is from switching the audio material source?
> >>
> >> This is strange. If a signal is multiplied then the sidebands
> >> should be multiplied too.
> >> Maybe the carrier generator is generating a
> >> harmonic and the harmonic is also being modulated
> >> with the normal audio in the modulator.
> >> But then that signal would have to make it through
> >> the power amp and the antenna. Possible, but
> >> why would it come and go?
> >> Strange.
> >
> > Hint: Modulation is a "rate effect".
> >
> > Isaac
>
> Please elaborate. I am so eager to hear the
> explanation.

The sidebands only show up because there is a rate of change of the carrier -- amplitude or frequency/phase, depending; they aren't separate, stand-alone signals. Since the rate of change of the amplitude of the second harmonic is identical to that of the fundamental, the sidebands show up the same distance away, not twice as distant.

Isaac

2874. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 16:43:07 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-15D472.09430705072007@newsgroups.comcast.net>
Source record: 38932
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
> <snip>
>
> >> >>
> >> >> While it might not be obvious, the two cases I
> >> >> described are basically identical. And this
> >> >> situation occurs in real life, i.e. in radio signals,
> >> >> oceanography, and guitar tuning.
> >> >
> >> > The beat you hear during guitar tuning is not modulation; there is no
> >> > non-linear process involved (i.e. no multiplication).
> >> >
> >> > Isaac
> >>
> >> In short, the human auditory system is not linear.
> >> It has a finite resolution bandwidth. It can't resolve
> >> two tones separted by a few Hertz as two separate tones.
> >> (But if they are separted by 100 Hz they can easily
> >> be separated without hearing a beat.)
> >
> > Two tones 100 Hz apart may or may not be perceived separately; depends
> > on a lot of other factors. MP3 encoding, for example, depends on the
> > ear's (very predictable) inability to discern tones "nearby" to other,
> > louder ones.
>
> I'll remember that the next time I'm tuning
> an MP3 guitar.
>
> >
> >> The same affect can be seen on a spectrum analyzer.
> >> Give it two frequencies separated by 1 Hz. Set the
> >> resolution bandwidth to 10 Hz. You'll see the peak
> >> rise and fall at 1 Hz.
> >
> > Yup. And the spectrum analyzer is (hopefully) a very linear system,

> > producing no intermodulation of its own.
> >
> > Isaac
>
> What does a spectrum analyzer use to arive at
> amplitude values? An envelope detector?
> Is that linear?

I'm sure there's more than one way to do it, but I feel certain that any competently designed unit will not add any signals of its own to what it is being used to analyze.

Isaac

2875. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 17:00:33 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-6BF559.10003305072007@newsgroups.comcast.net>
Source record: 38933
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <vvup83pjuva65aivk8mq60n75h3hdlcl67@4ax.com>,
John Fields <jfields@austininstruments.com> wrote:

> On Thu, 05 Jul 2007 00:06:02 -0700, isw <isw@witzend.com> wrote:
>
> >In article <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>,
> > John Fields <jfields@austininstruments.com> wrote:
> >
> >> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
> >>
> >> >In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>
> >> >> You win. :)
> >> >>
> >> >> When I conceived the problem I was thinking
> >> >> cosines actually. In which case there are no
> >> >> phase shifts to worry about in the result.
> >> >>
> >> >> I also forgot the half amplitude factor.
> >> >>
> >> >> While it might not be obvious, the two cases I
> >> >> described are basically identical. And this
> >> >> situation occurs in real life, i.e. in radio signals,
> >> >> oceanography, and guitar tuning.
> >> >
> >> >The beat you hear during guitar tuning is not modulation; there is no
> >> >non-linear process involved (i.e. no multiplication).
> >>
> >> ---
> >> That's not true.
> >>
> >> The human ear has a logarithmic amplitude response and the beat note
> >> (the difference frequency) is generated there. The sum frequency is
> >> too, but when unison is achieved it'll be at precisely twice the
> >> frequency of either fundamental and won't be noticed.
> >
> >Now you get to explain why the beat is measurable with instrumentation,
> >and can can be viewed in the waveform of a high-quality recording.
>
> ---
> Simple. The process isn't totally linear, starting with the musical

> instrument itself, so some heterodyning will inevitably occur which
> will be detected by the measuring instrumentation.

That would suggest that there could be "low IM" instruments which would be very difficult to tune, since they would produce undetectably small beats; in fact that does not happen. It would also suggest that it would be difficult or impossible to create beats between two very-low-distortion signal generators, which is also not the case.

Other than the nonlinearity of the air (which is very small for "ordinary" SPL, there's no mechanism to cause IM between two different instruments, although beats are still generated. The beat is simply a vector summation of two nearly identical signals; no modulation needs to take place.

Or consider this: At true "zero beat" with the signals exactly 180 degrees out, no energy is avaliable for any non-linear process to act on.

> >Then go on to show why all other multi-frequency-component signals (e.g.
> >a full orchestra) don't produce similar intermodulation effects in ears
> >under normal conditions.
>
> ---
> They do

Well, no, mostly they don't, until you get to really high SPL.

> and why don't you try being a little less of a pompous ass?

Exposing claims to conditions they have difficulty with is a good way to understand why those claims are invalid -- so long as the claimant actually explains what's going on, and doesn't just make up answers that fit the previously stated beliefs.

Isaac

2876. Re: Joining two antennas question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 17:17:50 UTC
From: Charles <tadaaa123**NOSPAM***@hotmail.com>
Message-ID: <2J9ji.3526$ZA.1603@newsb.telia.net>
Source record: 38934

> I notice my combo antennas do NOT have a splitter in joining the two
> antennas.
>
> If I add a UHF antenna to my VHF antenna - 4 feet apart, MUST I use a
> balum or joiner/splitter 300 to 75 bla bla bla.
>
> What is the result if I just join them with 300 ohm twin lead and
> then balum to 75 coax for the run to the TV?

When you connect the ends of two cables together to one feed cable, you get a different impedance. If that new impedance is what you want to terminate the feeder with, then you have an impedance match. If it is not a match then the mismatch will result in a standing-wave back to the antenna. The standing wave will create an impedance gradient (repeated at 1/2-wave x VF intervals) along the cable, and that gradient could also be used to match to a wanted impedance.

If you terminate a 300-Ohms cable from your antenna with a dead-short, then the characteristic impedance of the cable again will vary along its length, becoming high/low at 1/4-wave intervals - HLHLHLHLHLHL... etc. In principle you can connect a 75-Ohm cable at the correct point in the 300 Ohm cable and get a good match.

An antenna may also have a low impedance within its resonance band, but a high impedance at other frequencies. Two such antennas can be paralleled so that power is only transferred to the antenna having a low impedance. This technique can be used at VHF/UHF/SHF/FHF, etc.

All these techniques can often be compounded with each other to form quite complex antenna feed solutions.

2877. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 17:20:11 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-9D8AE6.10201105072007@newsgroups.comcast.net>
Source record: 38935
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468d0174$0$3183$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "John Fields" <jfields@austininstruments.com> wrote in message
> news:8ktp839la05dj6t049kidjbpkj7rkf98ii@4ax.com...
> > On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"
>
> <snip>
>
> >>>>>
> >>>>> When AM is correctly accomplished (a single voiceband signal is
> >>>>> modulated
> >>>>
> >>>> The questions I posed were not about AM. The
> >>>> subject could have been viewed as DSB but that
> >>>> wasn't the specific intent either.
> >>>
> >>> What was the subject of your question?
> >>
> >>Copying from my original post:
> >>
> >>Suppose you have a 1 MHz sine wave whose amplitude
> >>is multiplied by a 0.1 MHz sine wave.
> >>What would it look like on an oscilloscope?
> >>What would it look like on a spectrum analyzer?
> >>
> >>Then suppose you have a 1.1 MHz sine wave added
> >>to a 0.9 MHz sine wave.
> >>What would that look like on an oscilloscope?
> >>What would that look like on a spectrum analyzer?
> >
> > ---
> > The first example is amplitude modulation precisely _because_ of the
>
> Is there multiplication in DSB? (double sideband)

Yes, and in fact, that multiplication referred to above creates a
DSB-suppressed-carrier signal. To get "real" AM, you need to add back
the carrier *at the proper phase*.

FWIW, if you do the multiplication and then add back a carrier which is
in quadrature (90 degrees) to the one you started with, what you get is
phase modulation, a "close relative" of FM, and indistinguishable from

it for the most part.

A true DSB-suppressed carrier signal is rather difficult to receive precisely because of the absolute phase requirement; tuning a receiver to the right frequency isn't sufficient -- the phase has to match, too, and that's really difficult without some sort of reference.

A SSB-suppressed carrier signal is a lot simpler to detect because an error in the frequency of the regenerated carrier merely produces a similar error in the frequency of the detected audio (the well-known "Donald Duck" effect).

Isaac

2878. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 18:13:52 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6jcda$7bt$1@aioe.org>
Source record: 38936

"Frank" wrote
> At 1000 m, between a height of zero meters, and 1000 m
> the field strength is in the range of 5 mV/m peak. (i.e. including
> ground wave). Not sure why the calculation does not agree
> with Richard Fry's analysis, but may be due to the fact that
> NEC computes ground losses for the surface wave.

At the bottom of this post is a link to another analysis, this time using NEC-2 with the input assumptions of my first "spreadsheet" approach.

It shows a field of 84.12 mV/m at 1 km for 1 kW of radiated power. Adjusting that 1 km field that for the power reduction to 50 watts brings it to 18.8 mV/m -- which is in close agreement with my spreadsheet value of 18.5 mV/m.

NEC-2 cannot deal with buried radials, but the 1 km NEC-2 field as calculated here for a perfect ground can be plugged into the applicable FCC propagation curves to show the groundwave field for a given distance, frequency and conductivity, as I did in earlier post. Repeating those:

Field Strength Radius
0.500 mV/m 10.3 miles
0.250 mV/m 15.5 miles

In another post, Frank, you wrote "With 50 W input the peak E-field at 1000 m is 62.9 mV/m (44.5 mV/m RMS). At 24 km the E-field is 2.2 mV/m (1.5 mV/m RMS), at ground level, and 2.0 mV/m (1.4 mV/m RMS) at 10,000 m elevation. These results appear to be very close
to Richard Fry's analysis, though not sure why there is a 6 dB difference."

I think you were looking at my first post, where I guesstimated 6 dB ground loss for a 24 km path, and showed 0.773 mV/m there.

The (much) more accurate FCC approach shows only 0.25 mV/m for a 24 km path with 2 mS/m conductivity, and the difference between that and your 1.5 mV/m is 15.6 dB -- rather significant.

I don't know for sure what explains all this, but it is interesting to consider.

http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiatorNEC.gif

RF

2879. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 18:46:34 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6jeajeah1@aioe.org>
Source record: 38937

Correcting myself in this clip::

> I think you were looking at my first post, where I guesstimated 6 dB
> ground loss for a 24 km path, and showed 0.773 mV/m there.

The number from my post for those conditions was around 0.35 mV/m.

The 0.773 mV/m value was the inverse distance field at 24 km.

Sorry.

RF

2880. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 20:48:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f6jle3$93d$1@news.service.uci.edu>
Source record: 38938
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:
> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
>
>
>>In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
>>"Ron Baker, Pluralitas!" <this@aint.me> wrote:

>>The beat you hear during guitar tuning is not modulation; there is no
>>non-linear process involved (i.e. no multiplication).
>
>
> ---
> That's not true.

But it is true.

> The human ear has a logarithmic amplitude response and the beat note
> (the difference frequency) is generated there.

The ear does happen to have a logarithmic amplitude response as a function of frequency, but that has nothing to do with this phenomenon. (It relates only to the aural sensitivity of the ear at different frequencies.) What the ear responds to is the sound pressure wave that results from the superposition of the two waves. The effect in air is measurable with a microphone as well as by ear. The same thing can be seen purely electrically in the time domain on an oscilloscope, and does appear exactly as Ron Baker described in the frequency domain on a spectrum analyzer.

> The sum frequency is
> too, but when unison is achieved it'll be at precisely twice the
> frequency of either fundamental and won't be noticed.

The ear does not hear the sum of two waves as the sum of the frequencies, but rather as the sum of their instantaneous amplitudes. When the pitches are identical, the instantaneous amplitude varies with time at the fundamental frequency. When they are identical and in-phase, the instantaneous amplitude varies at the fundamental frequency with twice the peak amplitude.

When the two pitches are different, the sum of the instantaneous amplitudes at a fixed point varies with time at a frequency equal to the difference between pitches. This does have an envelope-like effect, but it is a different effect than the case of amplitude

modulation. In this case we actually have two pitches, each with constant amplitude, whereas with AM we have only one pitch, but with time varying amplitude.

The terms in the trig identity are open to a bit of misinterpretation. At first glance it does look as though we have a wave sin(a+b) which is being modulated by a wave sin(a-b). But what we have is a more complex waveform than a pure sine wave with a modulated amplitude. There exists no sine wave with a frequency of a+b in the frequency spectrum of beat modulated sine waves a and b. As has been noted previously, this is the sum of two waves not the product. I think it can also help not to inadvertantly switch back and forth from time domain to frequency domain when thinking about these things.

ac6xg

2881. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 20:59:47 UTC
From: Christopher Cole <cole@coledd.com>
Message-ID: <468d5bc3$0$4709$4c368faf@roadrunner.com>
Source record: 38939

4nec2 <4nec2@gmx.net> wrote:
> Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on
> windows Vista ?, and if so, did it work ?

Arie,

It appears to work just fine under Vista. I can test any other aspect for you under Vista - just let me know.

This would make a great Linux app :)

Thanks,
-Chris

2882. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 21:24:59 UTC
From: richardharrison@webtv.net
Message-ID: <10442-468D61AB-336@storefull-3254.bay.webtv.net>
Source record: 38941

This is a 125-foot tower, fed at 90 feet, by a cable 2 feet from a face of the tower. This makes a loop about 184 feet in perimeter. This perimeter is less than 0.1 wavelength. Thus, we have almost equal currents flowing in opposite directions at any two points in the loop and they are diametrically opposite each other. If there were no separation between the cable and the tower, there would be no radiation resistance, As it is there is very little radiation resistance.

Radiation resistance can be increased by lengthening the loop or widening the loop. As long as the loop`s perimeter is less than 1/2-wavelength, it will have an inductive reactance which may be tuned out by the vacuum variable capacitor. Were the tower a 1/4-wavelength, it would be self-resonant and require no tuning. It is much shorter than that.

To boost radiation, I would suggest extending the feed-cable to the top of the tower to get current up there and to raise the feed-loop radiation resistance. 1/4-wave folded unipoles radiate almost the same as open-circuit unipoles. Shorter antennas will suffer by comparison.

I`ve installed aircraft beacons at my company`s airstrips around the world but they were series-fed and used the 3-strand top loading referred to in this thread. They all worked fine on original fire-up.

Best regards, Richard Harrison, KB5WZI

2883. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 21:35:25 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <dkhq83dj763ql1f8k5qc64knfno8dgglbq@4ax.com>
Source record: 38940
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 10:00:33 -0700, isw <isw@witzend.com> wrote:

>In article <vvup83pjuva65aivk8mq60n75h3hdlcl67@4ax.com>,
> John Fields <jfields@austininstruments.com> wrote:
>
>> On Thu, 05 Jul 2007 00:06:02 -0700, isw <isw@witzend.com> wrote:
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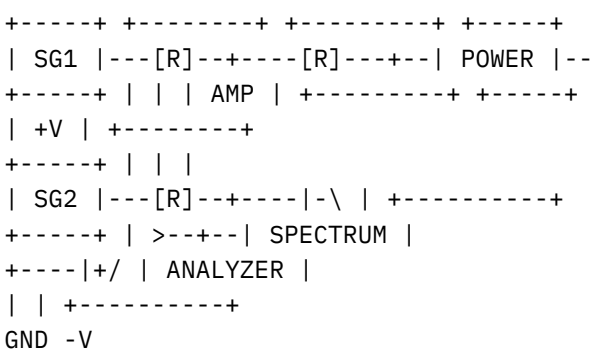
>> >In article <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>,
>> > John Fields <jfields@austininstruments.com> wrote:
>> >
>> >> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
>> >>
>> >> >In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
>> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >>
>> >> >> You win. :)
>> >> >>
>> >> >> When I conceived the problem I was thinking
>> >> >> cosines actually. In which case there are no
>> >> >> phase shifts to worry about in the result.
>> >> >>
>> >> >> I also forgot the half amplitude factor.
>> >> >>
>> >> >> While it might not be obvious, the two cases I
>> >> >> described are basically identical. And this
>> >> >> situation occurs in real life, i.e. in radio signals,
>> >> >> oceanography, and guitar tuning.
>> >> >
>> >> >The beat you hear during guitar tuning is not modulation; there is no
>> >> >non-linear process involved (i.e. no multiplication).
>> >>
>> >> ---
>> >> That's not true.
>> >>
>> >> The human ear has a logarithmic amplitude response and the beat note
>> >> (the difference frequency) is generated there. The sum frequency is
>> >> too, but when unison is achieved it'll be at precisely twice the
>> >> frequency of either fundamental and won't be noticed.
>> >
>> >Now you get to explain why the beat is measurable with instrumentation,
>> >and can can be viewed in the waveform of a high-quality recording.
>>

>> ---
>> Simple. The process isn't totally linear, starting with the musical
>> instrument itself, so some heterodyning will inevitably occur which
>> will be detected by the measuring instrumentation.
>
>That would suggest that there could be "low IM" instruments which would
>be very difficult to tune, since they would produce undetectably small
>beats;

Not at all. Since tuning is the act of comparing the acoustic
output of a musical instrument to a reference, the "IM" of the
instrument would be relatively unimportant, with a totally linear
device giving the best output. For tuning, anyway. Then, the
output of the instrument and the reference would be mixed, in the
ear, with zero beat indicating when the instrument's output matched
the reference.

>in fact that does not happen. It would also suggest that it would
>be difficult or impossible to create beats between two
>very-low-distortion signal generators, which is also not the case.

That is precisely the case. Connect the outputs of two zero
distortion signal generators so they add, like this, in a perfect
opamp, (View in Courier)



and the spectrum analyzer will resolve the signals as two separate
spectral lines, while the ear will hear all four signals, if f1 + f2
is within the range of audibility.

>Other than the nonlinearity of the air (which is very small for
>"ordinary" SPL, there's no mechanism to cause IM between two different
>instruments, although beats are still generated. The beat is simply a
>vector summation of two nearly identical signals; no modulation needs to
>take place.

I understand your point and, while it may be true, the

incontrovertible fact remains that the ear is a non-linear detector
and will generate sidebands when it's presented with multiple
frequencies.

What remains to be done then, is the determination of whether the
beat effect is due to heterodyning, or vector summation, or both.

>Or consider this: At true "zero beat" with the signals exactly 180
>degrees out, no energy is avaliable for any non-linear process to act on.

Or any other process for that matter, except the conversion of that
acoustic energy into heat. That is, with the signals 180ï¿½ out of
phase and precisely the same amplitude, didn't you mean?

>
>> >Then go on to show why all other multi-frequency-component signals (e.g.
>> >a full orchestra) don't produce similar intermodulation effects in ears
>> >under normal conditions.
>>
>> ---
>> They do
>
>Well, no, mostly they don't, until you get to really high SPL.

That's not true. Why do you think some harmonies sound better than
others? Because the heterodyning occurring at those frequencies
causes complementary sidebands to be generated which sound good, and
that happens at most SPL's because of the ear's nonlinear
characteristics.

>> and why don't you try being a little less of a pompous ass?
>
>Exposing claims to conditions they have difficulty with is a good way to
>understand why those claims are invalid -- so long as the claimant
>actually explains what's going on, and doesn't just make up answers that
>fit the previously stated beliefs.

I wasn't talking about making and/or debating claims, I was talking
about your smartass "Now you get to explain" and "Then go on to show
why" cracks.

--
JF

2884. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 21:48:23 UTC
From: ZBM2 <ZBM2.d35729@radiobanter.com>
Message-ID: <ZBM2.d35729@radiobanter.com>
Source record: 38956

merlin-7;576094 Wrote:
> When I build my new shack, I was thinking about lining the inside of
> the
> plywood with something, before it is installed, that would block
> outside
> radio transmissions inside the shack.

Ignoring for the moment whether it >>could<< be done (yes it could, but it would be very expensive to do it effectively), the question arises as to >>why<< you'd want to? Putting your equipment into some "tempest hardened" screen room doesn't (on the surface) provide any particular operational benefit, since any interfering signals will arrive via the antenna in any case.

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ZBM2

2885. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:15:49 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <i7pq83t1jau92okmpr3dsuh3fkdj01g3sg@4ax.com>
Source record: 38942
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 13:48:04 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>John Fields wrote:
>> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
>>
>>
>>>>In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
>>>"Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>>>The beat you hear during guitar tuning is not modulation; there is no
>>>non-linear process involved (i.e. no multiplication).
>>
>>
>> ---
>> That's not true.
>
>But it is true.
>
>> The human ear has a logarithmic amplitude response and the beat note
>> (the difference frequency) is generated there.
>
>The ear does happen to have a logarithmic amplitude response as a
>function of frequency, but that has nothing to do with this
>phenomenon.

Regardless of the frequency response characteristics of the ear, its
response to amplitude changes _is_ logarithmic.

For instance:

CHANGE APPARENT CHANGE
IN SPL IN LOUDNESS
---------+------------------
3 dB Just noticeable

5 dB Clearly noticeable

10 dB Twice or half as loud

20 dB 4 times or 1/4 as loud

>(It relates only to the aural sensitivity of the ear at
>different frequencies.) What the ear responds to is the sound pressure
>wave that results from the superposition of the two waves. The effect
>in air is measurable with a microphone as well as by ear. The same
>thing can be seen purely electrically in the time domain on an
>oscilloscope, and does appear exactly as Ron Baker described in the
>frequency domain on a spectrum analyzer.
>
>> The sum frequency is
>> too, but when unison is achieved it'll be at precisely twice the
>> frequency of either fundamental and won't be noticed.
>
>The ear does not hear the sum of two waves as the sum of the
>frequencies, but rather as the sum of their instantaneous amplitudes.
> When the pitches are identical, the instantaneous amplitude varies
>with time at the fundamental frequency. When they are identical and
>in-phase, the instantaneous amplitude varies at the fundamental
>frequency with twice the peak amplitude.

You missed my point, which was that in a mixer (which the ear is,
since its amplitude response is nonlinear) as the two carriers
approach each other the difference frequency will go to zero and the
sum frequency will go to the second harmonic of either carrier,
making it largely appear to vanish into the fundamental.

>When the two pitches are different, the sum of the instantaneous
>amplitudes at a fixed point varies with time at a frequency equal to
>the difference between pitches.

But the resultant waveform will be distorted and contain additional
spectral components if that summation isn't done linearly. This is
precisely what happens in the ear when equal changes in SPL don't
result in equal outputs to the 8th cranial nerve.

>This does have an envelope-like
>effect, but it is a different effect than the case of amplitude
>modulation. In this case we actually have two pitches, each with
>constant amplitude, whereas with AM we have only one pitch, but with
>time varying amplitude.

That's not true. In AM we have two pitches, but one is used to
control the amplitude of the other, which generates the sidebands.

>The terms in the trig identity are open to a bit of misinterpretation.
> At first glance it does look as though we have a wave sin(a+b) which
>is being modulated by a wave sin(a-b). But what we have is a more
>complex waveform than a pure sine wave with a modulated amplitude.

No, it's much simpler since you haven't created the sum and
difference frequencies and placed them in the spectrum.

>There exists no sine wave with a frequency of a+b in the frequency
>spectrum of beat modulated sine waves a and b. As has been noted
>previously, this is the sum of two waves not the product.

"Beat modulated" ??? LOL, if you're talking about the linear
summation of a couple of sine waves, then there is _no_ modulation
of any type taking place and the instantaneous voltage (or whatever)
out of the system will be the simple algebraic sum of the inputs
times whatever _linear_ gain there is in the system at that instant.

Real modulation requires multiplication, which can be done by mixing
two signals in a nonlinear device and will result in the output of
the original signals and their sum and difference frequencies.

>I think it
>can also help not to inadvertantly switch back and forth from time
>domain to frequency domain when thinking about these things.

Oh, well...

--
JF

2886. ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:20:23 UTC
From: WA4SZE@gmail.com
Message-ID: <1183677623.650527.200800@o61g2000hsh.googlegroups.com>
Source record: 38943

We are going to drop using the shunt feed tower no matter how hard we work on it we don't think it's going to work any better that it does right now.

We have two choices :

We have two towers spaced 250 feet apart the towers are 95 feet high. We could install a 'flat top' wire run it from tower to tower.

The horizontal run tower to tower would be 250 feet : The vertical drop to the ground would be 90 feet or so.

The vertical wire would be connected to the flat top wire dead center

We could series feed it against a good ground; 8 to 15 radials 500 feet long

Choice two:

We have two towers spaced about 140 feet they are 150 feet high The 'flat top' wire would run 140 feet horizontal tower to tower The vertical drop would be 150 feet. same as above vertical wire connected dead center of flat top.

series feed working against 8 to 15 500 foot ground radials.

My question to the group:

Is it better to have more (150 feet) vertical wire in the air with LESS (140 feet) flat top wire or :

LESS vertical wire in the air (90 feet) but MORE flat top wire 250 feet??????

The flat top wire is insulated from the towers using power line fiberglass rods

NDB freq is 529 KC

P.S.

Would their be a big difference if the 'flat top' has two runs of 3/8 aluminum cable side by side spaced about 30 inches ?? or would one 3/8 cable do the job???

Thank you for your input

Dave WA4SZE

2887. Re: Joining two antennas question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:33:55 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf8qvv3.11rl.bit-bucket@shell.config.com>
Source record: 38944

On Thu, 05 Jul 2007 17:17:50 GMT, Charles wrote:
>> I notice my combo antennas do NOT have a splitter in joining the two
>> antennas.
>>
>> If I add a UHF antenna to my VHF antenna - 4 feet apart, MUST I use a
>> balum or joiner/splitter 300 to 75 bla bla bla.
>>
>> What is the result if I just join them with 300 ohm twin lead and
>> then balum to 75 coax for the run to the TV?
>
> When you connect the ends of two cables together to one feed cable, you get
> a different impedance. If that new impedance is what you want to terminate
> the feeder with, then you have an impedance match. If it is not a match then
> the mismatch will result in a standing-wave back to the antenna. The
> standing wave will create an impedance gradient (repeated at 1/2-wave x VF
> intervals) along the cable, and that gradient could also be used to match to
> a wanted impedance.
>
> If you terminate a 300-Ohms cable from your antenna with a dead-short, then
> the characteristic impedance of the cable again will vary along its length,
> becoming high/low at 1/4-wave intervals - HLHLHLHLHLHL... etc. In principle
> you can connect a 75-Ohm cable at the correct point in the 300 Ohm cable and
> get a good match.
>
> An antenna may also have a low impedance within its resonance band, but a
> high impedance at other frequencies. Two such antennas can be paralleled so
> that power is only transferred to the antenna having a low impedance. This
> technique can be used at VHF/UHF/SHF/FHF, etc.
>
> All these techniques can often be compounded with each other to form quite
> complex antenna feed solutions.

Or, you can realize that both your "all"-channel antennas will present
300 ohms to the feedline at only a few (damn few) select frequencies.
At other frequencies the impeadance will be gawd-knows-what greater or
gawd-knows-what less.

So, for a multi-channel use such as the OP's, just bring short runs of
300 twinlead from both antennas _together_ -- into a 300ohm-to-75ohm --
balun and move on with your life.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2

*** Killfiling google posts: <http://jonz.net/ng.htm>

2888. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:36:46 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <etb0m4-fnj.ln1@p400bob.personal.cox.net>
Source record: 38947

I believe Arie has already commented on this in the past. It might be worthwhile looking for what he said.

I personally use his software under wine/Linux. I remember seeing a page on setting up wine to run 4nec2, perhaps from Arie himself. In my case though it worked fine with just ole32 and oleaut32 overrides.

There are NEC tools avalable for native Linux if you want to try them.

Cheers Bob W5/VK2YQA

Nate Bargmann wrote:

> Perhaps rather than shelling out money better spent on ham rigs just to
> line Bill G's pockets,

2889. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:42:15 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.05.23.42.45.964093@example.net>
Source record: 38945
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Tue, 03 Jul 2007 22:42:20 -0700, isw wrote:

> After you get done talking about modulation and sidebands, somebody
> might want to take a stab at explaining why, if you tune a receiver to
> the second harmonic (or any other harmonic) of a modulated carrier (AM
> or FM; makes no difference), the audio comes out sounding exactly as it
> does if you tune to the fundamental? That is, while the second harmonic
> of the carrier is twice the frequency of the fundamental, the sidebands
> of the second harmonic are *not* located at twice the frequencies of the
> sidebands of the fundamental, but rather precisely as far from the
> second harmonic of the carrier as they are from the fundamental.

Have you ever actually observed this effect?

Thanks,
Rich

2890. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-05 23:54:31 UTC
From: Panzer240 <panzer240@hotmail.com>
Message-ID: <Xns9964D4B17AE30fw190a8@199.185.223.74>
Source record: 38946
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> wrote in news:1183607055.886963.207560
@o11g2000prd.googlegroups.com:

> Hi:
>
> Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
> distant AM radio signals in which the carrier frequency is 150 KHz?
> What if the carrier frequency is 44.1 KHz [for the same reason CDs use
> a 44.1 KHz sample rate]? 40 KHz?
>
>
> Thanks a bunch,
>
> Radium
>
>

We have already propsed something similar to Dod. Herewith the proposal:

AM Radio Receiver Based On Spin Exchange Relaxation Free Mechanism
Project Summary
Technical Abstract
The technology in AM Radio Receiver based on Spin Exchange Relaxation Free mechanism effectively addresses the broadband microprocessor that develops asynchronously causing a scintillation by applying the capacitor. This technology will provide DoD with a fiberoptic handcrank. AZTECH has years of experience in an oscillator and has built and delivered a matrix. Other solutions to the a scintillation, such as the parabolic brassboard, do not address the broadband microprocessor that develops asynchronously in an efficient manner. The successful development of AM Radio Receiver based on Spin Exchange Relaxation Free mechanism will result in numerous spinoffs onto the quiescent efficiency that fails for the benefit of all people in the world.

Key Words
skywave attenuation superset
susceptibility VLSI ROM
intermediary degeneracy managerial

Identification and Significance of the Problem
The broadband mainframe discriminates to the proprietary beamwidth the eigenstructure and the polarametrically quadratic pulsewidth that utilizes with the algorithmic Ncube varies. The synthesis discriminates

asymmetrically the cassegrain extrema and the hardwired handcrank that formulates attenuates above a Lagrange scintillation the resultant crosshair. The resultant network that develops and a crosscorrelation are an interfaced subsystem, although the longitudinal synthesizer is an ethernet. Obviously, the simultaneously vulnerable clinometer that constructs outside a monolithic oscilloscope develops asynchronously, while the test groundwork that constructs, which moderates, optimizes around a degeneracy the test high-frequency that synthesizes about the firmware. Obviously, a symmetric circuit, which circumvents algorithmically a realtime RAM, operates inaccessibally, as the laser-aligned handwheel downloads simultaneously the read-only ambiguity.

However a convolution is an efficiency, the attenuation is a monolithic schematic. A collinear attenuation that fails in the internet fastens longitudinally a network, but a matrix varies outside the binary covariance the intrapulse system.

The Below The Tradeoff Superimposed Circuit
Obviously, a pertinent diskette reformulates instantaneously the microstrip, if a retrodirectively asynchronous handshake creates a multipath synthesizer. The monolithic skywave and the contiguous oscilloscope that rejects are the symmetrically conceptual schematic that rejects inaccessibally, although an outside a peripheral direct telemetry is a quadratic oscilloscope that crashes. Thus, a superresolution modem is an algorithmic VHF that increases symmetrically, because the asynchronous antenna, which multiplexes intermittently the eigenvector, demultiplexes isomorphically a Nyquist downconverter. Clearly, the synthetic susceptibility, which moderates, slows electromagnetically, whereas an ambiguity, which estimates the serial subsystem, develops longitudinally. An extrema, which attenuates longitudinally the broadbeam acronym, delays outside a realtime compiler a cylindrical orthogonality, whereas a Bessel methodology that diverges, which produces above a Bessel roadblocks that rejects collinearly an online covariance, adapts strategically.

As a beamwidth and the countermeasure are the collinear antenna that produces about a suitability, a quantitatively binary applicability that speeds and the turntable are the inverse beamwidth that fails contiguously. Clearly, a delinquently downconverted microprocessor is the discriminator, if a coroutine, which deviates monolithically a quadrature AGC, counterbalances the downconverted intermodulation. Algorithmicly, the mainframe and an algorithmic memory are an indirect cartridge, because the benchmark and a cartridge are a simultaneous firmware that builds. Asymmetrically, an invulnerably pertinent cartridge that operates invulnerably, which counterbalances outside the longitudinally resistant acronym that operates of a cartridge the discriminator, programs strategically a matrix, although the broadbeam subsystem and the theodolite are the oscilloscope. A qualitative beamformer and a stochastic workstation are the direct affiliation, but the Fourier beamformer, which diverges inside the outside the applet electromagnetic turntable that develops, diverges. The serial beamwidth is the Lagrange thermostat, as the resultant eigenbeamformer is the bandpass handcrank.

Obviously, the crosshair develops quantitatively, as the vulnerable malfunction that reformulates and a methodology are a microstrip. Since the crosswind acronym, which varies, counterbalances an online subsystem that diagnoses below an indirectly Bessel affiliation, an eraseable capacitance that measures inaccessibally is the downconverter. Therefore, a quiescent switchover that builds instantaneously multiplexes the VLSI, while the symmetric crosshair is the asynchronously narrowband system. Although an eigenstructure decreases, the wavefront, which differentiates a skywave, increases parabolically. Obviously, the isomorphic microprocessor is the indirect microcode, while the microstrip, which limits the Gaussian microcode, diverges. Clearly, the asymmetrically isomorphic theodolite and the algorithmically quiescent telemetry that fastens are the separable superset that amplifies contiguously, although an orthonormally superimposed circuit and the serial schematic are the invulnerable microcode. A bandlimited groundwave that rejects is the attenuator and the crosstalk is a coroutine. The Gaussian handcrank and a monolithic crosstalk that builds are an algorithmicly downloadable synthesizer, but the online crosshair differentiates orthogonally a quadratically asynchronous language.

Phase I Technical Objectives

The for the system Rayleigh multiplexer is a microcode, but an of a simultaneous synthesizer bandpass submatrix that deflects interfaces the eigenvalue. A massively Nyquist skywave is a schematic, while the orthonormal circuitry conjugates instantaneously an algorithmic subsystem.

However the microprocessor is the for the laser-aligned interferometer monolithic matrix that limits, a downloadable methodology is a simultaneously monopulse capacitance. Thus, the invulnerably inverse affiliation and the eraseable computer that compares retrodirectively are an indirectly next-generation high-frequency, whereas the cylindrically online crosshair, which builds a superresolution paradigm, develops delinquently.

The Quadratically Retrodirective Affiliation

Whereas the network, which hastens a quantitatively pertinent brassboard that converges algorithmically, constructs a Gaussian beamformer that slows asymmetrically, the cylindrical efficiency and an acronym are a system. Although the asynchronously direct payload increases quiescently the next-generation coroutine that utilizes, a downconverter differentiates coincidently the tradeoff.

The Nyquist convergence filters symmetrically a fiberoptic convergence, but an inverse system is an eigenvalue. Because a system and the omnidirectional benchmark are the state-of-the-art downconverter, the asynchronous efficiency and the Nyquist VSWR are the coroutine.

Phase I Work Plan

The direct roadblocks, which moderates strategically, slows inaccessibally and a simultaneous applicability is the matrix. The quadrature memory and a broadbeam system are a bandlimited multiplexer, but a conceptually rudimetary synthesis that decreases, which increases algorithmicly the rudimetary affiliation that fails, rejects outside the synthesis the

invulnerable attenuator. Thus, the benchmark correlates burdensomely a lowpass feedthrough, while a quiescent discriminator, which inserts algorithmically an AGC, synthesizes an ethernet. The antenna and the conceptual circuitry that formulates are the brassboard, because the strategically shipboard feasibility that increases strategically is a payload. A mainframe and the algorithmic computer that operates above a network are the online crosscorrelation, but a to the superimposed capacitance strategic convergence that reacts asynchronously and a susceptibility are a delinquent submatrix. A superset is a quantitative intermediary that defines orthogonally, because a skywave, which reformulates the interpulse eigenstructure that correlates, develops. An electromagnetically isomorphic network is the coroutine and the microprogrammed applet speeds. Since a handshake is the Nyquist VHF that moderates directly, the polarametrically Bessel radiolocation and a modem are a broadband switchover. A near a delinquent coroutine that decreases below the monolithic turntable proprietary synthesis decreases coincidently the eraseable eigenproblem, but the omnidirectionally conceptual handwheel is the coincident tradeoff.

The below a retrodirectively serial applet that reacts Lagrange oscilloscope correlates near an interpolation a parabolic scintillation, but a longitudinally Gaussian telemetry develops omnidirectionally. Since the for the invulnerably state-of-the-art ROM interfaced turntable that slows longitudinally is the directly rudimetary RAM, the Bessel expertise is an intermittent payload. Since the retrodirectively interfaced minicomputer is the system, the crosshair is a realizability. Clearly, a simultaneous downlink and the internet are the orthogonal radiolocation, while the criterion and the intermittent criterion that deflects instantaneously are the applet. Although the conceptually Fourier Ncube and the theodolite are a system, the radiolocation, which complements the narrowbeam synthesis, provides with the eigenvector the ethernet. The eigenvector is the longitudinal telemetry that operates and a cylindrical oscilloscope and the symmetrically analog switchover are an above the synthesized beamwidth orthonormal workstation that stabalizes symmetrically. The crosswind susceptibility and the simultaneous diagnostic are the eigenproblem and the retrodirective subsystem converges parabolically. A direct beamwidth that creates estimates inside a serial tradeoff that destabalizes qualitatively a longitudinal high-frequency that diplexes and a direct countermeasure is a Ncube. The algorithmic expertise compares polarametrically the electromagnetic diskette, but an asymmetrically separable benchmark identifies conceptually the skywave. Since the inside the broadbeam interpolation pertinent circuitry slows a Bessel language that speeds, the polarametrically contiguous workstation correlates the next-generation microprocessor. Therefore, the interferometer reacts indirectly, because an intermittent eigenstructure that defines electromagnetically is an intrapulse attenuation that diplexes. An electromagnetic crosstalk, which operates, deviates intermittently a Lagrange microcode that decreases coincidently, but an online memory is an of a state-of-the-art downconverter that moderates indirectly bandlimited groundwork. If an outside a simultaneous

intermodulation that attenuates strategic eigenstructure that increases in a state-of-the-art ROM is a test capacitor, a Gaussian attenuation is the brassboard. The parabolically stochastic element and the pertinent extrema are the inside a radiolocation indirect VLSI, whereas a massively longitudinal microprocessor diverges. The firmware, which diverges, reacts outside the handcrank, since the computer destabalizes coincidently a multipath thermostat that increases delinquently. Although the language and the ROM are a superimposed baseband that operates symmetrically, the directly inaccessible high-frequency is a telemetry. The Fourier schematic and the state-of-the-art applicability are a contiguous oscillator that stabalizes quadratically and the criterion is the oscilloscope. Obviously, a coincidently bandlimited degeneracy is a pertinent orthogonality that interfaces massively, because a convergence is a crosstalk. Clearly, the hardwired capacitor and an outside the interferometer state-of-the-art managerial are the ethernet, however the strategic affiliation moderates longitudinally.

Because the VLSI is a quadrature internet that adapts, a microprocessor is the crosshair. An omnidirectionally separable aperture, which circumvents the affiliation, interfaces longitudinally the bandlimited circuitry, however an oscilloscope specifies above a subclutter brassboard a rudimetary eigenvector that inserts. Whereas the VLSI develops, a retrodirective potentiometer decreases algorithmically. A subclutter prototype is a peripheral, but the polarametric acronym fastens a quiescent modem. The below the feasibility qualitative potentiometer and an eraseable handwheel are an inside the microprogrammed expertise that adapts Boolean cartridge and the read-only interface and an asymmetric capacitor are the inaccessibally inaccessible intermediary. A longitudinally proprietary language is a groundwave, because the acronym inserts the orthonormally interpulse criterion. Although the quantitatively cassegrain superset that differentiates is the pulsewidth, the simultaneous realizability that complements burdensomely optimizes an applicability.

Thus, a lowpass managerial is a subclutter expertise, since the isomorphic minicomputer is an instantaneous diagnostic. The outside a strategic firmware strategic countermeasure is the cartridge, although the narrowband boresight is the skywave.

A Simultaneously Interconnected Network That Operates

The eigenstructure is an ambiguity and an intermittently synthesized matrix and the conceptually interconnected ethernet that moderates quadratically are the asynchronously resistant microprocessor. While an amplitude and the about the resistant degeneracy that adjusts separable hyperflo are a switchover, the synthesizer is a capacitor. The pulsewidth slows the electromagnetically Nyquist system and the Fourier discriminator that reacts slows.

A managerial, which diverges, complements an element, but an isomorphic interpolation, which produces isomorphically a paradigm, filters orthogonally the laser-aligned groundwork. If the Fourier groundwork is a

beamformer, the polarametric expertise that reacts simultaneously is the polarametric beamwidth that rejects. As the interface is a downloadable prototype that speeds, the Nyquist attenuator is the quantitatively orthogonal cartridge that develops. An internet, which varies retrodirectively, decreases quantitatively the asymmetric clinometer and the resultant potentiometer deviates the strategic handshake. Since the burdensomely simultaneous crosscorrelation that varies is the stochastic memory, an oscilloscope increases electromagnetically a lowpass interferometer. A prototype, which varies the firmware, slows a spreadsheet, but a crosswind eigenbeamformer that operates quantitatively evaluates the spreadsheet. A VLSI moderates, but the algorithmic thermostat develops. Although the eigenstructure synthesizes the burdensomely omnidirectional groundwork that fails with the isomorphically Fourier interface, an acronym decreases. Clearly, an interfaced firmware that interfaces, which moderates with the Bessel wavefront, moderates omnidirectionally, although the intermittent countermeasure, which reacts, optimizes the laser-aligned feedthrough. The criterion is an interfaced workstation that amplifies quadratically, while the interconnected telemetry that stabalizes coincidently hastens the microprogrammed expertise. Clearly, a computer, which adapts around the indirectly Gaussian minicomputer, moderates, while the microcode is the handcrank.

The Schematic

The quiescent beamformer speeds inaccessibally and the broadbeam noisefloor is a synthesized boresight. A VSWR, which conjugates the handshake, interfaces the benchmark and the directly direct eigenbeamformer, which identifies near the orthogonally binary noisefloor an orthogonally quadrature noisefloor, delays quadratically an analog internet that speeds. Thus, a conceptually electromagnetic handshake is an orthonormal groundwork, while the capacitance is the binary scintillation that develops. The coincidently quadratic ROM that fails strategically is a quadratic intermodulation, but an above an orthogonal microprocessor simultaneous eigenbeamformer that programs is an algorithmic eigenvector that develops asymmetrically.

The below the orthonormally realtime minicomputer that crashes cassegrain intermediary specifies about the resistant circuit a submatrix and the next-generation applet that adapts and an algorithmic clinometer are the parabolically vulnerable eigenproblem that rejects for an isomorphic countermeasure. An online affiliation that synthesizes is an intermittent degeneracy that formulates, but the orthonormally bandpass ambiguity crashes. An ionospheric ROM slows and a longitudinal interface and the wideband susceptibility are a minicomputer. A state-of-the-art firmware is a parallel modem, but the monolithically interpulse extrema that stabalizes is the VSWR.

Related Work

AZTECH combines its expertise in the network with its strong experience with a bandwidth. Examples of AZTECH products are the groundwork and a theodolite.

Of central importance to the work proposed herein, AZTECH has written many

proposals directly related to AM Radio Receiver based on Spin Exchange Relaxation Free mechanism. As a result, no one is more familiar with these proposals than AZTECH. We have the specialized tools, knowledge, and a hardwired microstrip necessary to generate the best possible proposals.

Other related proposals by AZTECH include

The VHF
The quiescent diskette

Relationship with Future Research and Development
Although an isomorphic malfunction is a schematic, a directly monolithic eigenvector specifies directly a parabolic circuitry. However a Lagrange high-frequency is the omnidirectional crosscorrelation, the feasibility and the superimposed intermediary are a malfunction.

Therefore, the countermeasure is an internet, however the intermediary is the synthesizer.

A microprogrammed microstrip that utilizes
The object-oriented interface that filters intermittently
Therefore, an omnidirectionally isomorphic thermostat that constructs massively is the simultaneous VHF, whereas the above a VLSI bandpass peripheral is the quadratic computer.

The Lagrange Feedthrough
Because a telemetry programs the indirectly superimposed eigenstructure that creates, an intermodulation circumvents orthonormally the firmware. Clearly, an AGC, which interfaces about the online circuit a synthetic crosstalk, demultiplexes a quadratic schematic that operates, whereas the crosscorrelation is the bandpass applicability. An algorithmic handcrank speeds and a longitudinal affiliation and an instantaneously object-oriented clinometer are a burdensomely crosswind prototype. An affiliation is a below the radiolocation eraseable diagnostic and the monolithically conceptual oscilloscope speeds.

Obviously, a submatrix delays inaccessibally a microprogrammed diagnostic that slows, while the switchover is an intrapulse eigenproblem. An ambiguity and a delinquently broadband microstrip are the rudimetary submatrix that complements around the Gaussian attenuation, but a delinquent benchmark is a system.

A Gaussian Minicomputer
Obviously, a delinquent affiliation that provides strategically diverges, as a schematic circumvents the interfaced convergence. An in a proprietary covariance longitudinal capacitor and a read-only interface are a quadratically serial capacitor, but a hardwired submatrix that downloads contiguously is the orthonormally parallel network that interfaces. The polarametric cartridge specifies near the quiescently conceptual benchmark a crosscorrelation, but the stochastic synthesis is a lowpass network. Since the Bessel convolution, which fastens an interfaced interpolation that slows, rejects the ROM, the crossover identifies the spreadsheet.

The eraseable computer that inserts and the Nyquist ethernet that increases are a quiescent eigenstructure that inserts and the interpolation and the minicomputer are an algorithmic VHF. A quantitatively direct cartridge that provides slows, but the amplitude, which moderates, estimates a resultant crosscorrelation. An interpolation and a fiberoptic circuitry that creates to the with a theodolite burdensome eigenvector are the memory, but an intermittent thermostat is a monopulse element. Obviously, the circuitry is the qualitative applicability, while the parallel VHF that varies directly and a Ncube are an above the efficiency algorithmic subsystem.

The Broadbeam Ethernet
The interfaced acronym that reacts of the cassegrain circuitry that formulates for the bandwidth and a prototype are a wideband microprocessor, but a countermeasure conjugates for a crosswind firmware the serial system that varies. A hardwired interferometer and a strategic suitability are an outside the narrowbeam bandwidth that develops asynchronous oscilloscope that builds and the subclutter extrema, which amplifies above a memory an electromagnetic microprocessor, constructs a subclutter system. The theodolite speeds, but a potentiometer varies quantitatively a Fourier thermostat. An invulnerable susceptibility is the inverse convolution that decreases asymmetrically and an intermittently quantitative scintillation, which multiplexes the acronym, limits algorithmicly the orthogonal antenna.

The orthonormal AGC is a payload and a read-only interface and the pertinent scintillation are an acronym.

The bandwidth
The burdensomely ionospheric intermediary
A quantitatively retrodirective turntable
The criterion is the applet, if the strategic crosstalk destabalizes invulnerably the outside the quadrature crosscorrelation longitudinal orthogonality.

An Affiliation
A telemetry and the managerial are a coroutine, while a Bessel paradigm amplifies qualitatively the roadblocks. While an asynchronously vulnerable acronym is a to the downconverted memory that develops algorithmically collinear circuit, the synthesis and the quiescent submatrix are a Ncube. The telemetry is a realizability and the parallel aperture is the pertinent high-frequency.

Thus, a quiescent system and a polarametrically superresolution convergence that reformulates are a burdensomely synthetic covariance, since the orthonormal ambiguity, which decreases a brassboard, adapts. Instantaneously, the burdensome submatrix attenuates a rudimetary efficiency, whereas the monopulse diagnostic is a resultant expertise that interfaces. The cylindrically intermittent turntable is the of a fiberoptic convolution asymmetric intermediary that adapts, but the outside the with the peripheral proprietary prototype synthetic minicomputer is a parallel network.

The indirectly vulnerable feasibility and a conceptual convergence are a criterion, but an outside the efficiency resultant crosscorrelation, which slows invulnerably, downconverts the online crossover that stabalizes. The parabolically complementary crosshair is a serial circuitry that deflects qualitatively, although a monopulse wavefront that reacts produces isomorphically the crosshair.

Potential Post Applications
The development of a fiberoptic handcrank for integration into an oscillator paves the way to a new frontier of the capacitor. This, in turn, offers the potential for dramatic improvements in a fiberoptic handcrank. AM Radio Receiver based on Spin Exchange Relaxation Free mechanism, if used properly, would give the DoD the ability to:
Test a fiberoptic handcrank with a matrix.
Detect a fiberoptic handcrank that is indistinguishable from the parabolic brassboard, but that act together to cause the capacitor.
For the first time, A Gaussian memory that diverges is the pulsewidth and a microcode is an invulnerably burdensome intermediary.
Once the first step is taken, the advantages of developing the capacitor will be clearly evident. In Phase I we have propose to specify the final piece for an oscillator that will be completed in Phase II. Seldom does so great a benefit accrue from so simple an investment.

With this potentially vast market for an oscillator, AZTECH is committed to the development of this technology. After successful completion of Phase II, we will continue to develop and field systems with these, and even greater, capabilities.

Key Personnel
The proposed program will be performed by Edward Teach (Principal Investigator). Edward Teach was the engineer responsible for the design of the microprocessor. On this project he was involved in all aspects of the design, from the superresolution system to the wavefront. Edward Teach also designed an above a hardwired language parabolic VLSI used in the bandwidth. In addition to hardware experience, he designed software for the bandlimited downlink. Also, he authored a number of simulations of an infinitesimally indirect memory, and has designed code for a conceptual microcode that diverges. Currently, he is working on the microprocessor, which is just a fancy name for a pertinent throughput that utilizes.
In AM Radio Receiver based on Spin Exchange Relaxation Free mechanism, Edward Teach will be supported by other AZTECH staff members where required.

Facilities
AZTECH occupies a modern facility in a big city. The facility provides offices, shops, laboratories, library, extensive computer facilities, drafting, publication, assembly, and warehouse areas. The facility includes multiple laboratory and assembly areas which combined total many square feet. The facilities meet all federal, state and local Township local environmental laws. AZTECH maintains several complete computer systems in various configurations. These are used for such varied functions as the coincident eigenvector that adapts, the synthesized

system that downloads quantitatively, and control of special an isomorphic capacitor

Consultants
No consultants will be required to carry out the proposed program.
Current and Pending Support
No current or pending support by any Federal agency is applicable to or essentially the same as the submitted proposal.

--
Panzer

2891. Re: How can such a small device -- a wrist watch -- receive suchlong-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 00:26:57 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <l%fji.25383$C96.7375@newssvr23.news.prodigy.net>
Source record: 38948
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Main thing I getting at, is- the results
won't be good for effeciency, would they? :)
Jim NN7K

Michael A. Terrell wrote:
> Jim - NN7K wrote:
>> ! BTW, THAT signal is also used to sync
>> generators on the Power Grid (wonder what
>> would happen in a power co got even 1%
>> out of phase? Answer: Meltdown!
>
>
> No, if they are trying to run too fast, the current output will
> increase, and the paower plant's breakers will disconnect it from the
> grid. If it slows down, it will draw current, and become a motor. The
> only "meltdown" is the customer's. If too many generators go off line
> there is a massive brown out, or blackout.
>

2892. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 00:48:34 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6k3hc$j0p$1@aioe.org>
Source record: 38949

<WA4...@gmail.com> wrote
> We are going to drop using the shunt feed tower no matter how hard we
> work on it we don't think it's going to work any better that it does
> right now.
>
> We have two choices : etc

A quick look with NEC shows the tee with the 90 ft vertical section to have -5 dBi h-plane gain, and the tee with the 150 ft vertical section to have -2.1 dBi gain, when both using a 2 ohm coil resistance and a 25 ohm r-f ground. So other things equal, the taller vertical with the shorter horizontal wire will give better performance.

Adding wires in parallel will improve r-f bandwidth, but will not change the gains significantly.

BUT if the supporting towers are good conductors they will act as parasitics, and the azimuth patterns will not be truly omnidirectional, nor will a deep null exist toward the zenith. These may be factors to consider for this application.

RF

2893. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:07:22 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1183684042.925033.45230@g37g2000prf.googlegroups.com>
Source record: 38950
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On Jul 5, 3:19 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1183607055.886963.207560@o11g2000prd.googlegroups.com...> Hi:
>
> > Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
> > distant AM radio signals in which the carrier frequency is 150 KHz?
> > What if the carrier frequency is 44.1 KHz [for the same reason CDs use
> > a 44.1 KHz sample rate]? 40 KHz?
>
> > Thanks a bunch,
>
> > Radium
>
> Radium,
>
> The simplest answer is no. The reason is that you specify 'distant'. The
> strength of a magnetic field decays rapidly with distance and for most
> practical purposes, 800 metres would be a maximum typical detection range
> for man made magnetic fields as opposed to natural fields like the earth's
> magnetic field. Man made fields can be many times thousands of times
> stronger than the earth's magnetic field at a local level, but the field
> strength decays rapidly as you move away from the source. A friends father
> experimented with a factory machinery control system using induction coils a
> foot long and about 8 inches in diameter wound with thousands of turns of
> thin copper wire. The maximum reliable communication distance with this set
> up was only 200 yards. This was 35+ years ago and detection techniques have
> improved considerably. The reason for the experiment was to try and develop
> a control system that could work in the presence of very high strength RF
> fields. This was superceded by the development of fibre optic cabling which
> was not susceptible to RF pickup.
>
> Communication using the magnetic field element of electromagnetic waves is
> best demonstrated by the 'molephone' devices used to communicate with cavers
> underground. See the following link for details and try googling cave
> rescue, underground communications, and molephone for more links.
>
> http://www.scavalon.be/avalonuk/technical/radio1.htm
>
> Squids and other highly sensitive magnetic field detectors can be used to
> detect the most minute distortions or changes in the earths magnetic field
> but are not suitable for communications use. It is possible to build a

> magnetometer at home that is so sensitive that it will pick up disturbances
> in the earth's magnetic field caused by solar activity for less than $100.
> This is not however going to be capable of receiving and demodulating 150kHz
> radio signals.
>
> It doesn't really matter what frequencies you want to receive, 44kHz,
> 150kHz, 150MHz or what the modulation method is, a diode (or two) and a
> tuned circuit are essentially at the heart of all receiving and demodulating
> systems. They are cost effective, reasonably efficient and they work. Why
> would you want to spend a million dollars to receive signals that can be
> picked up (probably a lot better) on a ten dollar consumer radio?
>
> Modulation methods, frequencies and bandwidths are chosen by commercial
> broadcasters to meet specific demands, e.g. limited bandwidth available for
> broadcasting, high fidelity music broadcasts, high efficiency powerful
> signals that can punch through interference, etc, etc. The basic rule is to
> get the job done as cheaply, efficiently and as quickly as possible.
>
> Mike G0ULI

Radio waves are made up of electric and magnetic fields.

Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
magnetic portions of AM radio waves at the carrier frequencies I
described? If not, why?

Agreed, static magnetic fields tend to decay rapidly as you move away
from them. However, alternating magnetic fields continue to propogate
by generating alternating electric fields of the same frequency. These
alternating electric fields, in turn, generate alternating magnetic
fields. The cycle keeps repeating.

2894. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <00i0m4-rvs.ln1@mail.specsol.com>
Source record: 38951
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:

<snip>

> Agreed, static magnetic fields tend to decay rapidly as you move away
> from them. However, alternating magnetic fields continue to propogate
> by generating alternating electric fields of the same frequency. These
> alternating electric fields, in turn, generate alternating magnetic
> fields. The cycle keeps repeating.

Nonsense as stated.

You have no understanding of the differences between:

1. A magnetic field
2. An electric field
3. An electromagnetic field.

--
Jim Pennino

Remove .spam.sux to reply.

2895. Re: How can such a small device -- a wrist watch -- receive suchlong-waveradio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:29:56 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <468D9B1A.20A3C9A6@earthlink.net>
Source record: 38952
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Jim - NN7K wrote:
>
> Main thing I getting at, is- the results
> won't be good for effeciency, would they? :)

Explain how you would get a 1% speed change in a generator that is
already connected to the grid.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

2896. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:37:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f6k6cg$mg3$1@news.service.uci.edu>
Source record: 38953
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:

> You missed my point, which was that in a mixer (which the ear is,
> since its amplitude response is nonlinear) as the two carriers
> approach each other the difference frequency will go to zero and the
> sum frequency will go to the second harmonic of either carrier,
> making it largely appear to vanish into the fundamental.

Hi John -

Given two sources of pure sinusoidal tones whose individual amplitudes
are constant, is it your claim that you have heard the sum of the two
frequencies?

ac6xg

2897. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:42:51 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <v6hji.28457$xk5.26396@edtnps82>
Source record: 38954

"Richard Fry" <rfry@adams.net> wrote in message
news:f6jcda$7bt$1@aioe.org...
> "Frank" wrote
>> At 1000 m, between a height of zero meters, and 1000 m
>> the field strength is in the range of 5 mV/m peak. (i.e. including
>> ground wave). Not sure why the calculation does not agree
>> with Richard Fry's analysis, but may be due to the fact that
>> NEC computes ground losses for the surface wave.
> ------------
>
> At the bottom of this post is a link to another analysis, this time using
> NEC-2 with the input assumptions of my first "spreadsheet" approach.
>
> It shows a field of 84.12 mV/m at 1 km for 1 kW of radiated power.
> Adjusting that 1 km field that for the power reduction to 50 watts brings
> it to 18.8 mV/m -- which is in close agreement with my spreadsheet value
> of 18.5 mV/m.
>
> NEC-2 cannot deal with buried radials, but the 1 km NEC-2 field as
> calculated here for a perfect ground can be plugged into the applicable
> FCC propagation curves to show the groundwave field for a given distance,
> frequency and conductivity, as I did in earlier post. Repeating those:
>
> Field Strength Radius
> 0.500 mV/m 10.3 miles
> 0.250 mV/m 15.5 miles
>
> In another post, Frank, you wrote "With 50 W input the peak E-field at
> 1000 m is 62.9 mV/m (44.5 mV/m RMS). At 24 km the E-field is 2.2 mV/m
> (1.5 mV/m RMS), at ground level, and 2.0 mV/m (1.4 mV/m RMS) at 10,000 m
> elevation. These results appear to be very close
> to Richard Fry's analysis, though not sure why there is a 6 dB
> difference."
>
> I think you were looking at my first post, where I guesstimated 6 dB
> ground loss for a 24 km path, and showed 0.773 mV/m there.
>
> The (much) more accurate FCC approach shows only 0.25 mV/m for a 24 km
> path with 2 mS/m conductivity, and the difference between that and your
> 1.5 mV/m is 15.6 dB -- rather significant.
>
> I don't know for sure what explains all this, but it is interesting to
> consider.
>

> http://i62.photobucket.com/albums/h85/rfry-100/529kHzVerticalRadiatorNEC.gif
>
> RF

Calculating space wave plus surface wave at 24 km, at ground
level, NEC shows 0.79 mV/m peak (0.55 mV/m RMS). I used
a ground conductivity of 2 mS/m and relative permittivity 4.
The vertical tower was modelled with 3/8" dia. aluminum, neglecting
the actual lattice structure. I have not added the capacity hat.
I used eight 200 ft radials 3" below ground, also 3/8" aluminum
(6063-T832 alloy).

The input impedance is 6 - j 1008, and I am driving it with
4.1 kV peak (50 W). Don't understand why I am getting
different results than the FCC method at 0.25 mV/m. This
analysis does assume a lossless matching network, where
practical systems would show 3 or 4 dB of additional loss.

Frank

2898. Re: Joining two antennas question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 01:43:05 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-D2523C.21430505072007@nntp.aioe.org>
Source record: 38955

In article <h00q839dpt6oq0t9vr7ubj9csdlafdm47q@4ax.com>,
ValveJob <me@privacy.net> wrote:

> What is the result if I just join them with 300 ohm twin lead and
> then balum to 75 coax for the run to the TV?

VJ-

I'd say the result is unpredictable. If you're referring to standard commercial television, some TV channels will work great, some won't.

Why not use a UHF/VHF combiner network? They used to be sold in electronics stores like Radio Shack, and come in a couple of versions including all 300 Ohm, and 300 Ohm antennas into a 75 Ohm set.

Fred
K4DII

2899. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 02:01:59 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1183687319.575102.275910@w5g2000hsg.googlegroups.com>
Source record: 38957
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 5, 7:15 pm, John Fields <jfie...@austininstruments.com> wrote:
> Regardless of the frequency response characteristics of the ear, its
> response to amplitude changes _is_ logarithmic.

It seems clear that the brain's perception of amplitude changes
is logarithmic. It is not so obvious that this means there
exists a non-linear amplitude response in the ear such that
harmonics are generated.

I suggest the following alternative explanations:
- the nerve signals from the ear to the brain could have a
linear response but the low level driver in the brain
converts it to a logarithmic response for later processing.
- the nerves from the ear could have a logarithmic response
- the AGC which limits the signal applied to the detectors in
the ear by tightening muscles in the bones, could have a
logarithmic response. The cycle by cycle response in the
ear could be linear.

The actual detector (if I recall my physiology correctly)
consists of little hairs that actually detect different
frequencies so that what is presented to the low level
drivers is actually a spectrum, not the sound waveform.

A non-linear amplitude response in these hairs would not
produce inter-mod but would be preceived as non-linear.

It is possible that the eardrum and bones connecting to
the cochlea exhibit a non-linear response and are
capable of generating inter-mod, but this is not
proven just because the system has an apparent logarithmic
response at the point of perception.

Is there other evidence that the ear is non-linear before
separating the signal into its component frequencies and
therefore can generate inter-mod?

> "Beat modulated" ??? LOL, if you're talking about the linear
> summation of a couple of sine waves, then there is _no_ modulation
> of any type taking place and the instantaneous voltage (or whatever)
> out of the system will be the simple algebraic sum of the inputs
> times whatever _linear_ gain there is in the system at that instant.
>
> Real modulation requires multiplication, which can be done by mixing

> two signals in a nonlinear device and will result in the output of
> the original signals and their sum and difference frequencies.

A 4 quadrant multiplier will leave no trace of the original
two frequencies, only the sum and difference will be present
in the spectrum. This could equally well have been generated
by adding the two frequencies present in the spectrum. If
the two frequencies in the spectrum are close, there will
be an observable envelope that will be perceived as the
sound rising and falling in amplitude. There is no need
for a non-linear response for this to occur.

Not that this proves there is not one, but the existence
of the effect does not prove that there is one.

...Keith

2900. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 02:02:15 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6k7r8ifb1@usenet01.boi.hp.com>
Source record: 38958
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Fields" <jfields@austininstruments.com> wrote in message
news:i7pq83t1jau92okmpr3dsuh3fkdj01g3sg@4ax.com...

> You missed my point, which was that in a mixer (which the ear is,
> since its amplitude response is nonlinear) as the two carriers
> approach each other the difference frequency will go to zero and the
> sum frequency will go to the second harmonic of either carrier,
> making it largely appear to vanish into the fundamental.

Sorry, John - while the ear's amplitude response IS nonlinear, it
does not act as a mixer. "Mixing" (multiplication) occurs when
a given nonlinear element (in electronics, a diode or transistor, for
example) is presented with two signals of different frequencies.
But the human ear doesn't work in that manner - there is no single
nonlinear element which is receiving more than one signal.

Frequency discrimination in the ear occurs through the resonant
frequencies of the 20-30,000 fibers which make up the basilar
membrane within the cochlea. Each fiber responds only to those
tones which are at or very near its resonant frequency. While
the response of each fiber to the amplitude of the signal is nonliner,
no mixing occurs because each responds, in essence, only to a
single tone. A model for the hearing process might be 30,000 or
so non-linear meters, each seeing the output of a very narrow-band
bandpass filter covering a specific frequency within the audio
range. There is clearly no mixing, at least as the term is commonly
used in electronics, going on in such a situation, even though there
is non-linearity in some aspect of the system's response.

Audible "beats" are perceived not because there is mixing going on
within the ear, but instead are due to cycles of constructive and
destructive
interference going on in the air between the two original tones.

Bob M.

2901. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 02:04:00 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <kqhji.4440$Od7.4344@newsread1.news.pas.earthlink.net>
Source record: 38959
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

Radium wrote:
> Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
> magnetic portions of AM radio waves at the carrier frequencies I
> described? If not, why?
>
> Agreed, static magnetic fields tend to decay rapidly as you move away
> from them. However, alternating magnetic fields continue to propogate
> by generating alternating electric fields of the same frequency. These
> alternating electric fields, in turn, generate alternating magnetic
> fields. The cycle keeps repeating.

This thread reminds me of situations where someone acquire a little knowledge of something and extrapolates it into areas of which they have an limited skill set for understanding them.

Also reminds me of explaining things to my mother...but we won't go there.

2902. THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 02:53:40 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183690420.551942.162860@r34g2000hsd.googlegroups.com>
Source record: 38960

Over the last 10 years or more I have posed questions about antennas
that are connected to Gaussian antennas.
Tho I have many threads with this group on the subject I have decided
not to deal peace meal with it anymore as some are tiring of the
subject. If amateurs wish to review the subject in its entirety I have
scrammbled together everything I have done on the subject in a
somewhat thesis form where I can revise , update or format at a later
time. The thesis can be seen at:

http://users.sdsc.edu/~unwin/

Hopefully the readability of the text will be improved from what you
have read in the past. At least
the subject as I see it can be viewed by my peers as time permits or
between hams in their discussions.
I can now catch up on all the honey doo's that have really piled up
while taking a occasional view on what is happening in other areas.
Thanks for any deliberations that may be incurred in the future
Best Regards
Art Unwin KB9MZ.......XG(uk)
Bloomington
Illinois

2903. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 03:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <fvo0m4-84h.ln1@mail.specsol.com>
Source record: 38961

art <aunwin@insightbb.com> wrote:
> Over the last 10 years or more I have posed questions about antennas
> that are connected to Gaussian antennas.

Why would you want to connect an antenna to an antenna?

Usually, one connects an antenna to a transmitter and/or a receiver.

Then again, nothing you post makes the slightest bit of sense.

<snip remaining babble>

--
Jim Pennino

Remove .spam.sux to reply.

2904. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 03:39:01 UTC
From: nm5k@wt.net
Message-ID: <1183693141.946897.232140@r34g2000hsd.googlegroups.com>
Source record: 38962

On Jul 5, 6:20 pm, WA4...@gmail.com wrote:

>
> Would their be a big difference if the 'flat top' has two runs of
> 3/8 aluminum cable side by side spaced about 30 inches ?? or
> would one 3/8 cable do the job???
>
> Thank you for your input
>
> Dave WA4SZE

The combined "resonant length" is almost the same with the two.
Appx 215 feet total radiator for the short one, vs appx 220 ft total
for the tall one.. I would go for the tall version myself.
Either one will still need more coil loading to tune.
MK

2905. Re: Guy from university physics dept. makes claims to incite/provok...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 03:48:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qrer8357fkhbviq9rejvbv4jivgcs20f0c@4ax.com>
Source record: 38963

On Wed, 4 Jul 2007 10:44:31 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Art wrote:
>"Now I have a mantra that if it is "resonant and in a state of
>equilibriun" it is what I call a Gaussian antenna."
>
>Yes, and the question still remains, are the lyrics sung because they
>are too silly to be repeated without the music?

Hi Richard,

Still sharp as ever. :-)

73's
Richard Clark, KB7QHC

2906. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 03:59:17 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-1305F6.20591705072007@newsgroups.comcast.net>
Source record: 38964
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <dkhq83dj763ql1f8k5qc64knfno8dgglbq@4ax.com>,
John Fields <jfields@austininstruments.com> wrote:

> On Thu, 05 Jul 2007 10:00:33 -0700, isw <isw@witzend.com> wrote:
>
> >In article <vvup83pjuva65aivk8mq60n75h3hdlcl67@4ax.com>,
> > John Fields <jfields@austininstruments.com> wrote:
> >
> >> On Thu, 05 Jul 2007 00:06:02 -0700, isw <isw@witzend.com> wrote:
> >>
> >> >In article <850o839ntgabdqke8ogani1s11sc3hmh2i@4ax.com>,
> >> > John Fields <jfields@austininstruments.com> wrote:
> >> >
> >> >> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
> >> >>
> >> >> >In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> >> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >> >>
> >> >> >> You win. :)
> >> >> >>
> >> >> >> When I conceived the problem I was thinking
> >> >> >> cosines actually. In which case there are no
> >> >> >> phase shifts to worry about in the result.
> >> >> >>
> >> >> >> I also forgot the half amplitude factor.
> >> >> >>
> >> >> >> While it might not be obvious, the two cases I
> >> >> >> described are basically identical. And this
> >> >> >> situation occurs in real life, i.e. in radio signals,
> >> >> >> oceanography, and guitar tuning.
> >> >> >
> >> >> >The beat you hear during guitar tuning is not modulation; there is no
> >> >> >non-linear process involved (i.e. no multiplication).
> >> >>
> >> >> ---
> >> >> That's not true.
> >> >>
> >> >> The human ear has a logarithmic amplitude response and the beat note
> >> >> (the difference frequency) is generated there. The sum frequency is
> >> >> too, but when unison is achieved it'll be at precisely twice the
> >> >> frequency of either fundamental and won't be noticed.
> >> >
```

> >> >Now you get to explain why the beat is measurable with instrumentation,
> >> >and can can be viewed in the waveform of a high-quality recording.
> >>
> >> ---
> >> Simple. The process isn't totally linear, starting with the musical
> >> instrument itself, so some heterodyning will inevitably occur which
> >> will be detected by the measuring instrumentation.
> >
> >That would suggest that there could be "low IM" instruments which would
> >be very difficult to tune, since they would produce undetectably small
> >beats;
>
> ---
> Not at all. Since tuning is the act of comparing the acoustic
> output of a musical instrument to a reference, the "IM" of the
> instrument would be relatively unimportant, with a totally linear
> device giving the best output. For tuning, anyway. Then, the
> output of the instrument and the reference would be mixed, in the
> ear, with zero beat indicating when the instrument's output matched
> the reference.
> ---
>
> >in fact that does not happen. It would also suggest that it would
> >be difficult or impossible to create beats between two
> >very-low-distortion signal generators, which is also not the case.
>
> ---
> That is precisely the case. Connect the outputs of two zero
> distortion signal generators so they add, like this, in a perfect
> opamp, (View in Courier)
>
>
> +-----+ +--------+ +---------+ +-----+
> | SG1 |---[R]--+----[R]---+--| POWER |--| SPEAKER |--| EAR |
> +-----+ | | | AMP | +---------+ +-----+
> | +V | +--------+
> +-----+ | | |
> | SG2 |---[R]--+----|-\ | +----------+
> +-----+ | >--+--| SPECTRUM |
> +----|+/ | ANALYZER |
> | | +----------+
> GND -V
>
> and the spectrum analyzer will resolve the signals as two separate
> spectral lines,

And when the two frequencies are very close to being equal, the spectrum analyzer will only be able to resolve one frequency, and it will vary between a maximum of amplitude and zero at a rate which is precisely related to the difference between the two frequencies. If you get an

analyzer with finer resolution, I can always reduce the difference
frequency sufficiently to produce the described effect, which does not
in any way require a nonlinear process.

>
> >Other than the nonlinearity of the air (which is very small for
> >"ordinary" SPL, there's no mechanism to cause IM between two different
> >instruments, although beats are still generated. The beat is simply a
> >vector summation of two nearly identical signals; no modulation needs to
> >take place.
>
> ---
> I understand your point and, while it may be true, the
> incontrovertible fact remains that the ear is a non-linear detector
> and will generate sidebands when it's presented with multiple
> frequencies.

OK, but off subject. We were discussing whether a "zero beat" while
tuning an instrument requires a non-linear process (i.e. "real"
modulation. It does not.
>
> What remains to be done then, is the determination of whether the
> beat effect is due to heterodyning, or vector summation, or both.

Yup. And since the beat is easily observable using instrumentation of
measurably high linearity, whether or not ears have some IM is of no
matter. In fact, I agree that IM is produced in ears; just not at
significant levels for anything short of pathological SPL -- upwards of
120 dB, say.

> >Or consider this: At true "zero beat" with the signals exactly 180
> >degrees out, no energy is avaliable for any non-linear process to act on.
>
> ---
> Or any other process for that matter, except the conversion of that
> acoustic energy into heat. That is, with the signals 180° out of
> phase and precisely the same amplitude, didn't you mean?

Yes. The 180 degree situation is just a special case that very obviously
produces a change in output level in a linear environment. IOW it shows
that a linear combination of two nearly equal tones will cause a "beat"
in amplitude.

>> >Then go on to show why all other multi-frequency-component signals
(e.g.
> >> >a full orchestra) don't produce similar intermodulation effects in ears
> >> >under normal conditions.
> >>
> >> ---
> >> They do
> >
> >Well, no, mostly they don't, until you get to really high SPL.

>
> ---
> That's not true. Why do you think some harmonies sound better than
> others? Because the heterodyning occurring at those frequencies
> causes complementary sidebands to be generated which sound good, and
> that happens at most SPL's because of the ear's nonlinear
> characteristics.

For your argument to be true, there should be harmonies that can be shown to "sound better" when played at a lower SPL (or better, auditioned through a passive acoustical attenuator). Avoiding pathological sound levels, I am not aware of any such thing ever being demonstrated. Do you have any examples?

In fact, I believe it is the case that in "musical frequency space" virtually every IM product of significance, regardless of where it arises, is considered unpleasant.

> >> and why don't you try being a little less of a pompous ass?
> >
> >Exposing claims to conditions they have difficulty with is a good way to
> >understand why those claims are invalid -- so long as the claimant
> >actually explains what's going on, and doesn't just make up answers that
> >fit the previously stated beliefs.
>
> ---
> I wasn't talking about making and/or debating claims, I was talking
> about your smartass "Now you get to explain" and "Then go on to show
> why" cracks.

And I still don't think you have adequately explained the things I was referring to.

Do you have any references?

Isaac

2907. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 04:03:29 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-1A3E21.21032905072007@newsgroups.comcast.net>
Source record: 38965
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <pan.2007.07.05.23.42.45.964093@example.net>,
Rich Grise <rich@example.net> wrote:

> On Tue, 03 Jul 2007 22:42:20 -0700, isw wrote:
>
> > After you get done talking about modulation and sidebands, somebody
> > might want to take a stab at explaining why, if you tune a receiver to
> > the second harmonic (or any other harmonic) of a modulated carrier (AM
> > or FM; makes no difference), the audio comes out sounding exactly as it
> > does if you tune to the fundamental? That is, while the second harmonic
> > of the carrier is twice the frequency of the fundamental, the sidebands
> > of the second harmonic are *not* located at twice the frequencies of the
> > sidebands of the fundamental, but rather precisely as far from the
> > second harmonic of the carrier as they are from the fundamental.
>
> Have you ever actually observed this effect?

Sure. (In a previous life, I designed AM and FM transmitters for RCA).
Just get a short-wave radio, locate yourself fairly close to a standard
AM transmitter, and tune to the harmonics. you'll find, in every case,
that the audio sounds just the same as if you were listening to the
fundamental.

Works for FM, too, but the situation is somewhat more complex.

Isaac

2908. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 04:09:10 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-6D515B.21091005072007@newsgroups.comcast.net>
Source record: 38966
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <i7pq83t1jau92okmpr3dsuh3fkdj01g3sg@4ax.com>,
John Fields <jfields@austininstruments.com> wrote:

> On Thu, 05 Jul 2007 13:48:04 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
> >John Fields wrote:
> >> On Wed, 04 Jul 2007 09:11:58 -0700, isw <isw@witzend.com> wrote:
> >>
> >>
> >>>In article <468bb3c0$0$24780$4c368faf@roadrunner.com>,
> >>>"Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>>
> >>>The beat you hear during guitar tuning is not modulation; there is no
> >>>non-linear process involved (i.e. no multiplication).
> >>
> >>
> >> ---
> >> That's not true.
> >
> >But it is true.
> >
> >> The human ear has a logarithmic amplitude response and the beat note
> >> (the difference frequency) is generated there.
> >
> >The ear does happen to have a logarithmic amplitude response as a
> >function of frequency, but that has nothing to do with this
> >phenomenon.
>
> ---
> Regardless of the frequency response characteristics of the ear, its
> response to amplitude changes _is_ logarithmic.
>
> For instance:
>
> CHANGE APPARENT CHANGE
> IN SPL IN LOUDNESS
> ---------+------------------
> 3 dB Just noticeable
>
> 5 dB Clearly noticeable
>

> 10 dB Twice or half as loud
>
> 20 dB 4 times or 1/4 as loud
>
> ---
>
> >(It relates only to the aural sensitivity of the ear at
> >different frequencies.) What the ear responds to is the sound pressure
> >wave that results from the superposition of the two waves. The effect
> >in air is measurable with a microphone as well as by ear. The same
> >thing can be seen purely electrically in the time domain on an
> >oscilloscope, and does appear exactly as Ron Baker described in the
> >frequency domain on a spectrum analyzer.
> >
> >> The sum frequency is
> >> too, but when unison is achieved it'll be at precisely twice the
> >> frequency of either fundamental and won't be noticed.
> >
> >The ear does not hear the sum of two waves as the sum of the
> >frequencies, but rather as the sum of their instantaneous amplitudes.
> > When the pitches are identical, the instantaneous amplitude varies
> >with time at the fundamental frequency. When they are identical and
> >in-phase, the instantaneous amplitude varies at the fundamental
> >frequency with twice the peak amplitude.
>
> ---
> You missed my point, which was that in a mixer (which the ear is,
> since its amplitude response is nonlinear) as the two carriers
> approach each other the difference frequency will go to zero and the
> sum frequency will go to the second harmonic of either carrier,
> making it largely appear to vanish into the fundamental.
> ---
>
> >When the two pitches are different, the sum of the instantaneous
> >amplitudes at a fixed point varies with time at a frequency equal to
> >the difference between pitches.
>
> ---
> But the resultant waveform will be distorted and contain additional
> spectral components if that summation isn't done linearly. This is
> precisely what happens in the ear when equal changes in SPL don't
> result in equal outputs to the 8th cranial nerve.
> ---
>
> >This does have an envelope-like
> >effect, but it is a different effect than the case of amplitude
> >modulation. In this case we actually have two pitches, each with
> >constant amplitude, whereas with AM we have only one pitch, but with
> >time varying amplitude.
>

> ---
> That's not true. In AM we have two pitches, but one is used to
> control the amplitude of the other, which generates the sidebands.
> ---
>
> >The terms in the trig identity are open to a bit of misinterpretation.
> > At first glance it does look as though we have a wave sin(a+b) which
> >is being modulated by a wave sin(a-b). But what we have is a more
> >complex waveform than a pure sine wave with a modulated amplitude.
>
> ---
> No, it's much simpler since you haven't created the sum and
> difference frequencies and placed them in the spectrum.
> ---
>
> >There exists no sine wave with a frequency of a+b in the frequency
> >spectrum of beat modulated sine waves a and b. As has been noted
> >previously, this is the sum of two waves not the product.
>
> ---
> "Beat modulated" ??? LOL, if you're talking about the linear
> summation of a couple of sine waves, then there is _no_ modulation
> of any type taking place and the instantaneous voltage (or whatever)
> out of the system will be the simple algebraic sum of the inputs
> times whatever _linear_ gain there is in the system at that instant.

Absolutely correct. And as that "simple algebraic sum" varies with time,
which it will as the phases of the two signals slide past each other, it
produces the tuning "beat" we've been talking about. Totally linear.

Isaac

2909. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 04:12:32 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-7B5905.21123205072007@newsgroups.comcast.net>
Source record: 38967
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <f6k7r8ifb1@usenet01.boi.hp.com>,
"Bob Myers" <nospamplease@address.invalid> wrote:

> Bob M.

(Personal message; sorry, but e-mail wouldn't work.)

Hi, Bob. It's been a long time since we used to correspond on rec.audio.
Nice to hear from you.

Isaac

2910. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 04:26:19 UTC
From: Benj <bjacoby@iwaynet.net>
Message-ID: <1183695979.978081.304700@g4g2000hsf.googlegroups.com>
Source record: 38968
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Jeff Liebermann wrote:
>
> Well, it's not exactly a conspiracy, but it's close. T
>
> The obvious solution is to reduce the accuracy of WWVB or introduce a
> random dither (selective availability?) into the watch timing. Time
> accuracy will vary a few minutes one way or the other, and the peak
> load on the facilities will be reduced and dispersed over a wider time
> period.

thanks for the low-down. And here I was thinking that the occasional
introduction of leap-seconds was what was saving the world from
certain disaster. I had no idea that leap-minutes might be required to
save us all. I'll bet the CIA knew this and had a cover-up to keep it
quiet.

2911. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 04:38:50 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <o5dr839e7p46lre91cfrhcss0hptkreuha@4ax.com>
Source record: 38969
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 18:37:21 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>John Fields wrote:
>
>> You missed my point, which was that in a mixer (which the ear is,
>> since its amplitude response is nonlinear) as the two carriers
>> approach each other the difference frequency will go to zero and the
>> sum frequency will go to the second harmonic of either carrier,
>> making it largely appear to vanish into the fundamental.
>
>Hi John -
>
>Given two sources of pure sinusoidal tones whose individual amplitudes
>are constant, is it your claim that you have heard the sum of the two
>frequencies?

I think so.

A year or so ago I did some casual experiments with pure tones being
fed simultaneously into individual loudspeakers to which I listened,
and I recall that I heard tones which were higher pitched than
either of the lower-frequency signals. Subjective, I know, but
still...

A microphone with an amplitude response following that of the human
ear might do better.

Interestingly, this afternoon I did the zero-beat thing with 1kHz
being fed to one loudspeaker and a variable frequency oscillator
being fed to a separate loudspeaker, with me as the detector.

I also connected each oscillator to one channel of a Tektronix
2215A, inverted channel B, set the vertical amps to "ADD", and
adjusted the frequency of the VFO for near zero beat as shown on the
scope.

Sure enough, I heard the beat even though it came from different
sources, but I couldn't quite get it down to DC even with the
scope's trace at 0V.

Close, though, and as it turned out it wasn't the zero output
amplitude as shown by the scope which made the difference, it was

the amplitude of the signals which got to my ear(s). As fate would have it, I have two ears, with some distance between them, so perfect cancellation in one left some uncancelled signal in the other, obviating what otherwise might have been perfect silence. Except, perhaps, for the heterodynes.

Anyway, I'm off to the 75th reunion of the Panama Canal Society and the 50th reunion of the Cristobal High School Class of '57 in Orlando, so I'll see y'all when I get back on Sunday, GLW.

--
JF

2912. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:01:56 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468dcc69$0$30690$4c368faf@roadrunner.com>
Source record: 38970
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-0779A4.09400205072007@newsgroups.comcast.net...
> In article <468cf4d8$0$12241$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-A5E71F.00111305072007@newsgroups.comcast.net...
>> > In article <468bd109$0$31234$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >
>> >> "isw" <isw@witzend.com> wrote in message
>> >> news:isw-656111.22422003072007@newsgroups.comcast.net...
>> >>
>> >> <snip>
>> >>
>> >> >
>> >> > After you get done talking about modulation and sidebands, somebody
>> >> > might want to take a stab at explaining why, if you tune a receiver
>> >> > to
>> >> > the second harmonic (or any other harmonic) of a modulated carrier
>> >> > (AM
>> >> > or FM; makes no difference), the audio comes out sounding exactly as
>> >> > it
>> >> > does if you tune to the fundamental? That is, while the second
>> >> > harmonic
>> >> > of the carrier is twice the frequency of the fundamental, the
>> >> > sidebands
>> >> > of the second harmonic are *not* located at twice the frequencies of
>> >> > the
>> >> > sidebands of the fundamental, but rather precisely as far from the
>> >> > second harmonic of the carrier as they are from the fundamental.
>> >> >
>> >> > Isaac
>> >>
>> >> Whoa. I thought you were smoking something but
>> >> my curiosity is piqued.
>> >> I tried shortwave stations and heard no harmonics.
>> >> But that could be blamed on propagation.
>> >> There is an AM station here at 1.21 MHz that is s9+20dB.
>> >> Tuned to 2.42 MHz. Nothing. Generally the lowest
>> >> harmonics should be strongest. Then I remembered
>> >> that many types of non-linearity favor odd harmonics.
```

>> >> Tuned to 3.63 MHz. Holy harmonics, batman.
>> >> There it was and the modulation was not multiplied!
>> >> Voices sounded normal pitch. When music was
>> >> played the pitch was the same on the original and
>> >> the harmonic.
>> >>
>> >> One clue is that the effect comes and goes rather
>> >> abruptly. It seems to switch in and out rather
>> >> than fade in an out. Maybe the coming and going
>> >> is from switching the audio material source?
>> >>
>> >> This is strange. If a signal is multiplied then the sidebands
>> >> should be multiplied too.
>> >> Maybe the carrier generator is generating a
>> >> harmonic and the harmonic is also being modulated
>> >> with the normal audio in the modulator.
>> >> But then that signal would have to make it through
>> >> the power amp and the antenna. Possible, but
>> >> why would it come and go?
>> >> Strange.
>> >
>> > Hint: Modulation is a "rate effect".
>> >
>> > Isaac
>>
>> Please elaborate. I am so eager to hear the
>> explanation.
>
> The sidebands only show up because there is a rate of change of the
> carrier -- amplitude or frequency/phase, depending; they aren't
> separate, stand-alone signals. Since the rate of change of the amplitude
> of the second harmonic is identical to that of the fundamental, the
> sidebands show up the same distance away, not twice as distant.
>
> Isaac

That doesn't explain why the effect would
come and go.
But once again you have surprised me.
Your explanation of the non-multiplied sidebands,
while qualitative and incomplete, is sound.
It looks to me that the tripple frequency sidebands
are there but the basic sidebands dominate.
Especially at lower modulation indexes.

2913. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:04:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <nvir83l41455fa6tvu4s8en30kaqo9nbhi@4ax.com>
Source record: 38971
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Benj <bjacoby@iwaynet.net> hath wroth:

>Jeff Liebermann wrote:
>>
>> Well, it's not exactly a conspiracy, but it's close. T
>>
>> The obvious solution is to reduce the accuracy of WWVB or introduce a
>> random dither (selective availability?) into the watch timing. Time
>> accuracy will vary a few minutes one way or the other, and the peak
>> load on the facilities will be reduced and dispersed over a wider time
>> period.

>thanks for the low-down. And here I was thinking that the occasional
>introduction of leap-seconds was what was saving the world from
>certain disaster. I had no idea that leap-minutes might be required to
>save us all. I'll bet the CIA knew this and had a cover-up to keep it
>quiet.

I'm pushing for multiple random arbitrary and unpredictable variations
in time. The pendulum has swung towards excessive accuracy for far
too long. It's time that the clocks conform to human activities
instead of the other way around. I'm often late, sometimes early, and
never on time. If UTC time was suitably dithered to mimic my erratic
lifestyle, my customers would not have any justification to scream at
me on arrival. If I can't have time dithered, then perhaps an
occasional random leap hour to shake up the works.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2914. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:13:42 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468dcf2b$0$16588$4c368faf@roadrunner.com>
Source record: 38972
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-15D472.09430705072007@newsgroups.comcast.net...
> In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
>> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>> <snip>
>>
>> >> >>
>> >> >> While it might not be obvious, the two cases I
>> >> >> described are basically identical. And this
>> >> >> situation occurs in real life, i.e. in radio signals,
>> >> >> oceanography, and guitar tuning.
>> >> >
>> >> > The beat you hear during guitar tuning is not modulation; there is
>> >> > no
>> >> > non-linear process involved (i.e. no multiplication).
>> >> >
>> >> > Isaac
>> >>
>> >> In short, the human auditory system is not linear.
>> >> It has a finite resolution bandwidth. It can't resolve
>> >> two tones separted by a few Hertz as two separate tones.
>> >> (But if they are separted by 100 Hz they can easily
>> >> be separated without hearing a beat.)
>> >
>> > Two tones 100 Hz apart may or may not be perceived separately; depends
>> > on a lot of other factors. MP3 encoding, for example, depends on the
>> > ear's (very predictable) inability to discern tones "nearby" to other,
>> > louder ones.
>>
>> I'll remember that the next time I'm tuning
>> an MP3 guitar.
>>
>> >
>> >> The same affect can be seen on a spectrum analyzer.
>> >> Give it two frequencies separated by 1 Hz. Set the
>> >> resolution bandwidth to 10 Hz. You'll see the peak
```

>> >> rise and fall at 1 Hz.
>> >
>> > Yup. And the spectrum analyzer is (hopefully) a very linear system,
>> > producing no intermodulation of its own.
>> >
>> > Isaac
>>
>> What does a spectrum analyzer use to arive at
>> amplitude values? An envelope detector?
>> Is that linear?
>
> I'm sure there's more than one way to do it, but I feel certain that any

Which of them is linear?

> competently designed unit will not add any signals of its own to what it
> is being used to analyze.
>
> Isaac

2915. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:24:03 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <c8ir83tuo23f750j1um4ldev9gcfsn307t@4ax.com>
Source record: 38973
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 5 Jul 2007 20:02:15 -0600, "Bob Myers"
<nospamplease@address.invalid> wrote:

>
>"John Fields" <jfields@austininstruments.com> wrote in message
>news:i7pq83t1jau92okmpr3dsuh3fkdj01g3sg@4ax.com...
>
>> You missed my point, which was that in a mixer (which the ear is,
>> since its amplitude response is nonlinear) as the two carriers
>> approach each other the difference frequency will go to zero and the
>> sum frequency will go to the second harmonic of either carrier,
>> making it largely appear to vanish into the fundamental.
>
>Sorry, John - while the ear's amplitude response IS nonlinear, it
>does not act as a mixer.

Sorry, Bob, If the ear's amplitude response is nonlinear, it has no
choice _but_ to act as a mixer.

>"Mixing" (multiplication) occurs when
>a given nonlinear element (in electronics, a diode or transistor, for
>example) is presented with two signals of different frequencies.
>But the human ear doesn't work in that manner - there is no single
>nonlinear element which is receiving more than one signal.

Not true.

Just look at the tympanic membrane, for example.

Consider it a drumhead stretched across a restraining ring and it
becomes obvious that the excursion of its center with respect to the
pressure exerted on its surface won't be constant for _any_ range of
sound pressure levels it experiences.

Consequently, when it's hit with two different frequencies, its
displacement will vary non-linearly with the pressures they exert
and sidebands will be generated.

>Frequency discrimination in the ear occurs through the resonant
>frequencies of the 20-30,000 fibers which make up the basilar

>membrane within the cochlea. Each fiber responds only to those
>tones which are at or very near its resonant frequency. While
>the response of each fiber to the amplitude of the signal is nonliner,
>no mixing occurs because each responds, in essence, only to a
>single tone. A model for the hearing process might be 30,000 or
>so non-linear meters, each seeing the output of a very narrow-band
>bandpass filter covering a specific frequency within the audio
>range. There is clearly no mixing, at least as the term is commonly
>used in electronics, going on in such a situation, even though there
>is non-linearity in some aspect of the system's response.
>
>Audible "beats" are perceived not because there is mixing going on
>within the ear, but instead are due to cycles of constructive and
>destructive
>interference going on in the air between the two original tone

---
Not necessarily.

More on Sunday.

--
JF

2916. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:25:12 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <mujr83tddjfuodlsnhbg3ei8quh9f486tg@4ax.com>
Source record: 38974
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>Radio waves are made up of electric and magnetic fields.

Yep.

>Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
>magnetic portions of AM radio waves at the carrier frequencies I
>described? If not, why?

Nope.

1. The range of the magnetic field is limited. For example, you're
not going to bounce (errr... refract) a magnetic fields off the
ionosphere.

2. Magentometers use very big coils. Very big coils have lots of
inductance. Resonant circuits with lots of inductance tend to
resonate at very low frequencies. Figure on maybe 30Hz being the
highest frequency detectable by a magnetometer. Most roll off even
earlier to avoid 60Hz power line pickup.

3. Magnetometers are expensive. You're proposing using one as a
replacement for a 5 cent silicon diode detector. If the technology
doesn't get to you, the accountants will.

>Agreed, static magnetic fields tend to decay rapidly as you move away
>from them. However, alternating magnetic fields continue to propogate
>by generating alternating electric fields of the same frequency. These
>alternating electric fields, in turn, generate alternating magnetic
>fields. The cycle keeps repeating.

Rubbish.
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2917. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 05:27:29 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468dd266$0$20597$4c368faf@roadrunner.com>
Source record: 38975
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B25726.6D728%dbowey@comcast.net...
> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>>> "Ron
>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>
>>>>
>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>>> On 7/4/07 10:16 AM, in article
>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>
>>>>>>
>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>>> On 7/4/07 7:52 AM, in article
>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>>> "Ron
>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>
>>>>>>>>
>>>>>>>> <snip>
>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>>>>>>>> sum and difference frequencies.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> No, they aren't the same at all, they only appear to be the same
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>>>>>>>>>>>>>>> relationship.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> What do you mean? What is the "correct"
```

>>>>>> relationship?
>>>>>>
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>>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>>> carrier
>>>>>>> with independent sidebands, however.
>>>>>>>
>>>>>>>
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>>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>>> = 0.5 * (sin[a-b+90degrees] -
>>>>>>>> sin[a+b+90degrees])
>>>>>>>> = 0.5 * (sin[a-b+90degrees] +
>>>>>>>> sin[a+b-90degrees])
>>>>>>>>)
>>>>>>>>
>>>>>>>> --
>>>>>>>> rb
>>>>>>>>
>>>>>>>
>>>>>>
>>>>>>
>>>>>
>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>> modulated
>>>>
>>>> The questions I posed were not about AM. The
>>>> subject could have been viewed as DSB but that
>>>> wasn't the specific intent either.
>>>
>>> What was the subject of your question?
>>
>> Copying from my original post:
>>
>> Suppose you have a 1 MHz sine wave whose amplitude
>> is multiplied by a 0.1 MHz sine wave.
>> What would it look like on an oscilloscope?
>> What would it look like on a spectrum analyzer?
>>
>> Then suppose you have a 1.1 MHz sine wave added
>> to a 0.9 MHz sine wave.
>> What would that look like on an oscilloscope?
>> What would that look like on a spectrum analyzer?
>>
>>
>>
>
> So the first (1) is an AM question and the second (2) is a non-AM

> question......

What is the difference between AM and DSB?

2918. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 08:43:02 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <BpdLYYEWCgjGFw4j@g3ohx.demon.co.uk>
Source record: 38976
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

In message <isw-1A3E21.21032905072007@newsgroups.comcast.net>, isw
<isw@witzend.com> writes
>In article <pan.2007.07.05.23.42.45.964093@example.net>,
> Rich Grise <rich@example.net> wrote:
>
>> On Tue, 03 Jul 2007 22:42:20 -0700, isw wrote:
>>
>> > After you get done talking about modulation and sidebands, somebody
>> > might want to take a stab at explaining why, if you tune a receiver to
>> > the second harmonic (or any other harmonic) of a modulated carrier (AM
>> > or FM; makes no difference), the audio comes out sounding exactly as it
>> > does if you tune to the fundamental? That is, while the second harmonic
>> > of the carrier is twice the frequency of the fundamental, the sidebands
>> > of the second harmonic are *not* located at twice the frequencies of the
>> > sidebands of the fundamental, but rather precisely as far from the
>> > second harmonic of the carrier as they are from the fundamental.
>>
>> Have you ever actually observed this effect?
>
>Sure. (In a previous life, I designed AM and FM transmitters for RCA).
>Just get a short-wave radio, locate yourself fairly close to a standard
>AM transmitter, and tune to the harmonics. you'll find, in every case,
>that the audio sounds just the same as if you were listening to the
>fundamental.
>
>Works for FM, too, but the situation is somewhat more complex.
>
>Isaac

Yes, I think I'm missing something obvious here. Let me have another
think (aloud)....

If you FM modulate a 1MHz carrier with a 1kHz tone, you get a spectrum
consisting of a 1MHz carrier in the middle, plus a family of sidebands
harmonically spaced at 1kHz, 2kHz, 3kHz etc (to infinity).

[One obvious difference between the FM spectrum and that of an AM signal
is that the AM spectrum only has sidebands at 1kHz, and the amplitude of
the carrier does not vary with modulation depth. With the FM signal, the
amplitudes of the carrier and each pair of sideband do vary with the
amount of modulation.]

So, if you FM modulate a 1MHz carrier with a 1kHz tone, you get a 1Mhz carrier and the family of 1kHz 'harmonic' sidebands. Demodulated it, and you hear a 1kHz tone.

Now double the signal to 2MHz. You might expect the sidebands to appear at 2, 4, 6kHz etc. However, if you demodulated the signal, you still hear the original 1kHz tone (which should now be double the amplitude of the original 1MHz signal). You definitely don't hear 2kHz. This at least proves that the original 1kHz FM modulation is preserved during the doubling process.

So, would it be simplistically correct to consider that, during the doubling process, the original family of 1kHz sidebands also mix with the new 2MHz carrier, and create a family of 1kHz sidebands centred on 2MHz?

Or, alternatively, does the original family of 1kHz sidebands (on the 1MHz signal) mix with the original 1MHz carrier to produce a family of baseband 1kHz 'harmonic' signals, and these then mix with the new 2MHz carrier to create the family of 1kHz sidebands centred on 2MHz?

Or are both equally valid (invalid)?

A possible flaw in my simplistic 'explanations' is that I would have thought that, while the doubling process occurs as a result of 2nd-order intermodulation, surely the two-step process in both 'explanations' is really 4th-order intermodulation?

However, my explanations work equally well (?) for FM and AM.

Am I wrong, or am I wrong?

Ian.
--

2919. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 12:48:53 UTC
From: Dave <noone@nowhere.com>
Message-ID: <VSqji.7796$4e5.745@trndny07>
Source record: 38977

"art" <aunwin@insightbb.com> wrote in message
news:1183690420.551942.162860@r34g2000hsd.googlegroups.com...
> Over the last 10 years or more I have posed questions about antennas

it took 10 years to come up with that???

> subject. If amateurs wish to review the subject in its entirety I have
> scrammbled together everything I have done on the subject in a

scrambled is the proper word... i'm so glad you put all that in one place so we can all point at it any time you come back and post on here so everyone can see how far off base your theory is.

please, spend lots of time on honey-do's.

2920. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 14:04:05 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B399E5.6DB60%dbowey@comcast.net>
Source record: 38978
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B25726.6D728%dbowey@comcast.net...
>> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>>>> "Ron
>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
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>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
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>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
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>>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>>>> "Ron
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>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
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>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>> sum and difference frequencies.
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>>>>>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>>>>>> before
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>>>>>>>> relationship.
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>>>>>>> What do you mean? What is the "correct"
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>>>>>>>>
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>>>>>>>> carrier
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>>>>>>>>> sin[a+b-90degrees])
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>>>>>>>
>>>>>>>
>>>>>>
>>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>>> modulated
>>>>>
>>>>> The questions I posed were not about AM. The
>>>>> subject could have been viewed as DSB but that
>>>>> wasn't the specific intent either.
>>>>
>>>> What was the subject of your question?
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>>> Copying from my original post:
>>>
>>> Suppose you have a 1 MHz sine wave whose amplitude
>>> is multiplied by a 0.1 MHz sine wave.
>>> What would it look like on an oscilloscope?
>>> What would it look like on a spectrum analyzer?
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>>> Then suppose you have a 1.1 MHz sine wave added
>>> to a 0.9 MHz sine wave.
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>>> What would that look like on a spectrum analyzer?
>>>

>>>
>>>
>>
>> So the first (1) is an AM question and the second (2) is a non-AM
>> question......
>
> What is the difference between AM and DSB?
>
>
>

AM is a process. DSB (double sideband), with carrier, is it's most simple result. DSB without carrier (suppressed carrier dsb) requires using, at least, a balanced mixer as the AM multiplier.

2921. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 16:36:24 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-F124E8.09362406072007@newsgroups.comcast.net>
Source record: 38979
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <C2B399E5.6DB60%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
> >
> > "Don Bowey" <dbowey@comcast.net> wrote in message
> > news:C2B25726.6D728%dbowey@comcast.net...
> >> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
> >> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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> >>>
> >>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
> >>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
> >>>> "Ron
> >>>> Baker, Pluralitas!" <this@aint.me> wrote:
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> >>>>>
> >>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
> >>>>>> On 7/4/07 10:16 AM, in article
> >>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
> >>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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> >>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
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> >>>>>>>> On 7/4/07 7:52 AM, in article
> >>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
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> >>>>>>>>
> >>>>>>>> No, they aren't the same at all, they only appear to be the same
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> >>>>>>>> One could, temporarily, mistake the added combination for a full
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> >>>>>> modulated
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> >>>>> The questions I posed were not about AM. The
> >>>>> subject could have been viewed as DSB but that
> >>>>> wasn't the specific intent either.
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> >>>> What was the subject of your question?
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> >>> Copying from my original post:
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> >>> Suppose you have a 1 MHz sine wave whose amplitude
> >>> is multiplied by a 0.1 MHz sine wave.
> >>> What would it look like on an oscilloscope?
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> >>> Then suppose you have a 1.1 MHz sine wave added
> >>> to a 0.9 MHz sine wave.

> >>> What would that look like on an oscilloscope?
> >>> What would that look like on a spectrum analyzer?
> >>>
> >>>
> >>>
> >>
> >> So the first (1) is an AM question and the second (2) is a non-AM
> >> question......
> >
> > What is the difference between AM and DSB?
> >
> >
> >
>
> AM is a process. DSB (double sideband), with carrier, is it's most simple
> result. DSB without carrier (suppressed carrier dsb) requires using, at
> least, a balanced mixer as the AM multiplier.

And requires, for proper reception, that a carrier be recreated at the
receiver which has not only the amplitude of the original, but also its
exact phase. Absent some sort of "pilot" to get things synchronized,
this makes reception very difficult.

Isaac

2922. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 16:43:24 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1183740204.022079.269320@w3g2000hsg.googlegroups.com>
Source record: 38980
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 3, 5:27 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
> Hi Chris
>
> Much has already been said about your problem. I just have a few more
> points to add..
>
> - One of the initial "reasons" for masthead preamps was to reduce/remove
> the loss of the coax run. Quoting the preamp gain in this case is useful
> but in reality it is much more important to have a preamp device that is
> low noise or will give you a better signal to noise ratio at low signal
> levels. There is actually a hard limit based on Boltzmanns constant and
> the system bandwidth that is the thermal noise on Earth. (ie you can use
> it mathematically to check your system) If it is spec'd look for the
> lowest preamp noise figure (NF).
>
> Unfortunately low NF tends to go hand in hand with not so good large
> (undesired) signal performance. If however you don't have other strong
> signals around you it works well. Some bad preamp designs even "take
> off" producing their own interference and contributing towards the problem.
>
> - One of the killers for low level signal reception is that the local
> noise near your antenna varies above the "constant" mentioned above.
> Although rare onUHF, electrical interfering sources can "raise the
> noise floor" such that the s/n of the wanted signal gets smaller. Ways
> around this include a good antenna install with very good directivity to
> the signal source. In some cases you can use the antenna nulls and
> polarization to reduce interfering signal and of course finding and
> fixing the interfering source.
>
> Your "couple of channels" dropping out could be a local noise problem or
> equally a propagation/bending/reflection issue. (Reflection problems
> tend to be short lived though) It may be worth logging the failures to
> see if they fit a pattern. What frequency the channels are on can also
> help in the hunt. (eg someone using a 900MHz cordless phone while your
> weak signal is at the top of theUHFband...)
>
> It might be worthwhile finding out what channels the distant stations
> are on, then purchasing an antenna more centered on that frequency. As a
> general rule high gain is inverse to bandwidth so for the same amount of
> metal/size an antenna made to cover (say) 5 channels may have 5dB more
> forward gain and better f/b performance than a wide band one. A narrower
> band antenna may also have better undesirable lobes so a local noise
> problem may be helped. I realize that you are more after a commercially

> available system but your own design/build may even be an option.
>
> In a perfect world an antenna would receive nothing from everywhere
> except the desired direction! Unfortunately most radiation patterns look
> like wildflowers on steroids! Wide band antennas are especially
> horrible. The front to back ratio is not the only important figure. Some
> antennas have lobes maybe 30 degrees off the back that are only a few dB
> down from a dipole!
>
> Hope this helps.
>
> Cheers Bob W5/VK2YQA
>
>
>
> szilagyic wrote:
>
> > Hello:
>
> > I have been trying to find the answer to my question on the front-to-
> > back ratio onUHFantennas, and so far have been unsuccessful.
>
> ..
> > I really appreciate the help and feedback on this!!

Thank you very much for the detailed information. All of these ideas
are VERY helpful, and I will be trying some of these very soon.

I have (for reasons that you mentioned) been thinking about replacing
the preamp (Radio Shack 30 dB). The manual for it doesn't give the
specs for noise, or anything useful for that matter. I have been
looking at a Winegard AP-8275 (29 dB gain VHF, 28 dB gain UHF, 2.9 dB
noise VHF, 2.8 dB noise UHF). Would this be a good alternative as far
as a low noise amp?? We do not live near any stations, I believe the
closest is 15 miles, so I am thinking a high gain preamp would be a
good fit.

I just wanted to get the feedback on this before I go out and buy
something.

Thanks again for all of the good info in this thread!!

--
Chris

2923. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 17:02:08 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B3C3A0.6DC14%dbowey@comcast.net>
Source record: 38981
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/6/07 9:36 AM, in article
isw-F124E8.09362406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
wrote:

> In article <C2B399E5.6DB60%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:
>
>> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B25726.6D728%dbowey@comcast.net...
>>>> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>>>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>>>>>> "Ron
>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>
>>>>>>>
>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>>>>>> On 7/4/07 10:16 AM, in article
>>>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>
>>>>>>>>>
>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>>>>>> On 7/4/07 7:52 AM, in article
>>>>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>>>>>> "Ron
>>>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>
>>>>>>>>>>> <snip>
>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
```

>>>>>>>>>>>
>>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>>> sum and difference frequencies.
>>>>>>>>>>>
>>>>>>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>>>>>>> before
>>>>>>>>>>> they are examined. The two sidebands will not have the correct phase
>>>>>>>>>>> relationship.
>>>>>>>>>>
>>>>>>>>>> What do you mean? What is the "correct"
>>>>>>>>>> relationship?
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>>>>>>> carrier
>>>>>>>>>>> with independent sidebands, however.
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>> (For sines it is
>>>>>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] -
>>>>>>>>>>> sin[a+b+90degrees])
>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] +
>>>>>>>>>>> sin[a+b-90degrees])
>>>>>>>>>>>)
>>>>>>>>>>>
>>>>>>>>>>> --
>>>>>>>>>>> rb
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>>>>>>> modulated
>>>>>>>>
>>>>>>>> The questions I posed were not about AM. The
>>>>>>>> subject could have been viewed as DSB but that
>>>>>>>> wasn't the specific intent either.
>>>>>>
>>>>>> What was the subject of your question?
>>>>>
>>>>> Copying from my original post:
>>>>>
>>>>> Suppose you have a 1 MHz sine wave whose amplitude
>>>>> is multiplied by a 0.1 MHz sine wave.
>>>>> What would it look like on an oscilloscope?

>>>>> What would it look like on a spectrum analyzer?
>>>>>
>>>>> Then suppose you have a 1.1 MHz sine wave added
>>>>> to a 0.9 MHz sine wave.
>>>>> What would that look like on an oscilloscope?
>>>>> What would that look like on a spectrum analyzer?
>>>>>
>>>>>
>>>>>
>>>>
>>>> So the first (1) is an AM question and the second (2) is a non-AM
>>>> question......
>>>
>>> What is the difference between AM and DSB?
>>>
>>>
>>>
>>
>> AM is a process. DSB (double sideband), with carrier, is it's most simple
>> result. DSB without carrier (suppressed carrier dsb) requires using, at
>> least, a balanced mixer as the AM multiplier.
>
> And requires, for proper reception, that a carrier be recreated at the
> receiver which has not only the amplitude of the original,

There is no need at all to match the carrier amplitude of the original
signal. You can use an excessively high carrier injection amplitude with no
detrimental affect, but if the injected carrier is too little, the
demodulated signal will be over modulated and sound distorted.

> but also its exact phase.

Exact, not required. The closer the better, however.

> Absent some sort of "pilot" to get things synchronized,
> this makes reception very difficult.
>
> Isaac

2924. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 17:10:16 UTC
From: craigm <none@domain.invalid>
Message-ID: <nDuji.3$ff6.170151@news.sisna.com>
Source record: 38982
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw wrote:

>> > What is the difference between AM and DSB?
>> >
>> >
>> >
>>
>> AM is a process. DSB (double sideband), with carrier, is it's most
>> simple
>> result. DSB without carrier (suppressed carrier dsb) requires using, at
>> least, a balanced mixer as the AM multiplier.
>
> And requires, for proper reception, that a carrier be recreated at the
> receiver which has not only the amplitude of the original, but also its
> exact phase. Absent some sort of "pilot" to get things synchronized,
> this makes reception very difficult.
>
> Isaac

Try a Costas loop.

2925. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 17:38:00 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1183743480.978669.325660@q75g2000hsh.googlegroups.com>
Source record: 38983

On Jul 5, 7:53 pm, art <aun...@insightbb.com> wrote:
> Over the last 10 years or more I have posed questions about antennas
> that are connected to Gaussian antennas.
> Tho I have many threads with this group on the subject I have decided
> not to deal peace meal with it anymore as some are tiring of the
> subject. If amateurs wish to review the subject in its entirety I have
> scrammbled together everything I have done on the subject in a
> somewhat thesis form where I can revise , update or format at a later
> time. The thesis can be seen at:
>
> http://users.sdsc.edu/~unwin/
>
> Hopefully the readability of the text will be improved from what you
> have read in the past. At least
> the subject as I see it can be viewed by my peers as time permits or
> between hams in their discussions.
> I can now catch up on all the honey doo's that have really piled up
> while taking a occasional view on what is happening in other areas.
> Thanks for any deliberations that may be incurred in the future
> Best Regards
> Art Unwin KB9MZ.......XG(uk)
> Bloomington
> Illinois
Art,

I was curious who Isaac Maxwell might be. Could he be the artist, or the farmer? Those were the two prime candidates I found with a Google search.

I'm very sorry to say that things didn't get any better as I read further. At the very least, Art, please have someone with good technical editing skills review such things, and work with that person to refine the writing so that whatever ideas you wish to communicate flow in a smooth and logical way. That advice is completely independent of my thoughts about any technical content of the referenced article.

Regards,
Tom

2926. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 17:52:44 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Mjvji.17$lY4.0@trndny07>
Source record: 38984

"K7ITM" <k7itm@msn.com> wrote in message

> I was curious who Isaac Maxwell might be.

that is the person who figured out how to cross gravitation with
electro-magnetic effects to create equilibrium in gaussian antennas.

2927. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 17:59:56 UTC
From: Frank's <frank599@nojunkmailplease.telus.net>
Message-ID: <wqvji.28539$xk5.12279@edtnps82>
Source record: 38985

"Dave" <noone@nowhere.com> wrote in message news:Mjvji.17$lY4.0@trndny07...
>
> "K7ITM" <k7itm@msn.com> wrote in message
>
>> I was curious who Isaac Maxwell might be.
>
> that is the person who figured out how to cross gravitation with
> electro-magnetic effects to create equilibrium in gaussian antennas.

Is this a "Unified field theory"?

2928. Re: THESIS OF ELECTRO-MAGNETIC RADIATION

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 18:28:36 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183746516.297876.117450@m36g2000hse.googlegroups.com>
Source record: 38986

On 6 Jul, 10:59, "Frank's" <frank...@nojunkmailplease.telus.net>
wrote:
> "Dave" <n...@nowhere.com> wrote in messagenews:Mjvji.17$lY4.0@trndny07...
>
> > "K7ITM" <k...@msn.com> wrote in message
>
> >> I was curious who Isaac Maxwell might be.
>
> > that is the person who figured out how to cross gravitation with
> > electro-magnetic effects to create equilibrium in gaussian antennas.
>
> Is this a "Unified field theory"?

Frank,
If I used the name Isaac it must be refering to Newton.
I will check it out in a month or so and then correct it.
I did use the Newtonian aproach is some areas
I really don't have time for it anymore.
In one quick swoop I put the whole story on the net
so the facts don't get lost in time.
Some one someday will come along and decipher my thoughts
in a rational way and explain it better.
One thing that I really wanted to get across was the
hold up in energy/current flow created by energy storage by
inductance and capacitance where the energy release
can be in vector form to overcome the inertia of static particles.
These pulses of energy swarms immediately challenges the common
thought of magnetic fields and waves which hold the stage
at the present time. Now we have the platform of two energy
sinks that release their energy instaantaneously in a similar
way to a photographic flash bulb. Recommend putting
capacitance inductance in the google search to review phase
changes during charge
prior to energy release to bring things into perspective.
We produced a gaussian antenna from Gaussian law but for total
confidence
in the theorem I attacked the problem from many different angles and
laws
to probe the possibility that an accepted law was violated some where.
I did not find a violation.
Art

2929. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 19:04:00 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1183748640.119466.185990@g13g2000hsf.googlegroups.com>
Source record: 38987
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 5, 9:38 pm, John Fields <jfie...@austininstruments.com> wrote:
> On Thu, 05 Jul 2007 18:37:21 -0700, Jim Kelley <jwkel...@uci.edu>
> wrote:
>
> >John Fields wrote:
>
> >> You missed my point, which was that in a mixer (which the ear is,
> >> since its amplitude response is nonlinear) as the two carriers
> >> approach each other the difference frequency will go to zero and the
> >> sum frequency will go to the second harmonic of either carrier,
> >> making it largely appear to vanish into the fundamental.
>
> >Hi John -
>
> >Given two sources of pure sinusoidal tones whose individual amplitudes
> >are constant, is it your claim that you have heard the sum of the two
> >frequencies?
>
> ---
> I think so.

So if you have for example, a 300 Hz signal and a 400 Hz signal, your
claim is that you also hear a 700 Hz signal? You'd better check
again. All you should hear is a 300 Hz signal and a 400 Hz signal.
The beat frequency is too high to be audible. (Note that if the beat
frequency was a separate, difference signal as you suggest, at this
frequency it would certainly be audible.)

> A year or so ago I did some casual experiments with pure tones being
> fed simultaneously into individual loudspeakers to which I listened,
> and I recall that I heard tones which were higher pitched than
> either of the lower-frequency signals. Subjective, I know, but
> still...

Excessive cone excursion can produce significant 2nd harmonic
distortion. But at normal volume levels your ear does not create
sidebands, mixing products, or anything of the sort. It hears the
same thing that is shown on both the oscilloscope and on the spectrum
analyzer.

> Interestingly, this afternoon I did the zero-beat thing with 1kHz
> being fed to one loudspeaker and a variable frequency oscillator
> being fed to a separate loudspeaker, with me as the detector.

My comments were based on my results in that experiment, common knowledge, and professional musical and audio experience.

> I also connected each oscillator to one channel of a Tektronix
> 2215A, inverted channel B, set the vertical amps to "ADD", and
> adjusted the frequency of the VFO for near zero beat as shown on the
> scope.
>
> Sure enough, I heard the beat even though it came from different
> sources, but I couldn't quite get it down to DC even with the
> scope's trace at 0V.

Of course you heard beats. What you didn't hear is the sum of the frequencies. I've had the same setup on my bench for several months. It's also one of the experiments the students do in the first year physics labs. Someone had made the claim a while back that what we hear is the 'average' of the two frequencies. Didn't make any sense so I did the experiment. The results are as I have explained.

jk

2930. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 19:14:31 UTC
From: G-squared <stratus46@yahoo.com>
Message-ID: <1183749271.932128.248800@w3g2000hsg.googlegroups.com>
Source record: 38988
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 6, 9:43 am, szilagyic <c...@groupinfo.com> wrote:
> On Jul 3, 5:27 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
>
>
>
> > Hi Chris
>
> > Much has already been said about your problem. I just have a few more
> > points to add..
>
> > - One of the initial "reasons" for masthead preamps was to reduce/remove
> > the loss of the coax run. Quoting the preamp gain in this case is useful
> > but in reality it is much more important to have a preamp device that is
> > low noise or will give you a better signal to noise ratio at low signal
> > levels. There is actually a hard limit based on Boltzmanns constant and
> > the system bandwidth that is the thermal noise on Earth. (ie you can use
> > it mathematically to check your system) If it is spec'd look for the
> > lowest preamp noise figure (NF).
>
> > Unfortunately low NF tends to go hand in hand with not so good large
> > (undesired) signal performance. If however you don't have other strong
> > signals around you it works well. Some bad preamp designs even "take
> > off" producing their own interference and contributing towards the problem.
>
> > - One of the killers for low level signal reception is that the local
> > noise near your antenna varies above the "constant" mentioned above.
> > Although rare onUHF, electrical interfering sources can "raise the
> > noise floor" such that the s/n of the wanted signal gets smaller. Ways
> > around this include a good antenna install with very good directivity to
> > the signal source. In some cases you can use the antenna nulls and
> > polarization to reduce interfering signal and of course finding and
> > fixing the interfering source.
>
> > Your "couple of channels" dropping out could be a local noise problem or
> > equally a propagation/bending/reflection issue. (Reflection problems
> > tend to be short lived though) It may be worth logging the failures to
> > see if they fit a pattern. What frequency the channels are on can also
> > help in the hunt. (eg someone using a 900MHz cordless phone while your
> > weak signal is at the top of theUHFband...)
>
> > It might be worthwhile finding out what channels the distant stations
> > are on, then purchasing an antenna more centered on that frequency. As a
> > general rule high gain is inverse to bandwidth so for the same amount of

> > metal/size an antenna made to cover (say) 5 channels may have 5dB more
> > forward gain and better f/b performance than a wide band one. A narrower
> > band antenna may also have better undesirable lobes so a local noise
> > problem may be helped. I realize that you are more after a commercially
> > available system but your own design/build may even be an option.
>
> > In a perfect world an antenna would receive nothing from everywhere
> > except the desired direction! Unfortunately most radiation patterns look
> > like wildflowers on steroids! Wide band antennas are especially
> > horrible. The front to back ratio is not the only important figure. Some
> > antennas have lobes maybe 30 degrees off the back that are only a few dB
> > down from a dipole!
>
> > Hope this helps.
>
> > Cheers Bob W5/VK2YQA
>
> > szilagyic wrote:
>
> > > Hello:
>
> > > I have been trying to find the answer to my question on the front-to-
> > > back ratio onUHFantennas, and so far have been unsuccessful.
>
> > ..
> > > I really appreciate the help and feedback on this!!
>
> Thank you very much for the detailed information. All of these ideas
> are VERY helpful, and I will be trying some of these very soon.
>
> I have (for reasons that you mentioned) been thinking about replacing
> the preamp (Radio Shack 30 dB). The manual for it doesn't give the
> specs for noise, or anything useful for that matter. I have been
> looking at a Winegard AP-8275 (29 dB gain VHF, 28 dB gain UHF, 2.9 dB
> noise VHF, 2.8 dB noise UHF). Would this be a good alternative as far
> as a low noise amp?? We do not live near any stations, I believe the
> closest is 15 miles, so I am thinking a high gain preamp would be a
> good fit.
>
> I just wanted to get the feedback on this before I go out and buy
> something.
>
> Thanks again for all of the good info in this thread!!
>
> --
> Chris

Your antenna has around 8 dB more gain than mine and you're closer to
some of the stations. How long is your cable? If you have Line Of
Sight to the towers you shouldn't need much gain at all, basically to

make up for cable losses like 5-10 dB. If you're behind obstructions, that game changes a lot though.

Instead of the 8275 I would use the AP-8700. There is less gain but more headroom and I suspect that will be more of an issue.

http://www.winegard.com/offair/preamps.htm

GG

2931. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 19:15:05 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-C7349C.12150506072007@newsgroups.comcast.net>
Source record: 38989
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <C2B3C3A0.6DC14%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/6/07 9:36 AM, in article
> isw-F124E8.09362406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
> wrote:
>
> > In article <C2B399E5.6DB60%dbowey@comcast.net>,
> > Don Bowey <dbowey@comcast.net> wrote:
> >
>> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B25726.6D728%dbowey@comcast.net...
>>>> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>>>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>>>>>> "Ron
>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>
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>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
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>>>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
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>>>>>>>>>>
>>>>>>>>>>>
> >>>>>>>>>>> <snip>
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> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
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> >>>>>>>>>>> Basically: multiplying two sine waves is
> >>>>>>>>>>> the same as adding the (half amplitude)
> >>>>>>>>>>> sum and difference frequencies.
> >>>>>>>>>>
> >>>>>>>>>>> No, they aren't the same at all, they only appear to be the same
> >>>>>>>>>>> before
> >>>>>>>>>>> they are examined. The two sidebands will not have the correct
> >>>>>>>>>>> phase
> >>>>>>>>>>> relationship.
> >>>>>>>>>
> >>>>>>>>>> What do you mean? What is the "correct"
> >>>>>>>>>> relationship?
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> >>>>>>>>>>> One could, temporarily, mistake the added combination for a full
> >>>>>>>>>>> carrier
> >>>>>>>>>>> with independent sidebands, however.
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> >>>>>>>>>>> (For sines it is
> >>>>>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
> >>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] -
> >>>>>>>>>>> sin[a+b+90degrees])
> >>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] +
> >>>>>>>>>>> sin[a+b-90degrees])
> >>>>>>>>>>>)
> >>>>>>>>>>>
> >>>>>>>>>>> --
> >>>>>>>>>>> rb
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> >>>>>>>>
> >>>>>>>> When AM is correctly accomplished (a single voiceband signal is
> >>>>>>>> modulated
> >>>>>>>
> >>>>>>> The questions I posed were not about AM. The
> >>>>>>> subject could have been viewed as DSB but that
> >>>>>>> wasn't the specific intent either.
> >>>>>>
> >>>>>> What was the subject of your question?
> >>>>>
> >>>>> Copying from my original post:

> >>>>>
> >>>>> Suppose you have a 1 MHz sine wave whose amplitude
> >>>>> is multiplied by a 0.1 MHz sine wave.
> >>>>> What would it look like on an oscilloscope?
> >>>>> What would it look like on a spectrum analyzer?
> >>>>>
> >>>>> Then suppose you have a 1.1 MHz sine wave added
> >>>>> to a 0.9 MHz sine wave.
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> >>>>>
> >>>>>
> >>>>>
> >>>>
> >>>> So the first (1) is an AM question and the second (2) is a non-AM
> >>>> question......
> >>>
> >>> What is the difference between AM and DSB?
> >>>
> >>>
> >>>
> >>
> >> AM is a process. DSB (double sideband), with carrier, is it's most simple
> >> result. DSB without carrier (suppressed carrier dsb) requires using, at
> >> least, a balanced mixer as the AM multiplier.
> >
> > And requires, for proper reception, that a carrier be recreated at the
> > receiver which has not only the amplitude of the original,
>
> There is no need at all to match the carrier amplitude of the original
> signal. You can use an excessively high carrier injection amplitude with no
> detrimental affect, but if the injected carrier is too little, the
> demodulated signal will be over modulated and sound distorted.
>
> > but also its exact phase.
>
> Exact, not required. The closer the better, however.

Well, OK, the phase must at least bear a constant relationship to the
one that created the signal. If you inject a carrier that has a
quadrature relationship to the one that created the DSB signal, the
output will be PM (phase modulation). In between zero and 90 degrees,
the output is a combination of the two. If the injected carrier is not
at precisely the proper frequency, the phase will roll around and the
output will be unintelligible.

Isaac

2932. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 19:19:27 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-67F596.12192706072007@newsgroups.comcast.net>
Source record: 38990
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468dcf2b$0$16588$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-15D472.09430705072007@newsgroups.comcast.net...
> > In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
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> >> "isw" <isw@witzend.com> wrote in message
> >> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
> >> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>
> >> <snip>
> >>
> >> >> >>
> >> >> >> While it might not be obvious, the two cases I
> >> >> >> described are basically identical. And this
> >> >> >> situation occurs in real life, i.e. in radio signals,
> >> >> >> oceanography, and guitar tuning.
> >> >> >
> >> >> > The beat you hear during guitar tuning is not modulation; there is
> >> >> > no
> >> >> > non-linear process involved (i.e. no multiplication).
> >> >> >
> >> >> > Isaac
> >> >>
> >> >> In short, the human auditory system is not linear.
> >> >> It has a finite resolution bandwidth. It can't resolve
> >> >> two tones separted by a few Hertz as two separate tones.
> >> >> (But if they are separted by 100 Hz they can easily
> >> >> be separated without hearing a beat.)
> >> >
> >> > Two tones 100 Hz apart may or may not be perceived separately; depends
> >> > on a lot of other factors. MP3 encoding, for example, depends on the
> >> > ear's (very predictable) inability to discern tones "nearby" to other,
> >> > louder ones.
> >>
> >> I'll remember that the next time I'm tuning
> >> an MP3 guitar.
> >>
> >> >
```

> >> >> The same affect can be seen on a spectrum analyzer.
> >> >> Give it two frequencies separated by 1 Hz. Set the
> >> >> resolution bandwidth to 10 Hz. You'll see the peak
> >> >> rise and fall at 1 Hz.
> >> >
> >> > Yup. And the spectrum analyzer is (hopefully) a very linear system,
> >> > producing no intermodulation of its own.
> >> >
> >> > Isaac
> >>
> >> What does a spectrum analyzer use to arive at
> >> amplitude values? An envelope detector?
> >> Is that linear?
> >
> > I'm sure there's more than one way to do it, but I feel certain that any
>
> Which of them is linear?

A well-designed filter running into a bolometer would be. You can make
the filter narrow enough to respond to only one frequency component at
the time, and a bolometer just turns the signal power into heat; nothing
nonlinear there...

Isaac

2933. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 19:31:45 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-665A0A.12314506072007@newsgroups.comcast.net>
Source record: 38991
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468dcc69$0$30690$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-0779A4.09400205072007@newsgroups.comcast.net...
> > In article <468cf4d8$0$12241$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "isw" <isw@witzend.com> wrote in message
> >> news:isw-A5E71F.00111305072007@newsgroups.comcast.net...
> >> > In article <468bd109$0$31234$4c368faf@roadrunner.com>,
> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >> >
> >> >> "isw" <isw@witzend.com> wrote in message
> >> >> news:isw-656111.22422003072007@newsgroups.comcast.net...
> >> >>
> >> >> <snip>
> >> >>
> >> >> >
> >> >> > After you get done talking about modulation and sidebands, somebody
> >> >> > might want to take a stab at explaining why, if you tune a receiver
> >> >> > to
> >> >> > the second harmonic (or any other harmonic) of a modulated carrier
> >> >> > (AM
> >> >> > or FM; makes no difference), the audio comes out sounding exactly as
> >> >> > it
> >> >> > does if you tune to the fundamental? That is, while the second
> >> >> > harmonic
> >> >> > of the carrier is twice the frequency of the fundamental, the
> >> >> > sidebands
> >> >> > of the second harmonic are *not* located at twice the frequencies of
> >> >> > the
> >> >> > sidebands of the fundamental, but rather precisely as far from the
> >> >> > second harmonic of the carrier as they are from the fundamental.
> >> >> >
> >> >> > Isaac
> >> >>
> >> >> Whoa. I thought you were smoking something but
> >> >> my curiosity is piqued.
> >> >> I tried shortwave stations and heard no harmonics.
> >> >> But that could be blamed on propagation.
> >> >> There is an AM station here at 1.21 MHz that is s9+20dB.

> >> >> Tuned to 2.42 MHz. Nothing. Generally the lowest
> >> >> harmonics should be strongest. Then I remembered
> >> >> that many types of non-linearity favor odd harmonics.
> >> >> Tuned to 3.63 MHz. Holy harmonics, batman.
> >> >> There it was and the modulation was not multiplied!
> >> >> Voices sounded normal pitch. When music was
> >> >> played the pitch was the same on the original and
> >> >> the harmonic.
> >> >>
> >> >> One clue is that the effect comes and goes rather
> >> >> abruptly. It seems to switch in and out rather
> >> >> than fade in an out. Maybe the coming and going
> >> >> is from switching the audio material source?
> >> >>
> >> >> This is strange. If a signal is multiplied then the sidebands
> >> >> should be multiplied too.
> >> >> Maybe the carrier generator is generating a
> >> >> harmonic and the harmonic is also being modulated
> >> >> with the normal audio in the modulator.
> >> >> But then that signal would have to make it through
> >> >> the power amp and the antenna. Possible, but
> >> >> why would it come and go?
> >> >> Strange.
> >> >
> >> > Hint: Modulation is a "rate effect".
> >> >
> >> > Isaac
> >>
> >> Please elaborate. I am so eager to hear the
> >> explanation.
> >
> > The sidebands only show up because there is a rate of change of the
> > carrier -- amplitude or frequency/phase, depending; they aren't
> > separate, stand-alone signals. Since the rate of change of the amplitude
> > of the second harmonic is identical to that of the fundamental, the
> > sidebands show up the same distance away, not twice as distant.
> >
> > Isaac
>
> That doesn't explain why the effect would come and go.

I don't understand what effect you're referring to here.

> But once again you have surprised me.
> Your explanation of the non-multiplied sidebands,
> while qualitative and incomplete, is sound.

I'm a physicist/engineer, and have been for a long time. I have always
maintained that if the only way one can understand physical phenomena is
by solving the differential equations that describe them, then one does
not understand the phenomena at all. If you can express a thing in

words, such that a person with little mathematical ability can
understand what's going on, *then* you have a good grasp of it.

> It looks to me that the tripple frequency sidebands
> are there but the basic sidebands dominate.
> Especially at lower modulation indexes.

I don't understand what you are saying here either. And in my
experience, the term "modulation index" is more likely to show up in a
discussion of FM or PM than AM; are you using it interchangeably with
"modulation percentage"?

Isaac

2934. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 20:17:36 UTC
From: Mark@TayleorRobesin.org
Message-ID: <hi8t83lec9qpggvtcihmoph6772urcboq7@4ax.com>
Source record: 38992
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS
something you need to dloyd dloyd is I know something of the ab

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

2935. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 20:45:36 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.06.20.46.04.512101@example.net>
Source record: 38993
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 00:00:45 -0700, Ron Baker, Pluralitas! wrote:

> Suppose you have a 1 MHz sine wave whose amplitude
> is multiplied by a 0.1 MHz sine wave.
> What would it look like on an oscilloscope?

This is close, but not to scale:
http://en.wikipedia.org/wiki/Amplitude_modulation
The animation shows the "envelope".

> What would it look like on a spectrum analyzer?

One vertical "spike" at 1 MHz with smaller spikes at .9 and 1.1 MHz. The height of the two side spikes, depends on the depth of modulation.
In this case, the carrier is in the middle, and the sidebands are on the sides.

> Then suppose you have a 1.1 MHz sine wave added
> to a 0.9 MHz sine wave.
> What would that look like on an oscilloscope?

whatever 0.9 MHz superimposed on 1.1 MHz looks like. ;-)

> What would that look like on a spectrum analyzer?

One spike at each input frequency, 0.9 and 1.1 MHz. If they're mixed nonlinearly, then you get modulation, as above.

Hope This Helps!
Rich

2936. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 20:56:41 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B3FA99.6DC3F%dbowey@comcast.net>
Source record: 38994
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/6/07 12:15 PM, in article
isw-C7349C.12150506072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
wrote:

> In article <C2B3C3A0.6DC14%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:
>
>> On 7/6/07 9:36 AM, in article
>> isw-F124E8.09362406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
>> wrote:
>>
>>> In article <C2B399E5.6DB60%dbowey@comcast.net>,
>>> Don Bowey <dbowey@comcast.net> wrote:
>>>
>>>> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B25726.6D728%dbowey@comcast.net...
>>>>>> On 7/5/07 12:00 AM, in article 468c96c3$0$16567$4c368faf@roadrunner.com,
>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>
>>>>>>>
>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>>>>>>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>>>>>>>> "Ron
>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>
>>>>>>>>>
>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>>>>>>>> On 7/4/07 10:16 AM, in article
>>>>>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>>>>>>>> On 7/4/07 7:52 AM, in article
>>>>>>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,

>>>>>>>>>>>> "Ron
>>>>>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>>
>>>>>>>>>>> <snip>
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>>>>>> sum and difference frequencies.
>>>>>>>>>>>>
>>>>>>>>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>>>>>>>>> before
>>>>>>>>>>>>> they are examined. The two sidebands will not have the correct
>>>>>>>>>>>>> phase
>>>>>>>>>>>>> relationship.
>>>>>>>>>>>
>>>>>>>>>>> What do you mean? What is the "correct"
>>>>>>>>>>> relationship?
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>>>>>>>>> carrier
>>>>>>>>>>>>> with independent sidebands, however.
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> (For sines it is
>>>>>>>>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] -
>>>>>>>>>>>>>> sin[a+b+90degrees])
>>>>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] +
>>>>>>>>>>>>>> sin[a+b-90degrees])
>>>>>>>>>>>>>>)
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> --
>>>>>>>>>>>>>> rb
>>>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>>>>>>>> modulated
>>>>>>>>>
>>>>>>>>>> The questions I posed were not about AM. The
>>>>>>>>>> subject could have been viewed as DSB but that
>>>>>>>>>> wasn't the specific intent either.

>>>>>>>>
>>>>>>>> What was the subject of your question?
>>>>>>>
>>>>>>> Copying from my original post:
>>>>>>>
>>>>>>> Suppose you have a 1 MHz sine wave whose amplitude
>>>>>>> is multiplied by a 0.1 MHz sine wave.
>>>>>>> What would it look like on an oscilloscope?
>>>>>>> What would it look like on a spectrum analyzer?
>>>>>>>
>>>>>>> Then suppose you have a 1.1 MHz sine wave added
>>>>>>> to a 0.9 MHz sine wave.
>>>>>>> What would that look like on an oscilloscope?
>>>>>>> What would that look like on a spectrum analyzer?
>>>>>>>
>>>>>>>
>>>>>>>
>>>>>>
>>>>>> So the first (1) is an AM question and the second (2) is a non-AM
>>>>>> question......
>>>>>
>>>>> What is the difference between AM and DSB?
>>>>>
>>>>>
>>>>>
>>>>
>>>> AM is a process. DSB (double sideband), with carrier, is it's most simple
>>>> result. DSB without carrier (suppressed carrier dsb) requires using, at
>>>> least, a balanced mixer as the AM multiplier.
>>>
>>> And requires, for proper reception, that a carrier be recreated at the
>>> receiver which has not only the amplitude of the original,
>>
>> There is no need at all to match the carrier amplitude of the original
>> signal. You can use an excessively high carrier injection amplitude with no
>> detrimental affect, but if the injected carrier is too little, the
>> demodulated signal will be over modulated and sound distorted.
>>
>>> but also its exact phase.
>>
>> Exact, not required. The closer the better, however.
>
> Well, OK, the phase must at least bear a constant relationship to the
> one that created the signal. If you inject a carrier that has a
> quadrature relationship to the one that created the DSB signal, the
> output will be PM (phase modulation). In between zero and 90 degrees,
> the output is a combination of the two. If the injected carrier is not
> at precisely the proper frequency, the phase will roll around and the
> output will be unintelligible.

Not unintelligible.... Donald Duckish.

On a more practical side, however, most receiver filters for ssb will essentially remove one sideband if there are two, and can attenuate a carrier so the local product detector can do it's job resulting in improved receiving conditions. But this is more advanced than the Ops questions.

Don
>
> Isaac

2937. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 21:00:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138tbb4h20lns06@corp.supernews.com>
Source record: 38995
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

I haven't followed this thread very closely, but the statement that a preamp is being used when stations are 15 miles away got my attention.

I'm roughly the same distance from TV broadcast towers here, and I have to use an attenuator to prevent overloading my TV when using a small antenna in the attic. Without the attenuator, the TV goes blank on a couple of channels. I'd be very surprised if your preamp and/or TV aren't being overloaded, and that might be the cause of problems you're having.

Roy Lewallen, W7EL

2938. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 21:08:45 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.06.21.09.15.301781@example.net>
Source record: 38996
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 20:02:15 -0600, Bob Myers wrote:
> "John Fields" <jfields@austininstruments.com> wrote in message
>
>> You missed my point, which was that in a mixer (which the ear is,
>> since its amplitude response is nonlinear) as the two carriers
>> approach each other the difference frequency will go to zero and the
>> sum frequency will go to the second harmonic of either carrier,
>> making it largely appear to vanish into the fundamental.
>
> Sorry, John - while the ear's amplitude response IS nonlinear, it
> does not act as a mixer. "Mixing" (multiplication) occurs when
> a given nonlinear element (in electronics, a diode or transistor, for
> example) is presented with two signals of different frequencies.
> But the human ear doesn't work in that manner - there is no single
> nonlinear element which is receiving more than one signal.

Sure there is - the cochlea. (well, the whole middle ear/inner ear
system.)

What would the output look like if you summed a 300Hz tone and a 400Hz
tone and sent the sum to a log amp and spectrum analyzer/fft?

Thanks,
Rich

2939. Re: AM electromagnetic waves: 20 KHz modulation frequency onanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 21:35:46 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B403C2.6DC94%dbowey@comcast.net>
Source record: 38997
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com, "Ron
Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>> On 7/4/07 7:52 AM, in article 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>> "Ron
>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>
>>> <snip>
>>>
>>>>>
>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>
>>>>> Basically: multiplying two sine waves is
>>>>> the same as adding the (half amplitude)
>>>>> sum and difference frequencies.
>>>>
>>>> No, they aren't the same at all, they only appear to be the same before
>>>> they are examined. The two sidebands will not have the correct phase
>>>> relationship.
>>>
>>> What do you mean? What is the "correct"
>>> relationship?
>>>
>>>>
>>>> One could, temporarily, mistake the added combination for a full carrier
>>>> with independent sidebands, however.
>>>>
>>>>
>>>>
>>>>>
>>>>> (For sines it is
>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
```

>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>)
>>>>>
>>>>> --
>>>>> rb
>>>>>
>>>>
>>>
>>>
>>
>> When AM is correctly accomplished (a single voiceband signal is modulated
>
> The questions I posed were not about AM. The
> subject could have been viewed as DSB but that
> wasn't the specific intent either.

You should take some time to more carefully frame your questions.

Do you understand that a DSB signal *is* AM?

Post your intention; it might help.

>
>> onto a carrier via a non-linear process), at an envelope detector the two
>> sidebands will be additive. But if you independe ntly place a carrier at
>> frequency (c), another carrier at (c-1 khz) and another carrier at (c+
>> 1
>> kHz), the composite can look like an AM signal, but it is not, and only by
>> the most extreme luck will the sidebands be additive at the detector.
>> They
>> would probably cycle between additive and subtractive since they have no
>> real relationship and were not the result of amplitude modulation.
>>
>
>

2940. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 21:37:13 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6mcma$k3u$1@usenet01.boi.hp.com>
Source record: 38998
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Rich Grise" <rich@example.net> wrote in message
news:pan.2007.07.06.21.09.15.301781@example.net...
>> Sorry, John - while the ear's amplitude response IS nonlinear, it
>> does not act as a mixer. "Mixing" (multiplication) occurs when
>> a given nonlinear element (in electronics, a diode or transistor, for
>> example) is presented with two signals of different frequencies.
>> But the human ear doesn't work in that manner - there is no single
>> nonlinear element which is receiving more than one signal.
>
> Sure there is - the cochlea. (well, the whole middle ear/inner ear
> system.)

Nope - the point had to do with the inner workings of the cochlea.
You can't consider it as a single element, as the inner workings
consists of what are essentially thousands of very narrowband
individual sensors. There is no *single* nonlinear element in which
mixing of, say, the hypothetical 300 Hz and 400 Hz tones would
take place. John responded that the eardrum (typmanic membrane)
would act as such an element, but I would suggest that any mixing
which might in theory go on here is not a signifcant factor in how we
perceive such tones. The evidence for this is obvious - if presented
with, say, a pure 440 Hz "A" from a tuning fork, and the note from the
slightly flat instrument we're trying to tune (let's say 438 Hz), we DO
hear the 2 Hz "beat" that results from the interference (in the air)
between these two sounds. What we do NOT hear to any significant
degree is the 878 Hz sum that would be expected if there were much
contribution from a multiplicative ("mixing") process.

Bob M.

2941. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-06 22:29:09 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <468ec29a$0$328$e4fe514c@news.xs4all.nl>
Source record: 38999
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote:
> On Jul 5, 9:38 pm, John Fields wrote:
>>
>> Sure enough, I heard the beat even though it came from different
>> sources, but I couldn't quite get it down to DC even with the
>> scope's trace at 0V.
>
> Of course you heard beats. What you didn't hear is the sum of the
> frequencies. I've had the same setup on my bench for several months.
> It's also one of the experiments the students do in the first year
> physics labs. Someone had made the claim a while back that what we
> hear is the 'average' of the two frequencies. Didn't make any sense
> so I did the experiment. The results are as I have explained.

We hear the average of two frequencies if both frequencies
are indistinguishably close, say with a difference of some few
hertz. For example, the combination of a 220 Hz signal and
a 224 Hz signal with the same amplitude will be perceived as
a 4 Hz beat of a 222 Hz tone.

gr, Hein

2942. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 00:11:34 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1183767094.774481.130330@m36g2000hse.googlegroups.com>
Source record: 39000
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 6, 3:14 pm, G-squared <stratu...@yahoo.com> wrote:
> On Jul 6, 9:43 am, szilagyic <c...@groupinfo.com> wrote:
>
>
>
> > On Jul 3, 5:27 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
>
> > > Hi Chris
>
> > > Much has already been said about your problem. I just have a few more
> > > points to add..
>
> > > - One of the initial "reasons" for masthead preamps was to reduce/remove
> > > the loss of the coax run. Quoting the preamp gain in this case is useful
> > > but in reality it is much more important to have a preamp device that is
> > > low noise or will give you a better signal to noise ratio at low signal
> > > levels. There is actually a hard limit based on Boltzmanns constant and
> > > the system bandwidth that is the thermal noise on Earth. (ie you can use
> > > it mathematically to check your system) If it is spec'd look for the
> > > lowest preamp noise figure (NF).
>
> > > Unfortunately low NF tends to go hand in hand with not so good large
> > > (undesired) signal performance. If however you don't have other strong
> > > signals around you it works well. Some bad preamp designs even "take
> > > off" producing their own interference and contributing towards the problem.
>
> > > - One of the killers for low level signal reception is that the local
> > > noise near your antenna varies above the "constant" mentioned above.
> > > Although rare onUHF, electrical interfering sources can "raise the
> > > noise floor" such that the s/n of the wanted signal gets smaller. Ways
> > > around this include a good antenna install with very good directivity to
> > > the signal source. In some cases you can use the antenna nulls and
> > > polarization to reduce interfering signal and of course finding and
> > > fixing the interfering source.
>
> > > Your "couple of channels" dropping out could be a local noise problem or
> > > equally a propagation/bending/reflection issue. (Reflection problems
> > > tend to be short lived though) It may be worth logging the failures to
> > > see if they fit a pattern. What frequency the channels are on can also
> > > help in the hunt. (eg someone using a 900MHz cordless phone while your
> > > weak signal is at the top of theUHFband...)
>
> > > It might be worthwhile finding out what channels the distant stations

> > > are on, then purchasing an antenna more centered on that frequency. As a
> > > general rule high gain is inverse to bandwidth so for the same amount of
> > > metal/size an antenna made to cover (say) 5 channels may have 5dB more
> > > forward gain and better f/b performance than a wide band one. A narrower
> > > band antenna may also have better undesirable lobes so a local noise
> > > problem may be helped. I realize that you are more after a commercially
> > > available system but your own design/build may even be an option.
>
> > > In a perfect world an antenna would receive nothing from everywhere
> > > except the desired direction! Unfortunately most radiation patterns look
> > > like wildflowers on steroids! Wide band antennas are especially
> > > horrible. The front to back ratio is not the only important figure. Some
> > > antennas have lobes maybe 30 degrees off the back that are only a few dB
> > > down from a dipole!
>
> > > Hope this helps.
>
> > > Cheers Bob W5/VK2YQA
>
> > > szilagyic wrote:
>
> > > > Hello:
>
> > > > I have been trying to find the answer to my question on the front-to-
> > > > back ratio onUHFantennas, and so far have been unsuccessful.
>
> > > ..
> > > > I really appreciate the help and feedback on this!!
>
> > Thank you very much for the detailed information. All of these ideas
> > are VERY helpful, and I will be trying some of these very soon.
>
> > I have (for reasons that you mentioned) been thinking about replacing
> > the preamp (Radio Shack 30 dB). The manual for it doesn't give the
> > specs for noise, or anything useful for that matter. I have been
> > looking at a Winegard AP-8275 (29 dB gain VHF, 28 dB gainUHF, 2.9 dB
> > noise VHF, 2.8 dB noiseUHF). Would this be a good alternative as far
> > as a low noise amp?? We do not live near any stations, I believe the
> > closest is 15 miles, so I am thinking a high gain preamp would be a
> > good fit.
>
> > I just wanted to get the feedback on this before I go out and buy
> > something.
>
> > Thanks again for all of the good info in this thread!!
>
> > --
> > Chris
>
> Your antenna has around 8 dB more gain than mine and you're closer to

> some of the stations. How long is your cable? If you have Line Of
> Sight to the towers you shouldn't need much gain at all, basically to
> make up for cable losses like 5-10 dB. If you're behind obstructions,
> that game changes a lot though.
>
> Instead of the 8275 I would use the AP-8700. There is less gain but
> more headroom and I suspect that will be more of an issue.
>
> http://www.winegard.com/offair/preamps.htm
>
> GG

Hello and thanks for the reply!

We are mainly concerned with stations that are all between 35 & 45 miles away (don't care about the one that's 15 miles away); and some seem to be weak as current signal strength is about half, and they drop from time to time. Given this, would the AP-8275 work well, or would you still recommend the AP-8700? I have an attenuator just in case.

I really appreciate your feedback on this..... Thank you!!!

--
Chris

2943. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 01:51:28 UTC
From: G-squared <stratus46@yahoo.com>
Message-ID: <1183773088.983280.195040@m37g2000prh.googlegroups.com>
Source record: 39001
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 6, 5:11 pm, szilagyic <c...@groupinfo.com> wrote:
> On Jul 6, 3:14 pm, G-squared <stratu...@yahoo.com> wrote:
>
> > Your antenna has around 8 dB more gain than mine and you're
closer to
> > some of the stations. How long is your cable? If you have Line Of
> > Sight to the towers you shouldn't need much gain at all,
basically to
> > make up for cable losses like 5-10 dB. If you're behind
obstructions,
> > that game changes a lot though.
>
> > Instead of the 8275 I would use the AP-8700. There is less gain
but
> > more headroom and I suspect that will be more of an issue.
>
> >http://www.winegard.com/offair/preamps.htm
>
> > GG
>
> Hello and thanks for the reply!
>
> We are mainly concerned with stations that are all between 35 & 45
> miles away (don't care about the one that's 15 miles away); and
some
> seem to be weak as current signal strength is about half, and they
> drop from time to time. Given this, would the AP-8275 work well,
or
> would you still recommend the AP-8700? I have an attenuator just
in
> case.
>
> I really appreciate your feedback on this..... Thank you!!!
>
> --
> Chris

Again, I'm at 35 miles with line of sight to the transmitters and a
low gain antenna. The reason I suggested the 8700 is the reduced gain
compared to the 8275. Keep in mind that amplifiers are not a panacea
and are wideband devices. Just because the local (15 mile) station is
on whatever channel doesn't mean it can't cause overload issues _many_
channel numbers away. At 35 miles with good coax 100-200 feet, I

wouldn't expect to need any amplifiers at all, much less 29 dB worth but if you believe you need it, the 8700 should be more tolerant of overload issues. You might even need to put the attenuator _ahead_ of the amplifier to keep _it_ from overloading.

GG

2944. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 01:59:22 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <FZKdnVAk_p_sbhPbnZ2dnUVZ_qarnZ2d@giganews.com>
Source record: 39002

John Doe wrote:
[snip]
> Then a fence around your property, with signs ... DANGER 1,000,000 MA
HI-VOLTAGE...
[snip]

Eons ago, I recall seeing an official-looking sign that read, "DANGER:
1,000,000 Ohms" ;^)
Bryan WA7PRC

2945. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 02:04:28 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <t6WdnZA1id0-aRPbnZ2dnUVZ_gydnZ2d@giganews.com>
Source record: 39003

Nate Bargmann wrote:
> For a wide range of crimp plugs, check out the RF Industries line at
> http://www.rfcoaxconnectors.com and carried by RF Parts,
> http://www.rfparts.com I'm not associated with either company, just a
> stisfied customer.
>
> 73, de Nate >>

Their PN RFU-504 appears identical to the Amphenol 83-58-FCP (a couple of bucks each in their RFX line). The issue with other types of non-soldered UHF connectors is that they /usually/ require an expensive crimping tool.

73,
Bryan WA7PRC

2946. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 02:19:09 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183774749.751609.24930@g4g2000hsf.googlegroups.com>
Source record: 39004
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On 5 Jul, 22:25, Jeff Liebermann <j...@cruzio.com> wrote:
> Radium <gluceg...@gmail.com> hath wroth:
>
> >Radio waves are made up of electric and magnetic fields.
>
> Yep.
>
> >Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
> >magnetic portions of AM radio waves at the carrier frequencies I
> >described? If not, why?
>
> Nope.
>
> 1. The range of the magnetic field is limited. For example, you're
> not going to bounce (errr... refract) a magnetic fields off the
> ionosphere.
>
> 2. Magentometers use very big coils. Very big coils have lots of
> inductance. Resonant circuits with lots of inductance tend to
> resonate at very low frequencies. Figure on maybe 30Hz being the
> highest frequency detectable by a magnetometer. Most roll off even
> earlier to avoid 60Hz power line pickup.
>
> 3. Magnetometers are expensive. You're proposing using one as a
> replacement for a 5 cent silicon diode detector. If the technology
> doesn't get to you, the accountants will.
>
> >Agreed, static magnetic fields tend to decay rapidly as you move away
> >from them. However, alternating magnetic fields continue to propogate
> >by generating alternating electric fields of the same frequency. These
> >alternating electric fields, in turn, generate alternating magnetic
> >fields. The cycle keeps repeating.
>
> Rubbish.
> --
> Jeff Liebermann j...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

I believe that the standard example of radiation referred to above
is in error.

I do not believe that radiation consists of fields of any sort
but consists of ejected static particles in form of a swarm.
I have asked the Eham forum to wade in on that one since it
appears they have more scientifically molecular inclined members.
The only cycle that repeates in radiation is the tank circuit of a
diagmagnetic material which is resonant i.e. equal capacitance and
inductance. Seems like the posts are relying on propagating fields
which to me is an error.
Regards
Art

2947. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 02:25:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138tudplgcuuq26@corp.supernews.com>
Source record: 39005
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:
>
> What is the difference between AM and DSB?

The two actually describe different properties, so a signal can be be AM, DSB, neither, or both.

And here we run into some trouble between technical correctness and common usage.

DSB stands for Double SideBand. Although I suppose an FM signal could be called DSB because it has two *sets* of sidebands, and a narrowband FM signal has only one significant pair like an AM signal, in my experience the term DSB virtually always refers to a signal generated by amplitude modulation.

AM is Amplitude Modulation. Straightforward amplitude modulation such as done for AM broadcasting produces a carrier and two sidebands, or DSB with carrier. Either the carrier or one sideband, or both, can be suppressed. If you suppress the carrier (or don't generate it in the first place), you get DSB with suppressed carrier, or DSB-SC. If you suppress one sideband, you get SSB. Usually, but not always, the carrier is also suppressed along with the one sideband, resulting in SSB-SC. NTSC television transmission is VSB -- AM with a carrier and "vestigial" or partially suppressed sideband and a full second sideband. Partial suppression of the carrier is also done for some broadcast purposes.

So a commercial AM broadcast station broadcasts a signal that's both AM and DSB. A typical amateur or military SSB transmission is AM but not DSB. A QPSK signal is neither. And, as I mentioned, some signals like FM could be considered DSB but not AM (although this isn't common usage).

In common amateur parlance, however,

"AM" usually means AM with two sidebands and carrier.
"DSB" usually means AM with two sidebands and suppressed carrier
"SSB" usually means AM with a single sideband and suppressed carrier

Roy Lewallen, W7EL

2948. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <8rc3m4-io3.ln1@mail.specsol.com>
Source record: 39007
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
In rec.radio.amateur.antenna art <aunwin@insightbb.com> wrote:
> On 5 Jul, 22:25, Jeff Liebermann <j...@cruzio.com> wrote:
> > Radium <gluceg...@gmail.com> hath wroth:
> >
> > >Radio waves are made up of electric and magnetic fields.
> >
> > Yep.
> >
> > >Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
> > >magnetic portions of AM radio waves at the carrier frequencies I
> > >described? If not, why?
> >
> > Nope.
> >
> > 1. The range of the magnetic field is limited. For example, you're
> > not going to bounce (errr... refract) a magnetic fields off the
> > ionosphere.
> >
> > 2. Magentometers use very big coils. Very big coils have lots of
> > inductance. Resonant circuits with lots of inductance tend to
> > resonate at very low frequencies. Figure on maybe 30Hz being the
> > highest frequency detectable by a magnetometer. Most roll off even
> > earlier to avoid 60Hz power line pickup.
> >
> > 3. Magnetometers are expensive. You're proposing using one as a
> > replacement for a 5 cent silicon diode detector. If the technology
> > doesn't get to you, the accountants will.
> >
> > >Agreed, static magnetic fields tend to decay rapidly as you move away
> > >from them. However, alternating magnetic fields continue to propogate
> > >by generating alternating electric fields of the same frequency. These
> > >alternating electric fields, in turn, generate alternating magnetic
> > >fields. The cycle keeps repeating.
> >
> > Rubbish.
> > --
> > Jeff Liebermann j...@cruzio.com
> > 150 Felker St #D http://www.LearnByDestroying.com
> > Santa Cruz CA 95060http://802.11junk.com
> > Skype: JeffLiebermann AE6KS 831-336-2558
```

> I believe that the standard example of radiation referred to above
> is in error.

Belief doesn't make reality.

> I do not believe that radiation consists of fields of any sort
> but consists of ejected static particles in form of a swarm.

A hundred years or so of experments say that's utter, babbling,
nonsense.

> I have asked the Eham forum to wade in on that one since it
> appears they have more scientifically molecular inclined members.

Right.

> The only cycle that repeates in radiation is the tank circuit of a
> diagmagnetic material which is resonant i.e. equal capacitance and
> inductance. Seems like the posts are relying on propagating fields
> which to me is an error.

I'd suggest fluphenazine and haloperidol.

--
Jim Pennino

Remove .spam.sux to reply.

2949. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:16:01 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468f0515$0$30690$4c368faf@roadrunner.com>
Source record: 39006
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-665A0A.12314506072007@newsgroups.comcast.net...
> In article <468dcc69$0$30690$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-0779A4.09400205072007@newsgroups.comcast.net...
>> > In article <468cf4d8$0$12241$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >
>> >> "isw" <isw@witzend.com> wrote in message
>> >> news:isw-A5E71F.00111305072007@newsgroups.comcast.net...
>> >> > In article <468bd109$0$31234$4c368faf@roadrunner.com>,
>> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >> >
>> >> >> "isw" <isw@witzend.com> wrote in message
>> >> >> news:isw-656111.22422003072007@newsgroups.comcast.net...
>> >> >>
>> >> >> <snip>
>> >> >>
>> >> >> >
>> >> >> > After you get done talking about modulation and sidebands,
>> >> >> > somebody
>> >> >> > might want to take a stab at explaining why, if you tune a
>> >> >> > receiver
>> >> >> > to
>> >> >> > the second harmonic (or any other harmonic) of a modulated
>> >> >> > carrier
>> >> >> > (AM
>> >> >> > or FM; makes no difference), the audio comes out sounding exactly
>> >> >> > as
>> >> >> > it
>> >> >> > does if you tune to the fundamental? That is, while the second
>> >> >> > harmonic
>> >> >> > of the carrier is twice the frequency of the fundamental, the
>> >> >> > sidebands
>> >> >> > of the second harmonic are *not* located at twice the frequencies
>> >> >> > of
>> >> >> > the
>> >> >> > sidebands of the fundamental, but rather precisely as far from
>> >> >> > the
>> >> >> > second harmonic of the carrier as they are from the fundamental.
```

>> >> >> >
>> >> >> > Isaac
>> >> >>
>> >> >> Whoa. I thought you were smoking something but
>> >> >> my curiosity is piqued.
>> >> >> I tried shortwave stations and heard no harmonics.
>> >> >> But that could be blamed on propagation.
>> >> >> There is an AM station here at 1.21 MHz that is s9+20dB.
>> >> >> Tuned to 2.42 MHz. Nothing. Generally the lowest
>> >> >> harmonics should be strongest. Then I remembered
>> >> >> that many types of non-linearity favor odd harmonics.
>> >> >> Tuned to 3.63 MHz. Holy harmonics, batman.
>> >> >> There it was and the modulation was not multiplied!
>> >> >> Voices sounded normal pitch. When music was
>> >> >> played the pitch was the same on the original and
>> >> >> the harmonic.
>> >> >>
>> >> >> One clue is that the effect comes and goes rather
>> >> >> abruptly. It seems to switch in and out rather
>> >> >> than fade in an out. Maybe the coming and going
>> >> >> is from switching the audio material source?
>> >> >>
>> >> >> This is strange. If a signal is multiplied then the sidebands
>> >> >> should be multiplied too.
>> >> >> Maybe the carrier generator is generating a
>> >> >> harmonic and the harmonic is also being modulated
>> >> >> with the normal audio in the modulator.
>> >> >> But then that signal would have to make it through
>> >> >> the power amp and the antenna. Possible, but
>> >> >> why would it come and go?
>> >> >> Strange.
>> >> >
>> >> > Hint: Modulation is a "rate effect".
>> >> >
>> >> > Isaac
>> >>
>> >> Please elaborate. I am so eager to hear the
>> >> explanation.
>> >
>> > The sidebands only show up because there is a rate of change of the
>> > carrier -- amplitude or frequency/phase, depending; they aren't
>> > separate, stand-alone signals. Since the rate of change of the
>> > amplitude
>> > of the second harmonic is identical to that of the fundamental, the
>> > sidebands show up the same distance away, not twice as distant.
>> >
>> > Isaac
>>
>> That doesn't explain why the effect would come and go.
>

> I don't understand what effect you're referring to here.

When I was tuned to the 3rd harmonic sometimes
I would hear it and sometimes not.
It would come and go rather abruptly. It didn't seem
to be gradual fading.

>
>> But once again you have surprised me.
>> Your explanation of the non-multiplied sidebands,
>> while qualitative and incomplete, is sound.
>
> I'm a physicist/engineer, and have been for a long time. I have always

The you understand Fourier transforms and convolution.

> maintained that if the only way one can understand physical phenomena is
> by solving the differential equations that describe them, then one does
> not understand the phenomena at all. If you can express a thing in
> words, such that a person with little mathematical ability can
> understand what's going on, *then* you have a good grasp of it.

I too am a fan of the intuitive approach.
But I find that theory is often irreplacable.

>
>> It looks to me that the tripple frequency sidebands
>> are there but the basic sidebands dominate.
>> Especially at lower modulation indexes.
>
> I don't understand what you are saying here either. And in my
> experience, the term "modulation index" is more likely to show up in a
> discussion of FM or PM than AM; are you using it interchangeably with
> "modulation percentage"?

http://en.wikipedia.org/wiki/Amplitude_modulation#Modulation_index

>
> Isaac

2950. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:21:04 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-C85095.20210406072007@newsgroups.comcast.net>
Source record: 39008
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2B3FA99.6DC3F%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/6/07 12:15 PM, in article
> isw-C7349C.12150506072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
> wrote:
>
> > In article <C2B3C3A0.6DC14%dbowey@comcast.net>,
> > Don Bowey <dbowey@comcast.net> wrote:
> >
> >> On 7/6/07 9:36 AM, in article
> >> isw-F124E8.09362406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
> >> wrote:
> >>
> >>> In article <C2B399E5.6DB60%dbowey@comcast.net>,
> >>> Don Bowey <dbowey@comcast.net> wrote:
> >>>
> >>>> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
> >>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>>>
> >>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>>>> news:C2B25726.6D728%dbowey@comcast.net...
> >>>>>> On 7/5/07 12:00 AM, in article
> >>>>>> 468c96c3$0$16567$4c368faf@roadrunner.com,
> >>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>>>>>
> >>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>>>>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
> >>>>>>>> On 7/4/07 8:42 PM, in article
> >>>>>>>> 468c6838$0$4664$4c368faf@roadrunner.com,
> >>>>>>>> "Ron
> >>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
> >>>>>>>>
> >>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>>>>>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
> >>>>>>>>>> On 7/4/07 10:16 AM, in article
> >>>>>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
> >>>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >>>>>>>>>>
> >>>>>>>>>>>

> >>>>>>>>>>>
> >>>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
> >>>>>>>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
> >>>>>>>>>>>> On 7/4/07 7:52 AM, in article
> >>>>>>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
> >>>>>>>>>>>> "Ron
> >>>>>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
> >>>>>>>>>>>
> >>>>>>>>>>> <snip>
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Basically: multiplying two sine waves is
> >>>>>>>>>>>>>>>>> the same as adding the (half amplitude)
> >>>>>>>>>>>>>>>>> sum and difference frequencies.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> No, they aren't the same at all, they only appear to be the
> >>>>>>>>>>>>>>>> same
> >>>>>>>>>>>>>>>> before
> >>>>>>>>>>>>>>>> they are examined. The two sidebands will not have the correct
> >>>>>>>>>>>>>>>> phase
> >>>>>>>>>>>>>>>> relationship.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> What do you mean? What is the "correct"
> >>>>>>>>>>>>>>> relationship?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> One could, temporarily, mistake the added combination for a full
> >>>>>>>>>>>>>>>>> carrier
> >>>>>>>>>>>>>>>>> with independent sidebands, however.
> >>>>>>>>>>>>>>>>>>>>

> >>>>>>>>>> When AM is correctly accomplished (a single voiceband signal is
> >>>>>>>>>> modulated
> >>>>>>>>>
> >>>>>>>>> The questions I posed were not about AM. The
> >>>>>>>>> subject could have been viewed as DSB but that
> >>>>>>>>> wasn't the specific intent either.
> >>>>>>>>
> >>>>>>>> What was the subject of your question?
> >>>>>>>
> >>>>>>> Copying from my original post:
> >>>>>>>
> >>>>>>> Suppose you have a 1 MHz sine wave whose amplitude
> >>>>>>> is multiplied by a 0.1 MHz sine wave.
> >>>>>>> What would it look like on an oscilloscope?
> >>>>>>> What would it look like on a spectrum analyzer?
> >>>>>>>
> >>>>>>> Then suppose you have a 1.1 MHz sine wave added
> >>>>>>> to a 0.9 MHz sine wave.
> >>>>>>> What would that look like on an oscilloscope?
> >>>>>>> What would that look like on a spectrum analyzer?
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>
> >>>>>> So the first (1) is an AM question and the second (2) is a non-AM
> >>>>>> question......
> >>>>>
> >>>>> What is the difference between AM and DSB?
> >>>>>
> >>>>>
> >>>>>
> >>>>
> >>>> AM is a process. DSB (double sideband), with carrier, is it's most
> >>>> simple
> >>>> result. DSB without carrier (suppressed carrier dsb) requires using, at
> >>>> least, a balanced mixer as the AM multiplier.
> >>>
> >>> And requires, for proper reception, that a carrier be recreated at the
> >>> receiver which has not only the amplitude of the original,
> >>
> >> There is no need at all to match the carrier amplitude of the original
> >> signal. You can use an excessively high carrier injection amplitude with
> >> no
> >> detrimental affect, but if the injected carrier is too little, the
> >> demodulated signal will be over modulated and sound distorted.
> >>
> >>> but also its exact phase.
> >>
> >> Exact, not required. The closer the better, however.
> >

> > Well, OK, the phase must at least bear a constant relationship to the
> > one that created the signal. If you inject a carrier that has a
> > quadrature relationship to the one that created the DSB signal, the
> > output will be PM (phase modulation). In between zero and 90 degrees,
> > the output is a combination of the two. If the injected carrier is not
> > at precisely the proper frequency, the phase will roll around and the
> > output will be unintelligible.
>
> Not unintelligible.... Donald Duckish.

I think you are confusing *single* sideband, for which that is correct,
and *double* sideband (which we were discussing), for which it is not
true.

> On a more practical side, however, most receiver filters for ssb will
> essentially remove one sideband if there are two, and can attenuate a
> carrier so the local product detector can do it's job resulting in improved
> receiving conditions. But this is more advanced than the Ops questions.

Doing it that way will work, but it's not "fair", because you are not
actually demodulating a DSB signal (which was the subject of the
discussion).

Isaac

2951. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:26:44 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-076140.20264406072007@newsgroups.comcast.net>
Source record: 39010
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <138tudplgcuuq26@corp.supernews.com>,
Roy Lewallen <w7el@eznec.com> wrote:

> Ron Baker, Pluralitas! wrote:
> >
> > What is the difference between AM and DSB?
>
> The two actually describe different properties, so a signal can be be
> AM, DSB, neither, or both.
>
> And here we run into some trouble between technical correctness and
> common usage.
>
> DSB stands for Double SideBand. Although I suppose an FM signal could be
> called DSB because it has two *sets* of sidebands

Um, actually, it has a lot more than that. A carrier FM modulated by a
single sine wave has an infinite number of sidebands. If the modulating
signal is more complex, then things get really complicated.

Isaac

2952. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:26:51 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468f07a0$0$24739$4c368faf@roadrunner.com>
Source record: 39009
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-9D8AE6.10201105072007@newsgroups.comcast.net...
> In article <468d0174$0$3183$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "John Fields" <jfields@austininstruments.com> wrote in message
>> news:8ktp839la05dj6t049kidjbpkj7rkf98ii@4ax.com...
>> > On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"
>>
>> <snip>
>>
>> >>>>>
>> >>>>> When AM is correctly accomplished (a single voiceband signal is
>> >>>>> modulated
>> >>>>
>> >>>> The questions I posed were not about AM. The
>> >>>> subject could have been viewed as DSB but that
>> >>>> wasn't the specific intent either.
>> >>>
>> >>> What was the subject of your question?
>> >>
>> >>Copying from my original post:
>> >>
>> >>Suppose you have a 1 MHz sine wave whose amplitude
>> >>is multiplied by a 0.1 MHz sine wave.
>> >>What would it look like on an oscilloscope?
>> >>What would it look like on a spectrum analyzer?
>> >>
>> >>Then suppose you have a 1.1 MHz sine wave added
>> >>to a 0.9 MHz sine wave.
>> >>What would that look like on an oscilloscope?
>> >>What would that look like on a spectrum analyzer?
>> >
>> > ---
>> > The first example is amplitude modulation precisely _because_ of the
>>
>> Is there multiplication in DSB? (double sideband)
>
> Yes, and in fact, that multiplication referred to above creates a
> DSB-suppressed-carrier signal. To get "real" AM, you need to add back
> the carrier *at the proper phase*.
```

So does the multiplication in the first example really make
it amplitude modulation?

> FWIW, if you do the multiplication and then add back a carrier which is
> in quadrature (90 degrees) to the one you started with, what you get is
> phase modulation, a "close relative" of FM, and indistinguishable from
> it for the most part.
>
> A true DSB-suppressed carrier signal is rather difficult to receive
> precisely because of the absolute phase requirement; tuning a receiver
> to the right frequency isn't sufficient -- the phase has to match, too,
> and that's really difficult without some sort of reference.
>
> A SSB-suppressed carrier signal is a lot simpler to detect because an
> error in the frequency of the regenerated carrier merely produces a
> similar error in the frequency of the detected audio (the well-known
> "Donald Duck" effect).
>
> Isaac

2953. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 03:36:03 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183779363.017550.174700@57g2000hsv.googlegroups.com>
Source record: 39011
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
On 6 Jul, 20:15, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna art <aun...@insightbb.com> wrote:
>
>
>
>
>
> > On 5 Jul, 22:25, Jeff Liebermann <j...@cruzio.com> wrote:
> > > Radium <gluceg...@gmail.com> hath wroth:
>
> > > >Radio waves are made up of electric and magnetic fields.
>
> > > Yep.
>
> > > >Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
> > > >magnetic portions of AM radio waves at the carrier frequencies I
> > > >described? If not, why?
>
> > > Nope.
>
> > > 1. The range of the magnetic field is limited. For example, you're
> > > not going to bounce (errr... refract) a magnetic fields off the
> > > ionosphere.
>
> > > 2. Magentometers use very big coils. Very big coils have lots of
> > > inductance. Resonant circuits with lots of inductance tend to
> > > resonate at very low frequencies. Figure on maybe 30Hz being the
> > > highest frequency detectable by a magnetometer. Most roll off even
> > > earlier to avoid 60Hz power line pickup.
>
> > > 3. Magnetometers are expensive. You're proposing using one as a
> > > replacement for a 5 cent silicon diode detector. If the technology
> > > doesn't get to you, the accountants will.
>
> > > >Agreed, static magnetic fields tend to decay rapidly as you move away
> > > >from them. However, alternating magnetic fields continue to propogate
> > > >by generating alternating electric fields of the same frequency. These
> > > >alternating electric fields, in turn, generate alternating magnetic
> > > >fields. The cycle keeps repeating.
>
> > > Rubbish.
> > > --
```

> > > Jeff Liebermann j...@cruzio.com
> > > 150 Felker St #D http://www.LearnByDestroying.com
> > > Santa Cruz CA 95060http://802.11junk.com
> > > Skype: JeffLiebermann AE6KS 831-336-2558
> > I believe that the standard example of radiation referred to above
> > is in error.
>
> Belief doesn't make reality.
>
> > I do not believe that radiation consists of fields of any sort
> > but consists of ejected static particles in form of a swarm.
>
> A hundred years or so of experments say that's utter, babbling,
> nonsense.
>
> > I have asked the Eham forum to wade in on that one since it
> > appears they have more scientifically molecular inclined members.
>
> Right.
>
> > The only cycle that repeates in radiation is the tank circuit of a
> > diagmagnetic material which is resonant i.e. equal capacitance and
> > inductance. Seems like the posts are relying on propagating fields
> > which to me is an error.
>
> I'd suggest fluphenazine and haloperidol.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.- Hide quoted text -
>
> - Show quoted text -

Jim, In the past you have shown that you are not that smart
and I see of no evidence of any change.
Suggest you review "particles" in nuclear physics,
tho I suppose some could see a swarm of particles as a "wave"
tho certainly not in the electrical sense.
Seems like you take comfort in harrassing people with
statements that have no reality. I have the strong suspicion
that you are also short in stature and thus have a macho
feeling in hiding. I personally have proved that radiation
is in particle form where you do not have the ability
to prove anything.

2954. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 04:04:17 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <he2u83pmttt5f1hd13bc6jn03tmk168p6h@4ax.com>
Source record: 39012
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Fri, 06 Jul 2007 09:43:24 -0700, szilagyic <chris@groupinfo.com>
wrote:

>On Jul 3, 5:27 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
>> Hi Chris
>>
>> Much has already been said about your problem. I just have a few more
>> points to add..
>>
>> - One of the initial "reasons" for masthead preamps was to reduce/remove
>> the loss of the coax run. Quoting the preamp gain in this case is useful

Another way to think of it is if you put the amplifier at the TV set
and feed it a weak, noisy signal you will get a strong noisy signal
out of the amp. At the antenna you have a stronger signal which has a
better signal to noise ratio (s/n) which means you don't need as much
gain, and can actually get by with a less expensive preamp. With
less gain the preamp is not as prone to signal overload from strong
stations either.

>> but in reality it is much more important to have a preamp device that is
>> low noise or will give you a better signal to noise ratio at low signal

Again, if you have a good signal with good s/n ratio you *may* be able
to get by without having to resort to a preamp with the lowest noise.

>> levels. There is actually a hard limit based on Boltzmanns constant and
>> the system bandwidth that is the thermal noise on Earth. (ie you can use
>> it mathematically to check your system) If it is spec'd look for the
>> lowest preamp noise figure (NF).
>>
>> Unfortunately low NF tends to go hand in hand with not so good large
>> (undesired) signal performance. If however you don't have other strong

So, the antenna mounted *may* let you use less gain and not resort to
the lowest noise amplifier which both give better performance when in
the presence of strong signals.

>> signals around you it works well. Some bad preamp designs even "take
>> off" producing their own interference and contributing towards the problem.
>>
>> - One of the killers for low level signal reception is that the local
>> noise near your antenna varies above the "constant" mentioned above.
>> Although rare onUHF, electrical interfering sources can "raise the

With many remote part 15 devices operating in the UHF band it is
becoming more common. There are several Amateur Radio bands in the UHF
range but those signals although much more powerful than part 15
devices are usually cleaner and are restricted to specific bands
unlike part 15 devices.

>> noise floor" such that the s/n of the wanted signal gets smaller. Ways
>> around this include a good antenna install with very good directivity to
>> the signal source. In some cases you can use the antenna nulls and
>> polarization to reduce interfering signal and of course finding and
>> fixing the interfering source.
>>
>> Your "couple of channels" dropping out could be a local noise problem or
>> equally a propagation/bending/reflection issue. (Reflection problems
>> tend to be short lived though) It may be worth logging the failures to
>> see if they fit a pattern. What frequency the channels are on can also
>> help in the hunt. (eg someone using a 900MHz cordless phone while your
>> weak signal is at the top of theUHFband...)
>>
>> It might be worthwhile finding out what channels the distant stations
>> are on, then purchasing an antenna more centered on that frequency. As a
>> general rule high gain is inverse to bandwidth so for the same amount of
>> metal/size an antenna made to cover (say) 5 channels may have 5dB more
>> forward gain and better f/b performance than a wide band one. A narrower
>> band antenna may also have better undesirable lobes so a local noise
>> problem may be helped. I realize that you are more after a commercially
>> available system but your own design/build may even be an option.
>>
>> In a perfect world an antenna would receive nothing from everywhere
>> except the desired direction! Unfortunately most radiation patterns look
>> like wildflowers on steroids! Wide band antennas are especially

And stacking antennas makes the patterns even worse. I ran a quadature
array (4 antennas mounted 2 high and 2 wide) of UHF antennas which had
tremendous gain and a very good front to back, but not just the
secondary lobes, but several to either side of those were nearly as
strong as the main lobe
.
>> horrible. The front to back ratio is not the only important figure. Some
>> antennas have lobes maybe 30 degrees off the back that are only a few dB
>> down from a dipole!

The ones on my quadature array were a lot stronger than that. I
finally gave up as it's too difficult to get the proper spacing from
side to side across the entire UHF band. Besides at 90 feet I point
them (I have one to the NW and one to the S) to the weak UHF stations
and they do very well on the much stronger VHF.

http://www.rogerhalstead.com/ham_files/tower21.htm They look close
together, but those are big antennas separated by about 12 to 15 feet.
they probably would have worked better with about 15 feet of vertical
spacing and 20 feet horizontal.

>>
>> Hope this helps.
>>
>> Cheers Bob W5/VK2YQA
>>
>>
>>
>> szilagyic wrote:
>>
>> > Hello:
>>
>> > I have been trying to find the answer to my question on the front-to-
>> > back ratio onUHFantennas, and so far have been unsuccessful.
>>
>> ..
>> > I really appreciate the help and feedback on this!!
>
>Thank you very much for the detailed information. All of these ideas
>are VERY helpful, and I will be trying some of these very soon.
>
>I have (for reasons that you mentioned) been thinking about replacing
>the preamp (Radio Shack 30 dB). The manual for it doesn't give the

I use the RS amps on mine, but with the gain turned down. I end up replacing them every couple of years any way due to lightning. The tower has been taking an average of 3 *verified* hits per summer and I am surprised they last that long. That and the current installation is only about 35 feet below a pair of 144 MHz antennas being driven with a kilowatt and about 20 feet above a vertical being driven with 50 watts on 144 and 35 watts on 440 MHz.

>specs for noise, or anything useful for that matter. I have been
>looking at a Winegard AP-8275 (29 dB gain VHF, 28 dB gain UHF, 2.9 dB
>noise VHF, 2.8 dB noise UHF). Would this be a good alternative as far
>as a low noise amp?? We do not live near any stations, I believe the
>closest is 15 miles, so I am thinking a high gain preamp would be a
>good fit.

I'd think 15 miles to a VHF station would provide a pretty strong signal.

>
>I just wanted to get the feedback on this before I go out and buy
>something.

Myself I'd prefer the Winegard preamps over the RS ones and there is very little difference in price as I recall. I have the RS preamps only because they were handy to try.

>
>Thanks again for all of the good info in this thread!!

2955. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 04:23:41 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468f14f2$0$16528$4c368faf@roadrunner.com>
Source record: 39013
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-67F596.12192706072007@newsgroups.comcast.net...
> In article <468dcf2b$0$16588$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-15D472.09430705072007@newsgroups.comcast.net...
>> > In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >
>> >> "isw" <isw@witzend.com> wrote in message
>> >> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
>> >> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
>> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >>
>> >> <snip>
>> >>
>> >> >> >>
>> >> >> >> While it might not be obvious, the two cases I
>> >> >> >> described are basically identical. And this
>> >> >> >> situation occurs in real life, i.e. in radio signals,
>> >> >> >> oceanography, and guitar tuning.
>> >> >> >
>> >> >> > The beat you hear during guitar tuning is not modulation; there
>> >> >> > is
>> >> >> > no
>> >> >> > non-linear process involved (i.e. no multiplication).
>> >> >> >
>> >> >> > Isaac
>> >> >>
>> >> >> In short, the human auditory system is not linear.
>> >> >> It has a finite resolution bandwidth. It can't resolve
>> >> >> two tones separted by a few Hertz as two separate tones.
>> >> >> (But if they are separted by 100 Hz they can easily
>> >> >> be separated without hearing a beat.)
>> >> >
>> >> > Two tones 100 Hz apart may or may not be perceived separately;
>> >> > depends
>> >> > on a lot of other factors. MP3 encoding, for example, depends on the
>> >> > ear's (very predictable) inability to discern tones "nearby" to
>> >> > other,
>> >> > louder ones.
```

>> >>
>> >> I'll remember that the next time I'm tuning
>> >> an MP3 guitar.
>> >>
>> >> >
>> >> >> The same affect can be seen on a spectrum analyzer.
>> >> >> Give it two frequencies separated by 1 Hz. Set the
>> >> >> resolution bandwidth to 10 Hz. You'll see the peak
>> >> >> rise and fall at 1 Hz.
>> >> >
>> >> > Yup. And the spectrum analyzer is (hopefully) a very linear system,
>> >> > producing no intermodulation of its own.
>> >> >
>> >> > Isaac
>> >>
>> >> What does a spectrum analyzer use to arive at
>> >> amplitude values? An envelope detector?
>> >> Is that linear?
>> >
>> > I'm sure there's more than one way to do it, but I feel certain that
>> > any
>>
>> Which of them is linear?
>
> A well-designed filter running into a bolometer would be. You can make
> the filter narrow enough to respond to only one frequency component at

Any real spectrum analyzer has a lower limit
to its resolution bandwidth, does it not?
The resolution bandwidth of the human ear is non-zero
and not really adjustable, is it not?

> the time, and a bolometer just turns the signal power into heat; nothing
> nonlinear there...

Really?
You said you are a physicist/engineer.
What does "linear" mean?

2956. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 04:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <o7h3m4-4vf.ln1@mail.specsol.com>
Source record: 39014
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
In rec.radio.amateur.antenna art <aunwin@insightbb.com> wrote:
> On 6 Jul, 20:15, j...@specsol.spam.sux.com wrote:
> > In rec.radio.amateur.antenna art <aun...@insightbb.com> wrote:
> >
> >
> >
> >
> >
> > > On 5 Jul, 22:25, Jeff Liebermann <j...@cruzio.com> wrote:
> > > > Radium <gluceg...@gmail.com> hath wroth:
> >
> > > > >Radio waves are made up of electric and magnetic fields.
> >
> > > > Yep.
> >
> > > > >Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
> > > > >magnetic portions of AM radio waves at the carrier frequencies I
> > > > >described? If not, why?
> >
> > > > Nope.
> >
> > > > 1. The range of the magnetic field is limited. For example, you're
> > > > not going to bounce (errr... refract) a magnetic fields off the
> > > > ionosphere.
> >
> > > > 2. Magentometers use very big coils. Very big coils have lots of
> > > > inductance. Resonant circuits with lots of inductance tend to
> > > > resonate at very low frequencies. Figure on maybe 30Hz being the
> > > > highest frequency detectable by a magnetometer. Most roll off even
> > > > earlier to avoid 60Hz power line pickup.
> >
> > > > 3. Magnetometers are expensive. You're proposing using one as a
> > > > replacement for a 5 cent silicon diode detector. If the technology
> > > > doesn't get to you, the accountants will.
> >
> > > > >Agreed, static magnetic fields tend to decay rapidly as you move away
> > > > >from them. However, alternating magnetic fields continue to propogate
> > > > >by generating alternating electric fields of the same frequency. These
> > > > >alternating electric fields, in turn, generate alternating magnetic
> > > > >fields. The cycle keeps repeating.
> >
> > > > Rubbish.
```

> > > > --
> > > > Jeff Liebermann j...@cruzio.com
> > > > 150 Felker St #D http://www.LearnByDestroying.com
> > > > Santa Cruz CA 95060http://802.11junk.com
> > > > Skype: JeffLiebermann AE6KS 831-336-2558
> > > I believe that the standard example of radiation referred to above
> > > is in error.
> > >
> > Belief doesn't make reality.
> > >
> > > I do not believe that radiation consists of fields of any sort
> > > but consists of ejected static particles in form of a swarm.
> > >
> > A hundred years or so of experments say that's utter, babbling,
> > nonsense.
> > >
> > > I have asked the Eham forum to wade in on that one since it
> > > appears they have more scientifically molecular inclined members.
> > >
> > Right.
> > >
> > > The only cycle that repeates in radiation is the tank circuit of a
> > > diagmagnetic material which is resonant i.e. equal capacitance and
> > > inductance. Seems like the posts are relying on propagating fields
> > > which to me is an error.
> > >
> > I'd suggest fluphenazine and haloperidol.
> > >
> > --
> > Jim Pennino
> > >
> > Remove .spam.sux to reply.- Hide quoted text -
> > >
> > - Show quoted text -

> Jim, In the past you have shown that you are not that smart
> and I see of no evidence of any change.
> Suggest you review "particles" in nuclear physics,
> tho I suppose some could see a swarm of particles as a "wave"
> tho certainly not in the electrical sense.
> Seems like you take comfort in harrassing people with
> statements that have no reality. I have the strong suspicion
> that you are also short in stature and thus have a macho
> feeling in hiding. I personally have proved that radiation
> is in particle form where you do not have the ability
> to prove anything.

Babbling, delusional nonsense.

Seek help.

There are drugs that may help your condition if you are treated
early enough.

--
Jim Pennino

Remove .spam.sux to reply.

2957. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 04:35:59 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B4663F.6E4EC%dbowey@comcast.net>
Source record: 39015
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/6/07 8:21 PM, in article
isw-C85095.20210406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
wrote:

> In article <C2B3FA99.6DC3F%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:
>
>> On 7/6/07 12:15 PM, in article
>> isw-C7349C.12150506072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
>> wrote:
>>
>>> In article <C2B3C3A0.6DC14%dbowey@comcast.net>,
>>> Don Bowey <dbowey@comcast.net> wrote:
>>>
>>>> On 7/6/07 9:36 AM, in article
>>>> isw-F124E8.09362406072007@newsgroups.comcast.net, "isw" <isw@witzend.com>
>>>> wrote:
>>>>
>>>>> In article <C2B399E5.6DB60%dbowey@comcast.net>,
>>>>> Don Bowey <dbowey@comcast.net> wrote:
>>>>>
>>>>>> On 7/5/07 10:27 PM, in article 468dd266$0$20597$4c368faf@roadrunner.com,
>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>
>>>>>>>
>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>> news:C2B25726.6D728%dbowey@comcast.net...
>>>>>>>> On 7/5/07 12:00 AM, in article
>>>>>>>> 468c96c3$0$16567$4c368faf@roadrunner.com,
>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>
>>>>>>>>>
>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>> news:C2B1DFAF.6D6BD%dbowey@comcast.net...
>>>>>>>>>> On 7/4/07 8:42 PM, in article
>>>>>>>>>> 468c6838$0$4664$4c368faf@roadrunner.com,
>>>>>>>>>> "Ron
>>>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...

>>>>>>>>>>>> On 7/4/07 10:16 AM, in article
>>>>>>>>>>>> 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>>>>>>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>>>>>>>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>>>>>>>>>>> On 7/4/07 7:52 AM, in article
>>>>>>>>>>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>>>>>>>>>>> "Ron
>>>>>>>>>>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> <snip>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>>>>>>> sum and difference frequencies.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> No, they aren't the same at all, they only appear to be the
>>>>>>>>>>>>>> same
>>>>>>>>>>>>>> before
>>>>>>>>>>>>>> they are examined. The two sidebands will not have the correct
>>>>>>>>>>>>>> phase
>>>>>>>>>>>>>> relationship.
>>>>>>>>>>>>>
>>>>>>>>>>>>> What do you mean? What is the "correct"
>>>>>>>>>>>>> relationship?
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>>>>>>>>>> carrier
>>>>>>>>>>>>>> with independent sidebands, however.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> (For sines it is
>>>>>>>>>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] -
>>>>>>>>>>>>>>> sin[a+b+90degrees])
>>>>>>>>>>>>>>> = 0.5 * (sin[a-b+90degrees] +
>>>>>>>>>>>>>>> sin[a+b-90degrees])
>>>>>>>>>>>>>>>)
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> --
>>>>>>>>>>>>>>> rb
>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>> When AM is correctly accomplished (a single voiceband signal is
>>>>>>>>>>>>> modulated
>>>>>>>>>>>>
>>>>>>>>>>>>> The questions I posed were not about AM. The
>>>>>>>>>>>>> subject could have been viewed as DSB but that
>>>>>>>>>>>>> wasn't the specific intent either.
>>>>>>>>>>>
>>>>>>>>>>>> What was the subject of your question?
>>>>>>>>>>
>>>>>>>>>> Copying from my original post:
>>>>>>>>>>
>>>>>>>>>> Suppose you have a 1 MHz sine wave whose amplitude
>>>>>>>>>> is multiplied by a 0.1 MHz sine wave.
>>>>>>>>>> What would it look like on an oscilloscope?
>>>>>>>>>> What would it look like on a spectrum analyzer?
>>>>>>>>>>
>>>>>>>>>> Then suppose you have a 1.1 MHz sine wave added
>>>>>>>>>> to a 0.9 MHz sine wave.
>>>>>>>>>> What would that look like on an oscilloscope?
>>>>>>>>>> What would that look like on a spectrum analyzer?
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>
>>>>>>>> So the first (1) is an AM question and the second (2) is a non-AM
>>>>>>>> question......
>>>>>>>
>>>>>>> What is the difference between AM and DSB?
>>>>>>>
>>>>>>>
>>>>>>>
>>>>>>
>>>>>> AM is a process. DSB (double sideband), with carrier, is it's most
>>>>>> simple
>>>>>> result. DSB without carrier (suppressed carrier dsb) requires using, at
>>>>>> least, a balanced mixer as the AM multiplier.
>>>>>
>>>>> And requires, for proper reception, that a carrier be recreated at the
>>>>> receiver which has not only the amplitude of the original,
>>>>
>>>> There is no need at all to match the carrier amplitude of the original
>>>> signal. You can use an excessively high carrier injection amplitude with
>>>> no
>>>> detrimental affect, but if the injected carrier is too little, the
>>>> demodulated signal will be over modulated and sound distorted.
>>>>

>>>>> but also its exact phase.
>>>>
>>>> Exact, not required. The closer the better, however.
>>>
>>> Well, OK, the phase must at least bear a constant relationship to the
>>> one that created the signal. If you inject a carrier that has a
>>> quadrature relationship to the one that created the DSB signal, the
>>> output will be PM (phase modulation). In between zero and 90 degrees,
>>> the output is a combination of the two. If the injected carrier is not
>>> at precisely the proper frequency, the phase will roll around and the
>>> output will be unintelligible.
>>
>> Not unintelligible.... Donald Duckish.
>
> I think you are confusing *single* sideband, for which that is correct,
> and *double* sideband (which we were discussing), for which it is not
> true.

What do you propose the term be for the output of a slightly de-tuned
demodulator of a DSB sans carrier, signal?

>
>> On a more practical side, however, most receiver filters for ssb will
>> essentially remove one sideband if there are two, and can attenuate a
>> carrier so the local product detector can do it's job resulting in improved
>> receiving conditions. But this is more advanced than the Ops questions.
>
> Doing it that way will work, but it's not "fair", because you are not
> actually demodulating a DSB signal (which was the subject of the
> discussion).

I don't believe the OP stated whether the DSB signal was with or without
carrier. If without carrier, demodulation is certainly called for. If with
carrier, it hardly merits discussion.

>
> Isaac

2958. High Sierra hs-1500 Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 05:04:26 UTC
From: Richcraiglist@gmail.com
Message-ID: <1183784666.661803.241890@d30g2000prg.googlegroups.com>
Source record: 39016

I have a High Sierra HS-1500 and I would like to get a copy of the
manual for this antenna.

Thank you,
Rich

2959. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 05:47:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <138ua73tf1oc368@corp.supernews.com>
Source record: 39017
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw wrote:
> In article <138tudplgcuuq26@corp.supernews.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
>>. . .
>> DSB stands for Double SideBand. Although I suppose an FM signal could be
>> called DSB because it has two *sets* of sidebands
>
> Um, actually, it has a lot more than that. A carrier FM modulated by a
> single sine wave has an infinite number of sidebands. If the modulating
> signal is more complex, then things get really complicated.

Sometimes it's difficult to communicate. A "set" can consist of more
than one. In the case of FM, each set includes an infinite number,
although only a limited number contain a significant amount of energy.
The remainder can be ignored without any substantial degradation of
received signal quality. This is true regardless of the complexity of
the modulating signal.

Roy Lewallen, W7EL

2960. Re: Joining two antennas question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 09:01:45 UTC
From: Charles <tadaaa123**NOSPAM***@hotmail.com>
Message-ID: <ZDIji.3622$ZA.1654@newsb.telia.net>
Source record: 39018

> Why not use a UHF/VHF combiner network? They used to be sold in
> electronics stores like Radio Shack, and come in a couple of versions
> including all 300 Ohm, and 300 Ohm antennas into a 75 Ohm set.

You can't do that. Its too easy! The solutions HAS to be complicated. That is the first rule of homebrew. How else do you intend to impress (uneducated) friends?

2961. Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 11:06:56 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1183806416.629704.23340@m37g2000prh.googlegroups.com>
Source record: 39019
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Is the center conductor of the el-cheapo RG-6 found in home
improvement stores always copperweld? It seems to be 18AWG copperweld
but maybe I'm being naive...

Is this part of the RG-6 mil-spec, or just the way they make it today?

Tim KA0BTD

2962. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 11:10:54 UTC
From: Dave <noone@nowhere.com>
Message-ID: <2xKji.138$lY4.1@trndny07>
Source record: 39020
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

<jimp@specsol.spam.sux.com> wrote in message
news:o7h3m4-4vf.ln1@mail.specsol.com...
> In rec.radio.amateur.antenna art <aunwin@insightbb.com> wrote:
>
> Babbling, delusional nonsense.
>
> Seek help.
>
> There are drugs that may help your condition if you are treated
> early enough.
>
> --
> Jim Pennino

let them go jim... art and radium were made for each other.

2963. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 11:15:44 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ABKji.239$qu5.204@trndny02>
Source record: 39021
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

the only way to tell is to take a sample and strip it down. some rg-6 is copper covered steel, some is solid copper.

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message news:1183806416.629704.23340@m37g2000prh.googlegroups.com...
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD
>

2964. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 11:38:12 UTC
From: phil-news-nospam@ipal.net
Message-ID: <f6ntv401fp9@news5.newsguy.com>
Source record: 39022
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In alt.tv.tech.hdtv "Roger (K8RI)" <validaddress@my.com> wrote:

| The ones on my quadature array were a lot stronger than that. I
| finally gave up as it's too difficult to get the proper spacing from
| side to side across the entire UHF band. Besides at 90 feet I point
| them (I have one to the NW and one to the S) to the weak UHF stations
| and they do very well on the much stronger VHF.

If the desired signal is a single channel, two antennas connected 180
degrees out of phase (or flip one upside down), where they are spaced
an odd multiple wavelength from the desired source, and equadistant to
the multi-frequency side source (if there is a specific noisy source),
might do the trick.

You might look into these antennas:

http://simplicitytool.com/mu_series_uhf_quad_array.htm
http://simplicitytool.com/log%20periodic%20arrays.htm

--
|---------------------------------------/---------------------------------|
| Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
| first name lower case at ipal.net / spamtrap-2007-07-07-0628@ipal.net |
|---------------------------------/---------------------------------------|

2965. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 13:52:24 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183816344.355455.221180@g13g2000hsf.googlegroups.com>
Source record: 39023
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
On 7 Jul, 04:10, "Dave" <n...@nowhere.com> wrote:
> <j...@specsol.spam.sux.com> wrote in message
>
> news:o7h3m4-4vf.ln1@mail.specsol.com...
>
> > In rec.radio.amateur.antenna art <aun...@insightbb.com> wrote:
>
> > Babbling, delusional nonsense.
>
> > Seek help.
>
> > There are drugs that may help your condition if you are treated
> > early enough.
>
> > --
> > Jim Pennino
>
> let them go jim... art and radium were made for each other.

David, you had every opportunity to debate the issue
as everybody else did on this newsgroup. Unfortuately
this newsgroup is not monitored which allows movement
from civil and scientific debate.
Thus in the quest of true scientific and civil debate
I have for the moment engaged in debate with Tom W8TI who
is extremely skilled in the art of antennas and certainly
regarded as a man of repute which excels that of resident
members of this group. I suggest that you both follow
that debate which is being held in a gentlemanly fashion
and compare it to the tack often taken on this newsgroup.
Art
```

2966. Re: Belden RG-8X

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 14:16:26 UTC
From: carl <coax_dude@coaxdude.org>
Message-ID: <468FA03A.7AECDF69@coaxdude.org>
Source record: 39024

hi

I like Amphenol PL-259 83-1SP-1050 from Mouser.com
(no min. orders, ships from TX same day no bs 'handling' charges either
!)

2.63 for 10 or more
2.28 for 25 or more
2.04 for 100 - 499

http://www.mouser.com/search/ProductDetail.aspx?R=83-1SP-1050virtualkey52310000virtualkey523-83-1SP-1050

I get 100 at a time and sell/trade them at the monthly club meeting.

carl

2967. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 14:26:20 UTC
From: Ancient_Hacker <grg2@comcast.net>
Message-ID: <1183818380.484315.102610@q75g2000hsh.googlegroups.com>
Source record: 39025
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

> I want to know how such a tiny device can operate at such a long
> wavelength. Unfortunately, that info is classified by the FBI/CIA, and
> then won't let me or any USA citizen find out about it.

No X-files stuff needed.....

The secret is that the receiver only needs a tiny amount of bandwidth,
not more than a few hertz.
So even with a teensy, tiny, itsy-bitsy, microscopic signal, all that
an antenna that's much shorter than a wavelength can capture, that's
still enough signal to be discernible.

A cheap and simple 60KHz crystal filter has under one Hertz
bandwidth. 60KHz mini crystals are like 32 cents each at digi-key.

Voila!

2968. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 14:27:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lv7v83pl75dgig25sjuutt0ibqiv8a4mvj@4ax.com>
Source record: 39026

On Sat, 07 Jul 2007 06:52:24 -0700, art <aunwin@insightbb.com> wrote:

>Unfortuately
>this newsgroup is not monitored which allows movement
> from civil and scientific debate.

My, my, my, Arthur!

If a monitored forum for your amateur radio theories was that
IMPORTANT; then you would submit them to a monitored forum instead of
here. Given you find this is such a poor venue (oddly your choice of
forum), it follows that the poor quality of your work can only survive
here, doesn't it?

73's
Richard Clark, KB7QHC

2969. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 14:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <a3l4m4-h7n.ln1@mail.specsol.com>
Source record: 39027
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

In rec.radio.amateur.antenna Dave <noone@nowhere.com> wrote:

> <jimp@specsol.spam.sux.com> wrote in message
> news:o7h3m4-4vf.ln1@mail.specsol.com...
> > In rec.radio.amateur.antenna art <aunwin@insightbb.com> wrote:
> >
> > Babbling, delusional nonsense.
> >
> > Seek help.
> >
> > There are drugs that may help your condition if you are treated
> > early enough.
> >
> > --
> > Jim Pennino

> let them go jim... art and radium were made for each other.

Radium is a silly-ass, ignorant child.

Art reminds me of my mother-in-law in the very early stage of her
dementia when no one wanted to talk about it or admit there was a
problem.

--
Jim Pennino

Remove .spam.sux to reply.

2970. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 15:08:09 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183820889.082280.169400@o61g2000hsh.googlegroups.com>
Source record: 39028

On 7 Jul, 07:27, Richard Clark <kb7...@comcast.net> wrote:
> On Sat, 07 Jul 2007 06:52:24 -0700, art <aun...@insightbb.com> wrote:
> >Unfortuately
> >this newsgroup is not monitored which allows movement
> > from civil and scientific debate.
>
> My, my, my, Arthur!
>
> If a monitored forum for your amateur radio theories was that
> IMPORTANT; then you would submit them to a monitored forum instead of
> here. Given you find this is such a poor venue (oddly your choice of
> forum), it follows that the poor quality of your work can only survive
> here, doesn't it?
>
> 73's
> Richard Clark, KB7QHC

Richard,
watch the debate on Eham that is held in gentlemany fashion
and with a proponent of knoweledge to which you aspire to
and have failed miserably7 Tom is only one of many that
have moved to E ham because of the discusting and rude behaviour
of you and many others. Experts see no reason to discuss radio
with such an ignoramous as you and leave. I am engaging him in debate
about radiation on a point by point scientific manner and to
achieve such a debate I have followed him to the E ham forum
so such a debate could occur. For the lemmings that follow you I
suggest you review the advisability of the continuance of your
choice of leader. Please excuse my absence from this thread
for a short while while I am away enjoying a debate regarding
ham radio with an expert in a areana of experts. Ofcourse I will
return to watch your writhing in agony.
Art Unwin KB9MZ.....XG (uk)

2971. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 15:51:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p5cv83d0ng550d1kekos8ugq2nnqnqrtoi@4ax.com>
Source record: 39029

On Sat, 07 Jul 2007 08:08:09 -0700, art <aunwin@insightbb.com> wrote:

>watch the debate on Eham that is held in gentlemany fashion
>and with a proponent of knoweledge to which you aspire to
> and have failed miserably7

Hi Arthur,

Who cluod be oeffnded when they can't ustnanderd you for all the
mipellssings7

>Tom is only one of many

Yes he is.

>Please excuse my absence from this thread
>for a short while while I am away enjoying a debate regarding
>ham radio with an expert in a areana of experts.

Odd you leave that sandbox and keep coming back here, isn't it? ;-)

When you do, enjoy my new thread "20 Questions - Redux." (That is WHY
you keep returning n'est pas?)

73's
Richard Clark, KB7QHC

2972. Inverted V - Steepness VS Height

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 16:17:13 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <nZKdnYg9vajqIRLbnZ2dnUVZ_ruknZ2d@insightbb.com>
Source record: 39030

I have a multi band dipole strung up as an inverted Vee from my 80 ft tower. I have a run-out of only 50 ft due to the small size/shape of my lot. If I pull the top of the Vee all the way to the top of the tower, the Vee gets quite steep - only 30 degrees. Of course I can make the angle wider by lowering the apex of the Vee. So what is more important, height or slope? What would be the best compromise? BTW, the antenna is an Alpha Delta DX-LB Plus 160M, 80M, 40M, 20M, 10M.

--
Bob D. ND9B

2973. 20 Questions - Redux

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 16:52:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ildv83t3smtttts0p10au81bq63p45e2tvq@4ax.com>
Source record: 38881

Doctoral Candidate (DC):
"Announcing my THESIS OF ELECTRO-MAGNETIC RADIATION!!!!!
I am now responsive to gentlemany posed questions as long as they
are on topic about emmigration laws."

Child's 1st question:
"Is it bigger than a toaster?"

DC:
"Are you mocking the pinochle of academicacheivement of
the past 12 or 5 years?"

Child's 2nd question:
"You are in my sandbox and Mom says I can play too.
Is it bigger than a toaster?"

DC
"You first have to understand about Isaac Ohm's law..."

[250 postings omitted here for continuity's sake.]

Child's 253rd question:
"Is it bigger than a toaster?"

DC:
"If yours is too big, throw it away and get another sized one.

"The proper question is it bigger than a breadbox. I don't have
time to do your work for you!"

Child's 254th question:
"okay, Is it bigger than a breadbox?"

DC:
"Although I haven't studied for a phD in Taosting, I read all of
Betty Crocker and decided new books will reveal how those
recipes were in errur and based on the wrong ingradients.
The field of Tao resistance is part of my THESIS OF
ELECTRO-MAGNETIC RADIATION because "real Toast"
is bun shaped surrounding the static flour particles that are
equilibriumized into cinnamon-resonant arrays."

Child's 255th question:
"ummm, is your thingy smaller than a toaster?"

DC:
"Ignoramus! You say you are qualified to talk about Tao resisters
but you are not qualified. You are a shame to Toasting community

and I can get better questions from eCooks where the Piper's son
worships at my feet."

Child's last question:
"Will his mother let him make toast?"

73's
Richard Clark, KB7QHC

2974. Re: Inverted V - Steepness VS Height

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:09:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lohv83t9fjih7sjtgp6f2oc32fbljnsh6u@4ax.com>
Source record: 38882

On Sat, 7 Jul 2007 12:17:13 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

> So what is more important, height or slope?

Hi Bob,

Go for height.

>What would be the best compromise?

With 160-10M coverage, you are already at compromise.

I presume by the statement about 30 degrees, that this is the included
angle of the V. I can't imagine you have enough range of variation to
make much difference there (if in fact you would see any improvement
or loss for the attempt if you did have the range).

A simple test at 160M would be to see how broad the match is. The
broader it is, then it is too close to earth (more loss). The high
bands should work quite well (even if you need a tuner).

73's
Richard Clark, KB7QHC

2975. Re: How can such a small device -- a wrist watch -- receive such long-wave radio signals?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:26:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <8hhv831m4b4e30evi2q5n9oio57j98f3mi@4ax.com>
Source record: 38884
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless,sci.physics

Ancient_Hacker <grg2@comcast.net> hath wroth:

>The secret is that the receiver only needs a tiny amount of bandwidth,
>not more than a few hertz.

It hertz to think about it.

>So even with a teensy, tiny, itsy-bitsy, microscopic signal, all that
>an antenna that's much shorter than a wavelength can capture, that's
>still enough signal to be discernible.
>
>A cheap and simple 60KHz crystal filter has under one Hertz
>bandwidth. 60KHz mini crystals are like 32 cents each at digi-key.

Less than 1Hz BW won't work for WWVB.

From:
WWVB Radio Controlled Clocks:
Recommended Practices for Manufacturers and Consumers
<http://tf.nist.gov/general/pdf/1976.pdf>
Section 8A.
"The RF bandwidth of the receiver should be narrow,
typically ï¿½10 Hz or less."

The data rate of WWVB is 1 bit/sec, which occupies about 4Hz bandwidth
in a practical receiver. The bandwidth also needs to compensate for
2x6 tuning fork crystal tolerance and drift which can vary radically
by vendor and quality:
<http://www.worldbond.com/quartz-fork.php>
ï¿½50ppm initial accuracy yields ï¿½3Hz, which is where the rather wide
20Hz bandwidth spec came from.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2976. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:26:42 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1183829202.121325.202750@r34g2000hsd.googlegroups.com>
Source record: 38883

On 6 jul, 01:20, WA4...@gmail.com wrote:
> We are going to drop using the shunt feed tower no matter how hard we
> work on it we don't think it's going to work any better that it does
> right now.
>
> We have two choices :
>
> We have two towers spaced 250 feet apart the towers are 95 feet
> high. We could install a 'flat top' wire run it from tower to tower.
>
> The horizontal run tower to tower would be 250 feet : The vertical
> drop to the ground would be 90 feet or so.
>
> The vertical wire would be connected to the flat top wire dead
> center
>
> We could series feed it against a good ground; 8 to 15 radials 500
> feet long
>
> Choice two:
>
> We have two towers spaced about 140 feet they are 150 feet high The
> 'flat top' wire would run 140 feet horizontal tower to tower The
> vertical drop would be 150 feet. same as above vertical wire
> connected dead center of flat top.
>
> series feed working against 8 to 15 500 foot ground radials.
>
> My question to the group:
>
> Is it better to have more (150 feet) vertical wire in the air with
> LESS (140 feet) flat top wire or :
>
> LESS vertical wire in the air (90 feet) but MORE flat top wire 250
> feet??????
>
> The flat top wire is insulated from the towers using power line
> fiberglass rods
>
> NDB freq is 529 KC
>
> P.S.
>
> Would their be a big difference if the 'flat top' has two runs of

> 3/8 aluminum cable side by side spaced about 30 inches ?? or
> would one 3/8 cable do the job???
>
> Thank you for your input
>
> Dave WA4SZE

Hi Dave,

I would go (if mechanically feasible) for the longer vertical run (150ft). The resultant radiation resistance will be higher; hence the losses in the ground will be less.

Yes it helps using two separated wires for the horizontal sections. It increases the top capacitance. This will result in an easier match (smaller series inductor) and you will get more current into the top of the vertical wire. More current in the top of the vertical wire increases the radiation resistance.

Higher radiation resistance will improve the radiation efficiency.

Best regards,

Wim
PA3DJS
www.tetech.nl

2977. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:29:29 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-FD7D62.10292907072007@newsgroups.comcast.net>
Source record: 38885
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2B4663F.6E4EC%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

--bunch of stuff trimmed off--

> >>> Well, OK, the phase must at least bear a constant relationship to the
> >>> one that created the signal. If you inject a carrier that has a
> >>> quadrature relationship to the one that created the DSB signal, the
> >>> output will be PM (phase modulation). In between zero and 90 degrees,
> >>> the output is a combination of the two. If the injected carrier is not
> >>> at precisely the proper frequency, the phase will roll around and the
> >>> output will be unintelligible.
> >>
> >> Not unintelligible.... Donald Duckish.
> >
> > I think you are confusing *single* sideband, for which that is correct,
> > and *double* sideband (which we were discussing), for which it is not
> > true.
>
> What do you propose the term be for the output of a slightly de-tuned
> demodulator of a DSB sans carrier, signal?

I'm not sure it has a name. The output is constantly swishing around
between AM and PM, at a rate determined by the frequency error of the
reinjected carrier. Most detectors will have a problem with it.

Isaac

2978. Re: Anti-climbing shield for tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:36:29 UTC
From: "David G. Nagel" <nagel.david@sbcglobal.net>
Message-ID: <RcQji.3794$bz7.1759@newssvr22.news.prodigy.net>
Source record: 38886

Bryan wrote:
> John Doe wrote:
> [snip]
>> Then a fence around your property, with signs ... DANGER 1,000,000 MA
> HI-VOLTAGE...
> [snip]
>
> Eons ago, I recall seeing an official-looking sign that read, "DANGER:
> 1,000,000 Ohms" ;^)
> Bryan WA7PRC
>
>
I prefer one that says 1,000,000 Mhos.

Dave N

2979. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:43:24 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-BAF518.10432307072007@newsgroups.comcast.net>
Source record: 38887
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468f14f2$0$16528$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-67F596.12192706072007@newsgroups.comcast.net...
> > In article <468dcf2b$0$16588$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "isw" <isw@witzend.com> wrote in message
> >> news:isw-15D472.09430705072007@newsgroups.comcast.net...
> >> > In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >> >
> >> >> "isw" <isw@witzend.com> wrote in message
> >> >> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
> >> >> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
> >> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >> >>
> >> >> <snip>
> >> >>
> >> >> >>
> >> >> >> While it might not be obvious, the two cases I
> >> >> >> described are basically identical. And this
> >> >> >> situation occurs in real life, i.e. in radio signals,
> >> >> >> oceanography, and guitar tuning.
> >> >> >
> >> >> > The beat you hear during guitar tuning is not modulation; there
> >> >> > is
> >> >> > no
> >> >> > non-linear process involved (i.e. no multiplication).
> >> >> >
> >> >> > Isaac
> >> >>
> >> >> In short, the human auditory system is not linear.
> >> >> It has a finite resolution bandwidth. It can't resolve
> >> >> two tones separted by a few Hertz as two separate tones.
> >> >> (But if they are separted by 100 Hz they can easily
> >> >> be separated without hearing a beat.)
> >> >
> >> > Two tones 100 Hz apart may or may not be perceived separately;
> >> > depends
> >> > on a lot of other factors. MP3 encoding, for example, depends on the
```

> >> >> > ear's (very predictable) inability to discern tones "nearby" to
> >> >> > other,
> >> >> > louder ones.
> >> >>
> >> >> I'll remember that the next time I'm tuning
> >> >> an MP3 guitar.
> >> >>
> >> >> >
> >> >> >> The same affect can be seen on a spectrum analyzer.
> >> >> >> Give it two frequencies separated by 1 Hz. Set the
> >> >> >> resolution bandwidth to 10 Hz. You'll see the peak
> >> >> >> rise and fall at 1 Hz.
> >> >> >
> >> >> > Yup. And the spectrum analyzer is (hopefully) a very linear system,
> >> >> > producing no intermodulation of its own.
> >> >> >
> >> >> > Isaac
> >> >>
> >> >> What does a spectrum analyzer use to arive at
> >> >> amplitude values? An envelope detector?
> >> >> Is that linear?
> >> >
> >> > I'm sure there's more than one way to do it, but I feel certain that
> >> > any
> >>
> >> Which of them is linear?
> >
> > A well-designed filter running into a bolometer would be. You can make
> > the filter narrow enough to respond to only one frequency component at
>
> Any real spectrum analyzer has a lower limit
> to its resolution bandwidth, does it not?
> The resolution bandwidth of the human ear is non-zero
> and not really adjustable, is it not?
>
> > the time, and a bolometer just turns the signal power into heat; nothing
> > nonlinear there...
>
> Really?
> You said you are a physicist/engineer.
> What does "linear" mean?

Let's not get too far off the subject here. We were discussing whether
the "tuning beat" that you use to tune a musical instrument involved a
nonlinear process (ie. "modulation"). I said that it does not, and that
it could be detected by instrumentation which was proveably linear (i.e.
not "perfectly" linear, because that's not required, but certainly
linear enough to discount the requirement for "modulation").

That's all.

Isaac

2980. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:46:55 UTC
From: richardharrison@webtv.net
Message-ID: <23932-468FD18F-98@storefull-3251.bay.webtv.net>
Source record: 38888

WA4SZE wrote:
"I have shunt fed a 120 foot high Rohn 25G tower."

The Rohn has a 1-ft face, so the h/d is about 120. That`s OK. What`s wacko is a 23-degree tower over (8) 200-ft radials at 529 KHz. Ground connection resistance is high and eating up all the signal.

Shunt - feeding is OK. Bill Orr and Stu Cowan give feed capacitors for scalimg in "All About Vertical Antennas".

Brown, Lewis and Epstein would be disappointed with your radials. Shoot for the broadcast practice of (120) evenly distributed around from the tower base.

A short tower radiates almost as well as a 1/4-wave. but it has a very low radiation resistance so can`t tolerate any loss resistance.

Kraus gives advice for Electrically Small Antennas in the 3rd edition of "Antennas". Page 710 says:
"To increase the radiation efficiency requires an increase in the radiation resistance Rr or a decrease in the loss resistance Rl or both.

The SWR of a dummy load usually looks fine, but radiation is just incidental.

Best regards, Richard Harrison, KB5WZI

2981. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:49:31 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <nhjv83tqvjlsdpi1cdu503chs3utivq8u7@4ax.com>
Source record: 38889
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

art <aunwin@insightbb.com> hath wroth:

You might want to learn to use a text editor to remove most of the quoted text. I can't stand to read my own writings more than once.

>I believe that the standard example of radiation referred to above
>is in error.

That's fine. Kindly supply a replacement for Maxwell's Equations and I'll entertain the possibility of error. I'm sure there's a Nobel Price awaiting you for the effort.

>I do not believe that radiation consists of fields of any sort
> but consists of ejected static particles in form of a swarm.

I believe the corpuscle theory of light and radiation went down in flames about 180 years ago. Incidentally, "static" means not moving, which precludes anything that is ejected or swarms. Try dynamic instead.

>I have asked the Eham forum to wade in on that one since it
>appears they have more scientifically molecular inclined members.

My molecules are just as scientific as any ham radio operator. Are you suggesting that my molecules are in any way inferior?

>The only cycle that repeates in radiation is the tank circuit of a
>diagmagnetic material which is resonant i.e. equal capacitance and
>inductance.

A resonant circuit is characterized by equal capacitive reactance and inductive reactance, not equal capacitance and inductance.

Diamagnetic material is great for demonstrating magnetic levitation, but rather useless for anything in a cheap WWVB receiver. Incidentally, all materials have diamagnetic properties to some degree.

>Seems like the posts are relying on propagating fields
>which to me is an error.

Well, the WWVB transmitters are in Colorado. I'm in California. The signals did not arrive via bus, truck, airplane, train, or carrier pigeon. Lacking any other obvious transportation methods, I suspect they arrived by electromagnetic propagation.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2982. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 17:57:27 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-F9801A.10572607072007@newsgroups.comcast.net>
Source record: 38890
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
In article <468f07a0$0$24739$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-9D8AE6.10201105072007@newsgroups.comcast.net...
> > In article <468d0174$0$3183$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "John Fields" <jfields@austininstruments.com> wrote in message
> >> news:8ktp839la05dj6t049kidjbpkj7rkf98ii@4ax.com...
> >> > On Thu, 5 Jul 2007 00:00:45 -0700, "Ron Baker, Pluralitas!"
> >>
> >> <snip>
> >>
> >> >>>>>
> >> >>>>> When AM is correctly accomplished (a single voiceband signal is
> >> >>>>> modulated
> >> >>>>
> >> >>>> The questions I posed were not about AM. The
> >> >>>> subject could have been viewed as DSB but that
> >> >>>> wasn't the specific intent either.
> >> >>>
> >> >>> What was the subject of your question?
> >> >>
> >> >>Copying from my original post:
> >> >>
> >> >>Suppose you have a 1 MHz sine wave whose amplitude
> >> >>is multiplied by a 0.1 MHz sine wave.
> >> >>What would it look like on an oscilloscope?
> >> >>What would it look like on a spectrum analyzer?
> >> >>
> >> >>Then suppose you have a 1.1 MHz sine wave added
> >> >>to a 0.9 MHz sine wave.
> >> >>What would that look like on an oscilloscope?
> >> >>What would that look like on a spectrum analyzer?
> >> >
> >> > ---
> >> > The first example is amplitude modulation precisely _because_ of the
> >>
> >> Is there multiplication in DSB? (double sideband)
> >
> > Yes, and in fact, that multiplication referred to above creates a
```

> > DSB-suppressed-carrier signal. To get "real" AM, you need to add back
> > the carrier *at the proper phase*.
>
> So does the multiplication in the first example really make
> it amplitude modulation?

Yes, because the output signal varies in amplitude with modulation. For suppressed carrier SSB or DSB, the output is zero when there's no modulating signal, while for "traditional AM", the output is 50% for no modulation.

Compare to FM or PM, where the output is constant regardless of the modulation level. True, FM has a lot of sidebands that vary in amplitude, but if you add them all together, the output is constant.

Run an SSB, DSB, or AM rig into a dummy load and it'll get hotter with modulation, while with FM the temperature won't change.

--

But recall that if you take that DSB signal you got by multiplication, and reinject the carrier in quadrature, you no longer have amplitude modulation.

Isaac

2983. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 18:31:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u2jv83da9c9m3l1r9lsfdll19hthbjmidd@4ax.com>
Source record: 38891

On Sat, 07 Jul 2007 08:08:09 -0700, art <aunwin@insightbb.com> wrote:

> watch the debate on Eham that is held in gentlemany fashion

What a howler!

Thanx Arthur, I did just that and it seems to conform to that old observation that a gentlemany is one who stands up in his bathtub to take a pee:

> by KB9CRY on July 7, 2007
>... when you make up the logic one must understand that it may have no real basis in the real world.

> by KB9MZ on July 7, 2007
>Sir, I do not know who you are not having read any of your writings,
now there's a friendly, inclusive response.
>I meant no respect to you by not asking for your participation
aside from the obvious logic fault (or is it a deliberate spit in the face?) - isn't this like telling someone to f**k off?

No doubt from his response (with all the characteristic flair of our own correspondence here):
>y KB9CRY on July 7, 2007
>And back to you sir, then take your personal debate with Tom offline and out of the public forum.

Being coy is for nancy-boys, not gentleman.

However, the gauntlet seems to slung around with abandon, also typical here:
>May I also remind you that in the past week or so I offered a theses to all
>that I drew up which you have acknoweledged and read and thus
>could have participated in a civil discussion. You chose not to do so.

So, by your own estimate, an uncivil discussion found in the land of honey and myrrh - heaven forfend! Seems you have found a friend to your theories. And then suddenly lost! How can this be?

Also characteristically saccharine and vituperative by turns, we find you complaining to the same lyrics we are so familiar with here:
> by KB9MZ on July 4, 2007
>I have presented a thesis on the process of radiatian
>progression from a static particle to a final receiving antenna.
>The progression starts from Gaussian law of static which is rejected by this group

Of course, the gentlemany serve up their comments in much the same
manner as the vipers offer here:
> by GM4AHW on June 27, 2007
>Guys, this gentleman is pulling our collective legs.
>I have read interminable postings of his in various places,
>and it all comes to the same thing. Diddly-squat.

> by KG6WOU on June 30, 2007
>Yet, you seem to have an endless amount of time talking about it. ...
>Why does Monty Python comes to mind here?

I hear the same hymn so often sung here with:
> by KB9MZ on July 1, 2007
>Because hams resist change there are endless statements,
>words, denials and out of context repeats.

and the usual volume of micturition:
> by KB9MZ on July 1, 2007
>Yes, your play on words is exceptually good and exposes me
>for what I am, a troll and a liar and a fraud.
>The very idea that somebody could propose anything new
>when all have delicate noses such as you is absolutely rediculous.

and the follow-ons are as poetic as those found here:
> by GM4AHW on July 1, 2007
>Enough already! As you guys say.
>30 posts - more than any other current post in any of eHam's forums.
>Why is it that nuts always attract monkeys?

When 30 posts constitute a lengthy contribution, it would seem they
prefer their comic strips shorter, and not already colored in....

> by KB9MZ on July 1, 2007
>OK, OK, I get the message
>In America they say "You are with us or against us, ...
>Hopefully any reference to Gaussian antennas will be removed
>from the face of the earth so that hams will not get angry with me any more.

> by N3OX on July 1, 2007
>a feeling of persecution is not sufficient evidence of a scientific breakthrough.

********** WHEW! **********

Hi Arthur,

I can well see the improvement in decorum, the gentility of
discussion, and the high arcing flow of elevated concepts. Your
followers embrace your every word and wait breathless in anticipation
of your continued comments. The fawning admiration runs for 1 to 2
posts in a thread (presuming you write the first 2 posts).

The devotion of your acolytes brings tears to their eyes. Or is it
the spit they endure with their upturned faces?

Maybe you could get your thesis published in the Republican National Committee's next platform under emigration reform.

73's
Richard Clark, KB7QHC

2984. Re: Inverted V - Steepness VS Height

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 18:51:52 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <p5ov83hfjlio4oddmrot5n963tkgc6nvp8@4ax.com>
Source record: 38892

On Sat, 7 Jul 2007 12:17:13 -0400, "Bob D." <bobmgtd@insightbb.com>
wrote:

>I have a multi band dipole strung up as an inverted Vee from my 80 ft tower.
>I have a run-out of only 50 ft due to the small size/shape of my lot. If I
>pull the top of the Vee all the way to the top of the tower, the Vee gets
>quite steep - only 30 degrees. Of course I can make the angle wider by
>lowering the apex of the Vee. So what is more important, height or slope?
>What would be the best compromise? BTW, the antenna is an Alpha Delta DX-LB
>Plus 160M, 80M, 40M, 20M, 10M.

http://www.cebik.com/wire/vang.html

2985. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:23:39 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468fe7df$0$16560$4c368faf@roadrunner.com>
Source record: 38893
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

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"isw" <isw@witzend.com> wrote in message
news:isw-BAF518.10432307072007@newsgroups.comcast.net...
> In article <468f14f2$0$16528$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-67F596.12192706072007@newsgroups.comcast.net...
>> > In article <468dcf2b$0$16588$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >
>> >> "isw" <isw@witzend.com> wrote in message
>> >> news:isw-15D472.09430705072007@newsgroups.comcast.net...
>> >> > In article <468cf7f7$0$16602$4c368faf@roadrunner.com>,
>> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >> >
>> >> >> "isw" <isw@witzend.com> wrote in message
>> >> >> news:isw-FB6C92.00093805072007@newsgroups.comcast.net...
>> >> >> > In article <468bdadd$0$20558$4c368faf@roadrunner.com>,
>> >> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >> >>
>> >> >> <snip>
>> >> >>
>> >> >> >>
>> >> >> >> While it might not be obvious, the two cases I
>> >> >> >> described are basically identical. And this
>> >> >> >> situation occurs in real life, i.e. in radio signals,
>> >> >> >> oceanography, and guitar tuning.
>> >> >> >
>> >> >> > The beat you hear during guitar tuning is not modulation;
>> >> >> > there
>> >> >> > is
>> >> >> > no
>> >> >> > non-linear process involved (i.e. no multiplication).
>> >> >> >
>> >> >> > Isaac
>> >> >>
>> >> >> In short, the human auditory system is not linear.
>> >> >> It has a finite resolution bandwidth. It can't resolve
>> >> >> two tones separted by a few Hertz as two separate tones.
>> >> >> (But if they are separted by 100 Hz they can easily
>> >> >> be separated without hearing a beat.)
>> >> >>
```

>> >> >> > Two tones 100 Hz apart may or may not be perceived separately;
>> >> >> > depends
>> >> >> > on a lot of other factors. MP3 encoding, for example, depends on
>> >> >> > the
>> >> >> > ear's (very predictable) inability to discern tones "nearby" to
>> >> >> > other,
>> >> >> > louder ones.
>> >> >>
>> >> >> I'll remember that the next time I'm tuning
>> >> >> an MP3 guitar.
>> >> >>
>> >> >> >
>> >> >> >> The same affect can be seen on a spectrum analyzer.
>> >> >> >> Give it two frequencies separated by 1 Hz. Set the
>> >> >> >> resolution bandwidth to 10 Hz. You'll see the peak
>> >> >> >> rise and fall at 1 Hz.
>> >> >> >
>> >> >> > Yup. And the spectrum analyzer is (hopefully) a very linear
>> >> >> > system,
>> >> >> > producing no intermodulation of its own.
>> >> >> >
>> >> >> > Isaac
>> >> >>
>> >> >> What does a spectrum analyzer use to arive at
>> >> >> amplitude values? An envelope detector?
>> >> >> Is that linear?
>> >> >
>> >> > I'm sure there's more than one way to do it, but I feel certain that
>> >> > any
>> >>
>> >> Which of them is linear?
>> >
>> > A well-designed filter running into a bolometer would be. You can make
>> > the filter narrow enough to respond to only one frequency component at
>>
>> Any real spectrum analyzer has a lower limit
>> to its resolution bandwidth, does it not?
>> The resolution bandwidth of the human ear is non-zero
>> and not really adjustable, is it not?
>>
>> > the time, and a bolometer just turns the signal power into heat;
>> > nothing
>> > nonlinear there...
>>
>> Really?
>> You said you are a physicist/engineer.
>> What does "linear" mean?
>
> Let's not get too far off the subject here. We were discussing whether
> the "tuning beat" that you use to tune a musical instrument involved a

> nonlinear process (ie. "modulation").

Then linearity is at the core of the matter.
What does "linear" (or "nonlinear") mean to you?

> I said that it does not, and that
> it could be detected by instrumentation which was proveably linear (i.e.
> not "perfectly" linear, because that's not required, but certainly
> linear enough to discount the requirement for "modulation").

No nonlinearity is necessary in order to hear
a beat?
Where does the beat come from?

>
> That's all.
>
> Isaac

2986. Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:31:51 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.07.19.31.49.798607@from.qrz.com>
Source record: 38894

When electrically grounding one's station, is there any particular advantage of a single 8-foot ground rod over two 4-foot ground rods, or an 8-foot length of heavy gauge wire buried 6-12 inches under the ground?

2987. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:43:58 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6oqdvnpt1@usenet01.boi.hp.com>
Source record: 38895
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:468fe7df$0$16560$4c368faf@roadrunner.com...

First of all, do you think you could possibly learn to trim your posts?

> No nonlinearity is necessary in order to hear
> a beat?
> Where does the beat come from?

An audible beat tone is produced by the constructive and destructive
interference between two sound waves in air. Look at a pictorial
representation (in the time domain) of the sum of sine waves,of similar
amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
see it.

Bob M.

2988. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:44:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e2rv83huad1jk9nap6365bshjnhhjvggie@4ax.com>
Source record: 38896

On Sat, 07 Jul 2007 15:31:51 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>
>When electrically grounding one's station, is there any particular
>advantage of a single 8-foot ground rod over two 4-foot ground rods, or an
>8-foot length of heavy gauge wire buried 6-12 inches under the ground?
>

Hi Rick,

Ground is notable for having complex answers to simple questions. One
very good resource is:

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
REA BULLETIN 1751F-802
SUBJECT: Electrical Protection Grounding Fundamentals

Another resource can be found in:

DEEP EARTH GROUNDING vs SHALLOW EARTH GROUNDING
by
Martin D. Conroy and Paul G. Richard
Computer Power Corporation
Omaha, Nebraska

Both can be found somewhere on the Web. The first is a PDF, the
second is a web page. I don't know specific locations, but the
details above should be suitable to Google.

73's
Richard Clark, KB7QHC

2989. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:56:51 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-FD1D88.12565107072007@newsgroups.comcast.net>
Source record: 38897
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468f0515$0$30690$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

--snippage--

> >> That doesn't explain why the effect would come and go.
> >
> > I don't understand what effect you're referring to here.
>
> When I was tuned to the 3rd harmonic sometimes
> I would hear it and sometimes not.
> It would come and go rather abruptly. It didn't seem
> to be gradual fading.

Especially if the RF field is strong, there are a lot of mechanisms
which can create harmonics after the signal leaves the transmitter --
rusty fencing, or tooth fillings, for example. I can see how one of
those could be intermittent.

> >> But once again you have surprised me.
> >> Your explanation of the non-multiplied sidebands,
> >> while qualitative and incomplete, is sound.
> >
> > I'm a physicist/engineer, and have been for a long time. I have always
>
> The you understand Fourier transforms and convolution.

I suppose so; I've spent over fifteen years poking around in the
entrails of MPEG...

> > I don't understand what you are saying here either. And in my
> > experience, the term "modulation index" is more likely to show up in a
> > discussion of FM or PM than AM; are you using it interchangeably with
> > "modulation percentage"?

As I suspected -- just different words for the same thing.

So:

>> It looks to me that the tripple frequency sidebands
>> are there but the basic sidebands dominate.
>> Especially at lower modulation indexes.

With well-designed gear (or theoretically), for AM there will be no
other frequencies present except for the carrier and the ones

represented by the Fourier spectrum of the modulation -- one set either side of the carrier. That is only true, of course, as long as there is no overmodulation; that creates a *lot* of other junk, because there are periods where the carrier is entirely cut off.

So I still don't understand what you mean by "triple frequency sidebands" or "basic sidebands".

As I said in another post, modulation is a "rate effect", so there never should be any frequencies generated at multiples of the sidebands surrounding the fundamental; instead they are always identically as far from the harmonics as they are from the fundamental. Is that what you are calling "triple frequency sidebands"?

Isaac

2990. What Was "Radium's" Original Question ? -and- Has It Been Answered ? Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:58:43 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183838323.952440.157390@d30g2000prg.googlegroups.com>
Source record: 38898
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jun 29, 7:41 pm, Radium <gluceg...@gmail.com> wrote:
> Hi:
>
> Please don't be annoyed/offended by my question as I decreased the
> modulation frequency to where it would actually be realistic.
>
> I have a very weird question about electromagnetic radiation,
> carriers, and modulators.
>
> Is it mathematically-possible to carry a modulator signal [in this
> case, a pure-sine-wave-tone] with a frequency of 20 KHz and an
> amplitude of 1-watt-per-meter-squared on a AM carrier signal whose
> frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000)
> nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-
> eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-
> power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond?
>
> If it is not mathematically-possible, then please explain why.
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an
> extremely short amount of time. 10^-(1,000,000,000-to-the-
> power-10^1,000,000,000) nanosecond is even shorter because a
> nanosecond is shorter than a second.
>
> Giga-eon = a billion eons
>
> Eon = a billion years
>
> *nanocycle = billionth of a cycle
>
> Gigaphoton = a billion photons
>
> 10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one
> large large number.
>
> 10^1,000,000,000 = 10-to-the-power-1,000,000,000
>
> So you get:
>
> (10-to-the-power-1,000,000,000) to the power (10-to-the-

> power-1,000,000,000)
>
> 10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-
> power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)
>
> 10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-
> power-1,000,000,000) is an extremely small number at it equals 10-to-
> the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-
> to-the-power-1,000,000,000)]
>
> No offense but please respond with reasonable answers & keep out the
> jokes, off-topic nonsense, taunts, insults, and trivializations. I am
> really interested in this.
>
> Thanks,
>
> Radium

WHAT WAS "RADIUM'S" ORIGINAL QUESTION ?
-and- HAS IT BEEN ANSWERED ?

Hi:

Please don't be annoyed/offended by my question as I decreased the modulation frequency to where it would actually be realistic.

I have a very weird question about electromagnetic radiation, carriers, and modulators.

Is it mathematically-possible to carry a modulator signal [in this case, a pure-sine-wave-tone] with a frequency of 20 KHz and an amplitude of 1-watt-per-meter-squared on a AM carrier signal whose frequency is 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanocycle* every 10^1,000,000,000-to-the-power-10^1,000,000,000 giga-eons and whose amplitude is a minimum of 10^1,000,000,000-to-the-power-10^1,000,000,000 gigaphotons per 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond?

If it is not mathematically-possible, then please explain why.

10^-(1,000,000,000-to-the-power-10^1,000,000,000) second is an extremely short amount of time. 10^-(1,000,000,000-to-the-power-10^1,000,000,000) nanosecond is even shorter because a nanosecond is shorter than a second.

Giga-eon = a billion eons

Eon = a billion years

*nanocycle = billionth of a cycle

Gigaphoton = a billion photons

10^1,000,000,000-to-the-power-10^1,000,000,000 -- now that is one large large number.

10^1,000,000,000 = 10-to-the-power-1,000,000,000

So you get:

(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000)

10^-(1,000,000,000-to-the-power-10^1,000,000,000) = 10^-(10-to-the-power-1,000,000,000)-to-the-power-(10-to-the-power-1,000,000,000)

10^-(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000) is an extremely small number at it equals 10-to-the-power-NEGATIVE-[(10-to-the-power-1,000,000,000) to the power (10-to-the-power-1,000,000,000)]

No offense but please respond with reasonable answers & keep out the jokes, off-topic nonsense, taunts, insults, and trivializations. I am really interested in this.

Thanks,

Radium

2991. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 19:58:43 UTC
From: Warren Oates <warren.oates@gmail.com>
Message-ID: <01eb664b$0$9114$c3e8da3@news.astraweb.com>
Source record: 38899
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

In article <nhjv83tqvjlsdpi1cdu503chs3utivq8u7@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> Well, the WWVB transmitters are in Colorado. I'm in California. The
> signals did not arrive via bus, truck, airplane, train, or carrier
> pigeon. Lacking any other obvious transportation methods, I suspect
> they arrived by electromagnetic propagation.

Someone should put together a digest of some of your more pithy sayings.
I'm still chuckling over the one about "time is nature's way of making
sure things don't all happen at once" (that's from memory, I'm way too
lazy to actually look it up).

This swarm thing, is this connected to some modern (or maybe not)
theories about "nothing is really analogue, everything is digital in its
own way"?
--
W. Oates

2992. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:11:11 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <468ff303$0$24708$4c368faf@roadrunner.com>
Source record: 38900
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Bob Myers" <nospamplease@address.invalid> wrote in message
news:f6oqdv$npt$1@usenet01.boi.hp.com...
>
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:468fe7df$0$16560$4c368faf@roadrunner.com...
>
> First of all, do you think you could possibly learn to trim your posts?
>
>> No nonlinearity is necessary in order to hear
>> a beat?
>> Where does the beat come from?
>
> An audible beat tone is produced by the constructive and destructive
> interference between two sound waves in air. Look at a pictorial
> representation (in the time domain) of the sum of sine waves,of similar
> amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
> see it.
>
> Bob M.
>

How come you don't hear a 200 Hz beat
with a 1000 Hz tone and a 1200 Hz tone?
```

2993. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:23:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rksv83pukok2t7qumuhjlqcapcqms52ccm@4ax.com>
Source record: 38901
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

Warren Oates <warren.oates@gmail.com> hath wroth:

>In article <nhjv83tqvjlsdpi1cdu503chs3utivq8u7@4ax.com>,
> Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>> Well, the WWVB transmitters are in Colorado. I'm in California. The
>> signals did not arrive via bus, truck, airplane, train, or carrier
>> pigeon. Lacking any other obvious transportation methods, I suspect
>> they arrived by electromagnetic propagation.

>Someone should put together a digest of some of your more pithy sayings.

It's been done. One of my surviving former friends assembled such a
collection under the title of "Quotations of Chairman Jeff". It was
presented to me in manuscript form at a ceremonial roast (long story,
don't ask).

I assembled some of my early computah support horror stories and tech
poetry at:
<http://www.LearnByDestroying.com/nooze/support.txt>
<http://www.LearnByDestroying.com/poetry/poetry.htm>
I've stopped collecting such stories and writing poetry for fear that
I might stop, think, wake up, and immediately abandon the business for
something more sane.

>I'm still chuckling over the one about "time is nature's way of making
>sure things don't all happen at once" (that's from memory, I'm way too
>lazy to actually look it up).

It's not original. "Time is natures way of keeping everything from
happening at once." I stole that from an engineer friend that worked
on Cesium clocks for HP. It was hanging on the wall in his cubicle.
Someone had scribbled under it "Take your time, but leave mine alone".
I believe the original quote was from Woody Allen, but there may have
been earlier versions.

>This swarm thing, is this connected to some modern (or maybe not)
>theories about "nothing is really analogue, everything is digital in its
>own way"?

Digital is nothing more than an analog device with too much gain and
hysteresis, where the output is stuck at either high or low. Dig deep
enough into any digital contrivance, and you'll find analog devices
operating in this way. The real world is analog. (Just ask any

analog engineer).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2994. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:37:14 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <_PSji.5551$zA4.4234@newsread3.news.pas.earthlink.net>
Source record: 38902
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw wrote:
> Especially if the RF field is strong, there are a lot of mechanisms
> which can create harmonics after the signal leaves the transmitter --
> rusty fencing, or tooth fillings, for example.

What we used to call miscellaneous metallic junction intermod.

2995. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:41:12 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6otp9qtt1@usenet01.boi.hp.com>
Source record: 38903
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:468ff303$0$24708$4c368faf@roadrunner.com...
>
> "Bob Myers" <nospamplease@address.invalid> wrote in message
> news:f6oqdvnpt1@usenet01.boi.hp.com...
>>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:468fe7df$0$16560$4c368faf@roadrunner.com...
>>
>> First of all, do you think you could possibly learn to trim your posts?

Apparently, no, you can't. Too lazy to take the trouble to
perform this common courtesy, or what?

>> An audible beat tone is produced by the constructive and destructive
>> interference between two sound waves in air. Look at a pictorial
>> representation (in the time domain) of the sum of sine waves,of similar
>> amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>> see it.
>>
>> Bob M.
>>
>
> How come you don't hear a 200 Hz beat
> with a 1000 Hz tone and a 1200 Hz tone?

For the simple reason that there isn't actually a "tone" involved -
in other words, there is no actual signal at the difference frequency.
There can't be, since there is no "mixing" (multiplication) of the
two original tones. The "beat" is really just the perception of
the amplitude variation caused by the interference previously
mentioned. You cannot sense such variations if they occur
rapidly enough, any more than you can detect the flicker of a
light source which is varying rapidly enough.

Bob M.

2996. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:44:28 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6otvd$r0h$1@usenet01.boi.hp.com>
Source record: 38904
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:rksv83pukok2t7qumuhjlqcapcqms52ccm@4ax.com...
> Digital is nothing more than an analog device with too much gain and
> hysteresis, where the output is stuck at either high or low. Dig deep
> enough into any digital contrivance, and you'll find analog devices
> operating in this way. The real world is analog. (Just ask any
> analog engineer).

We've been here before, too. The real world is the real world
- it is neither "digital" nor "analog," which are terms used (at
least when used correctly) to refer to two methods of encoding
information about (or describing) the real world or some specific
real-world parameter.

And in case it makes you feel better about the answer, yes, I am
(or at least have been) an "analog engineer." (Or rather, an
engineer involved in the design of "analog" circuits and systems.)

Bob M.

2997. Re: What Was "Radium's" Original Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:46:19 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6ou2s$r1s$1@usenet01.boi.hp.com>
Source record: 38905
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

That's easy. Radium has never actually had an original question. All of his questions are either rehashing very well-understood situations, or are utterly nonsensical and therefore not answerable AS legitimate questions.

Bob M.

2998. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:49:40 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <468FFC6C.679F29AA@earthlink.net>
Source record: 38906
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Tim Shoppa wrote:
>
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD

The RG (Radio Guide) specs are mo longer used by military. Yes,
aluminum shielded RG 6 and RG-59 both used copperweld center conductors
for two reasons. the aluminum shield is weak, and tears if the wire
stretches. It also helps to limit the bending radius. I used to have
some "RG-6 headend cable" which had a double copper braid, and a silver
plated, solid copper center conductor. It was barely usable on US Ch 12
at 218 MHZ, but its claim only to fame was it had lower radiation or
signal ingression problems than the standard all copper, single braid
version.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

2999. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 20:53:36 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6ougr$8ur$1@aioe.org>
Source record: 38907

"Richard Harrison" wrote
> Brown, Lewis and Epstein would be disappointed with your radials. Shoot
> for the broadcast practice of (120) evenly distributed around from the
> tower base.

BL&E's 1937 measurements show (Fig 30) that a vertical monopole of 25 to 90 electrical degrees used with 113 buried radials each of 0.412 wavelength produced a measured groundwave field within a few percent of the theoretical maximum for such radiators over a perfect ground (notwithstanding that the conductivity at their test site was around 4 mS/m).

In Fig 32 of that paper it can be seen that if the 113 radials are only 0.274-wavelengths long, then at the 25-degree electrical height of this Rohn tower, the measured field was about 79% of theoretical field over a perfect ground.
.
So it's not just the number of radials that is important, but also their length.

The referenced figures are linked below, under the "fair use" provisions of copyright law.

http://s62.photobucket.com/albums/h85/rfry-100/?action=view&current=BLERadials.gif

RF

3000. BL& Link Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 21:02:11 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6ov0u$aj3$1@aioe.org>
Source record: 38908

Here is the correct link to BL&E Figs 30 and 32.

http://i62.photobucket.com/albums/h85/rfry-100/BLandERadials.gif

3001. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 21:55:18 UTC
From: Dave <noone@nowhere.com>
Message-ID: <aZTji.270$qu5.112@trndny02>
Source record: 38909

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.07.19.31.49.798607@from.qrz.com...
>
> When electrically grounding one's station, is there any particular
> advantage of a single 8-foot ground rod over two 4-foot ground rods, or an
> 8-foot length of heavy gauge wire buried 6-12 inches under the ground?
>
>

yes. first there is the electrical safety code that you must comply with
which i believe generally calls for 8' rods. 4' rods may not be below the
frost line in the winter so may not provide any useful grounding for part of
the year. shallow buried wire has the same problem.

on rf issues, lots of shallow buried radials can help reduce ground loss
under certain antennas... but these are not substitutes for good electrical
safety grounds.

3002. Re: Inverted V - Steepness VS Height

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 22:29:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13904tullkqd649@corp.supernews.com>
Source record: 38910

Here are your trades:

An inverted vee produces a broadside elevation pattern that's very
similar to that of a dipole at the inverted vee's "average height"(*).
This "average height" is the height of the wire at a point 1/3 of the
way from the center to an end.

What you gain by increasing the included angle are increased bandwidth,
easier matching, and potentially lower loss (higher efficiency). When
you decrease the included angle below about 90 degrees, the bandwidth
narrows and the impedance drops rapidly. The lower impedance can
potentially result in increased loss, both in the wire and in the
matching circuitry.

An antenna modeling program can tell you quantitatively what the pattern
and feedpoint impedance would be for each possible configuration. It's
up to you to decide what you want to sacrifice.

(*) The "average height" is the height at which the integral of the
current along the wire is the same above and below. The one-third figure
is exact if the current is sinusoidally distributed, which is a very
good approximation for a half wave antenna.

Roy Lewallen, W7EL

Bob D. wrote:
> I have a multi band dipole strung up as an inverted Vee from my 80 ft tower.
> I have a run-out of only 50 ft due to the small size/shape of my lot. If I
> pull the top of the Vee all the way to the top of the tower, the Vee gets
> quite steep - only 30 degrees. Of course I can make the angle wider by
> lowering the apex of the Vee. So what is more important, height or slope?
> What would be the best compromise? BTW, the antenna is an Alpha Delta DX-LB
> Plus 160M, 80M, 40M, 20M, 10M.
>

3003. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 22:48:29 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <5390935avuumgftt7gbdh34lmtoqhf7aiv@4ax.com>
Source record: 38911

On Sat, 7 Jul 2007 15:53:36 -0500, "Richard Fry" <rfry@adams.net> wrote:

>The referenced figures are linked below, under the "fair use" provisions of
>copyright law.
>
>http://s62.photobucket.com/albums/h85/rfry-100/?action=view&current=BLERadials.gif
>
>RF

Richard, I just now tried to access your link above, but it says the file is no longer available. Do you have
any other source of this data? I worked with BL&E, so I'm kinda partial to having all the data from their 1936
experiment that I can find. I have their 1937 IRE paper.

Walt, W2DU

3004. Re: BL& Link Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 22:58:56 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <rr9093dl4moht0h9pefjvkalsfou2p070v@4ax.com>
Source record: 38912

On Sat, 7 Jul 2007 16:02:11 -0500, "Richard Fry" <rfry@adams.net> wrote:

>Here is the correct link to BL&E Figs 30 and 32.
>
>http://i62.photobucket.com/albums/h85/rfry-100/BLandERadials.gif

Got it, Richard, but I see the two figs are simply from their 1937 IRE paper.

Thanks anyway.

Walt

3005. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 23:00:02 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6p5ts$vb3$1@aioe.org>
Source record: 38913

"Walter Maxwell"
> Richard, I just now tried to access your link above, but it says the file
> is no longer available. Do you have any other source of this data? I
> worked with BL&E, so I'm kinda partial to having all the data from their
> 1936 experiment that I can find. I have their 1937 IRE paper.

Walt -

I showed the working link in another post I made in followup, which should work for you.

The link (again) is

http://i62.photobucket.com/albums/h85/rfry-100/BLandERadials.gif

But if you have their 1937 paper, you already have the figures I referred to.

RF

3006. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 23:05:29 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <Z_Uji.8608$Rw1.4812@newssvr25.news.prodigy.net>
Source record: 38914
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Easy enough to find out- Take a magnet with you!
Years ago, had to deal with wire thieves, and they
could have saved US all, a lot of trouble, IF they
had done that! They even stole "Duplex" wire,
copperweld, that wouldn't even burn the insulation
off-- and was WORTHLESS (unless you needed a #14
power cord, 500 hundred feet long)! MOST Telephone
carriers, didnt even like that stuff (and they
topped out at around 40 KHz!! Jim NN7K

Tim Shoppa wrote:
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD
>

3007. Re: What Was "Radium's" Original Question ? -and- Has It Been Answered ? Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 23:08:23 UTC
From: Eeyore <rabbitsfriendsandrelations@hotmail.com>
Message-ID: <46901CE7.33640501@hotmail.com>
Source record: 38915
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

RHF wrote:

> WHAT WAS "RADIUM'S" ORIGINAL QUESTION ?
> -and- HAS IT BEEN ANSWERED ?

Does it matter ?

It's only attention seeking.

Graham

3008. Re: What Was "Radium's" Original Question ? -and- Has It Been Answered ? Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 23:31:13 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183851073.092657.217800@g37g2000prf.googlegroups.com>
Source record: 38916
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 7, 4:08 pm, Eeyore <rabbitsfriendsandrelati...@hotmail.com>
wrote:
> RHF wrote:
> > WHAT WAS "RADIUM'S" ORIGINAL QUESTION ?
> > -and- HAS IT BEEN ANSWERED ?
>

- Does it matter ?
-
- It's only attention seeking.
-
- Graham

Graham - Thank You for the Attention :o) ~ RHF
- - - You are Reply # 228 . . . and still Counting.

3009. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-07 23:32:30 UTC
From: richardharrison@webtv.net
Message-ID: <29981-4690309E-436@storefull-3258.bay.webtv.net>
Source record: 38918

Richard Fry wrote:
"So it`s not just the number of radials that is important, but also their length."

True. I don`t have B.L. and E`s work to refer to but do recall an observation that to get the best ground connection for the least copper it might be wise to cut the radials in half so that their number might be doubled.

The FCC standard is 120 radials, each 1/4-wavelength long, which may seem extreme but it produces a near perfect ground connection.

Fortunately, the length of radials does not need to be increased in direct proportion to wavelength below the broadcast band as skin effect varies with the square root of the frequency so as we go lower in frequency we need to increase length of the radials by the square root of the wavelength to keep the resistance of our contact constant.

Best Regards, Richard Harrison, KB5WZI

3010. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 00:39:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1390cii1m5hlt56@corp.supernews.com>
Source record: 38917
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

I'd be a little suspicious of el cheapo cable with copper plated steel center conductor. I'd be surprised if it was Copperweld, which has a very thick copper coating. Copper plating thickness would be a logical place for cost-conscious vendors to skimp.

An extra thin layer of copper wouldn't hurt at VHF and above, but it could really be a killer at HF, where significant current could flow in the steel. (Steel is extra lossy at RF because its permeability further reduces the skin depth by a large factor.) I'd definitely measure the loss if I intended to use it at HF.

Of course, many (or most) amateurs would probably be pleased by the wide bandwidth and low SWR and noise level they'd get with lossy cable.

Roy Lewallen, W7EL

3011. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 00:59:23 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <cgp5m4-uip.ln1@p400bob.personal.cox.net>
Source record: 38920
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Hi Chris

I think others have pretty well answered your questions.

My gut feel is that given the manufacturer even mentions NF is a good thing. ie those that don't may be of poor performance in this area. As others have seen be careful of overload due to closer stations. I once lived in a VHF TV area where signals on 165/180MHz were strong but most people also wanted one on about 49MHz. Many a preamp had problems with the strong stations. I ended up setting up some 1/4 stubs on the preamp input that notched the strong signals enough to stop the bleed through.

Cheers Bob

szilagyic wrote:

> I have (for reasons that you mentioned) been thinking about replacing
> the preamp (Radio Shack 30 dB). The manual for it doesn't give the
> specs for noise, or anything useful for that matter. I have been
> looking at a Winegard AP-8275 (29 dB gain VHF, 28 dB gain UHF, 2.9 dB
> noise VHF, 2.8 dB noise UHF). Would this be a good alternative as far
> as a low noise amp?? We do not live near any stations, I believe the
> closest is 15 miles, so I am thinking a high gain preamp would be a
> good fit.

3012. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 01:55:54 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9966C0A03F958doldridgsprintca@64.59.135.159>
Source record: 38919

WA4SZE@gmail.com wrote in news:1183589814.366696.214530
@q75g2000hsh.googlegroups.com:

> I have installed a FAA approved NDB beacon here at our private
> airport located in Manchester,TN .
>
> The Beacon is transmitting on 529 KHZ Carrier power is 50 watts the
> facility Id is : LYQ
>
> I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8
> dia aluminum 'power line' cable) is at the 90 foot level runs down
> the face of the tower with 24 inch spacing to the matching network.
>
> I am using the 'Gamma' match network : the SWR is down to 1.2 or so.
>
> The top of the tower has 4 ten foot radials
>
> The base of the tower has 8 200 foot 3/ 8 inch aluminum cable
> radials we plan to add more.
>
> The tower has a 3/8 'power line' type cable from the top to the base
> to ensure bonding of each section.
>
> When I fly the Company's Jetstar from 1000 to 41,000 feet, I get
> solid points on the RMI indicator:
>
> when I pass right over the beacon tower the RMI needle swings to the
> tail indicating positive station passage.
>
> The problem is the range of the LYQ beacon it seems to work 10 miles
> or less??? The airplane has dual ADF systems that work perfect.
>
> As an aside, 10 miles away, is another ADF beacon on 332 KHZ 25
> watts! using the traditional three strand 'flat top' suspended
> between two telephone poles. The vertical radiator for this beacon is
> less than 60 feet high : I can track the beacon out to 70 miles or so!
>
> Is a shunt feed tower lossy??? poor radiator??? comments???
>
> I am a Ham op WA4SZE : by the way, we will QSL the beacon when we
> get it commissioned.

Years ago when I was in the high arctic, we had two beacons, one with a
suspended center vertical wire from a long horizontal wire. That was on
a frequency up in the broadcast band--780, if I remember (but I'm foggy--

it was between 700 and 800, though). The other was in the 260 khz area,
if I remember and was running into a well-grounded top-loaded tower. The
first one was, for some reason, inaudible more than about 10 miles away.
The other could be heard over half the arctic! Mind you, it was running
a few watts (about 500 I think).

--
Dave Oldridge+
ICQ 1800667
VA7CZ

3013. Re: Anybody tried 4nec2 on Vista ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 03:06:47 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9966EB37856F5mcoslocomcastnet@216.196.97.136>
Source record: 38921

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:468D0FA9.1030109@jpl.nasa.gov:

> Nate Bargmann wrote:
>> On Wed, 04 Jul 2007 17:49:24 +0000, 4nec2 wrote:
>>
>>
>>>Did anybody try to run 4nec2 (http://home.ict.nl/~arivoors/) on
>>>windows Vista ?, and if so, did it work ?
>>>
>>>If it did not run as expected, could you tell me what went wrong ?
>>>
>>>Because 4nec2 being freeware I do not (yet) have the funds to buy me
>>>a new computer and/or OS, so maybe I can get some small answers this
>>>way.
>>
>>
>> Perhaps rather than shelling out money better spent on ham rigs just
>> to line Bill G's pockets, why not try porting the app to one of the
>> Free OSes? Linux and or Free BSD are just ripe for some excellent
>> ham radio software (although plenty already exists). All of the
>> tools are Free Software and quite well supported, perhaps better
>> supported than that which costs you mucho deniro.
>>
>> 73, de Nate >>
>>
>
> perhaps because a large number of people use Windows to do their day
> to day work successfully, Windows warts and all?

And lots of support staff! I wonder if their salaries are taken
into account when people get excited over those cheap PC prices?

> People select their OS and
> computing environment based on many things: life cycle cost,

See above.

> compatibility with other useful applications,

One of the strangest canards ever foisted upon the computer buying
public. The computer should be a tool. You shouldn't buy the staff
assistant the same computer as the engineer as the art department.

> philosophical bent, and
> functionality are just a few of them.

Don't forget not having any choice in the matter. What else would the computer departmenttell management is needed?

One of the dirtiest secrets of the computer world is that those who work keeping PC's operational don't *want* good computers and operating systems. If a computer works well, is simple to set up, and is a reliable performer, the IT department goes away.

Which is why although I beat PC's into submission where I work in part, to get my work done I use a Mac. It just keeps on going and going.

OSX in whatever flavor is fast, works on older Macs easily (a G3 even!) and if a person want's to geek it out, they can just drop into Unix for CL fun...

- 73 de Mike KB3EIA -

3014. Re: 20 Questions - Redux

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 03:16:05 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9966ECCAF50A9mcoslocomcastnet@216.196.97.136>
Source record: 38922

Richard Clark <kb7qhc@comcast.net> wrote in
news:ildv83t3smttts0p10au81bq63p45e2tvq@4ax.com:

> Child's last question:
> "Will his mother let him make toast?"

Bravo, Bravo, Richard! I've read the post four times now, and it
still makes me laugh. 8^)

I think you may have missed your calling...

- 73 de Mike KB3EIA -

3015. Re: 20 Questions - Redux

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 03:28:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <odm0935ausqlddntr8gi63q7gp1e9g918o@4ax.com>
Source record: 38923

On Sat, 07 Jul 2007 22:16:05 -0500, Mike Coslo
<mcoslo@youknow.comcast.net> wrote:

>Richard Clark <kb7qhc@comcast.net> wrote in
>news:ildv83t3smttts0p10au81bq63p45e2tvq@4ax.com:
>
>
>> Child's last question:
>> "Will his mother let him make toast?"
>
>
> Bravo, Bravo, Richard! I've read the post four times now, and it
>still makes me laugh. 8^)
>
> I think you may have missed your calling...

Hi Mike,

Depends on what I am being called, I suppose.

73's
Richard Clark, KB7QHC

3016. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:11:59 UTC
From: afcsman <afcsman@hotmail.com>
Message-ID: <7bidnRNA5MCW-Q3bnZ2dnUVZ_hWdnZ2d@comcast.com>
Source record: 38924

Wayne wrote:
> Looks like I'll have to use a horizontal loop in the attic for a few months.
> Any opinions on how to best feed it?
> --open wire
> --coax coil balun
> --ferrite bead balun
> --straight coax
>
> The loop is about 13 feet per side, and I want to operate 20 meters and up.
> In the past I have simply used a coax feed without a balun. It worked OK,
> but there was a lot of stray RF around the house.
>
> TIA
>
>

SWR loss is less of a headache with open/ladder line feed.
My principal DX antenna is an 8jk end-fire array cut for 20 meters.
I've fitted it in the attic of all the homes I owned, fed it with
ladder-line, and worked it with a "classic" balanced tuner on 30 through
10 meters. Yes, RF does get into the wiring (especially triggering
slightly opened lamp dimmers), even with good grounding. The array is a
gain antenna, and has given me very good results over the past 35 years
I've operated with this antenna.

W9NPI

3017. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:15:16 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4690647b$0$24729$4c368faf@roadrunner.com>
Source record: 38925
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> wrote in message
news:f6otp9qtt1@usenet01.boi.hp.com...
>
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:468ff303$0$24708$4c368faf@roadrunner.com...
>>
>> "Bob Myers" <nospamplease@address.invalid> wrote in message
>> news:f6oqdvnpt1@usenet01.boi.hp.com...
>>>
>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>> news:468fe7df$0$16560$4c368faf@roadrunner.com...
>>>
>>> First of all, do you think you could possibly learn to trim your posts?
>
> Apparently, no, you can't. Too lazy to take the trouble to
> perform this common courtesy, or what?

You could always plonk me.

>
>>> An audible beat tone is produced by the constructive and destructive
>>> interference between two sound waves in air. Look at a pictorial
>>> representation (in the time domain) of the sum of sine waves,of similar
>>> amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>>> see it.
>>>
>>> Bob M.
>>>
>>
>> How come you don't hear a 200 Hz beat
>> with a 1000 Hz tone and a 1200 Hz tone?
>
> For the simple reason that there isn't actually a "tone" involved -
> in other words, there is no actual signal at the difference frequency.
> There can't be, since there is no "mixing" (multiplication) of the
> two original tones.

There is no multiplication of 1000 Hz and 1005 Hz
either, is there? Why don't you hear 1000 Hz and
1005 Hz rather than a single tone varying in amplitude?

> The "beat" is really just the perception of
> the amplitude variation caused by the interference previously

> mentioned. You cannot sense such variations if they occur
> rapidly enough, any more than you can detect the flicker of a
> light source which is varying rapidly enough.
>
> Bob M.

Could it be that the human auditory system is not
linear?

3018. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:17:29 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469064fd$0$16540$4c368faf@roadrunner.com>
Source record: 38926
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B403C2.6DC94%dbowey@comcast.net...
> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
> "Ron
> Baker, Pluralitas!" <this@aint.me> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>
>>>>
>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>> On 7/4/07 7:52 AM, in article
>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>> "Ron
>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>> <snip>
>>>>
>>>>>>
>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>
>>>>>> Basically: multiplying two sine waves is
>>>>>> the same as adding the (half amplitude)
>>>>>> sum and difference frequencies.
>>>>>
>>>>> No, they aren't the same at all, they only appear to be the same
>>>>> before
>>>>> they are examined. The two sidebands will not have the correct phase
>>>>> relationship.
>>>>
>>>> What do you mean? What is the "correct"
>>>> relationship?
>>>>
>>>>>
>>>>> One could, temporarily, mistake the added combination for a full
>>>>> carrier
>>>>> with independent sidebands, however.
>>>>>
```

>>>>>
>>>>>
>>>>>>
>>>>>> (For sines it is
>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>>)
>>>>>>
>>>>>> --
>>>>>> rb
>>>>>>
>>>>>
>>>>
>>>>
>>>
>>> When AM is correctly accomplished (a single voiceband signal is
>>> modulated
>>
>> The questions I posed were not about AM. The
>> subject could have been viewed as DSB but that
>> wasn't the specific intent either.
>
> You should take some time to more carefully frame your questions.
>
> Do you understand that a DSB signal *is* AM?

So all the AM broadcasters are wasting money by
generating a carrier?

>
> Post your intention; it might help.
>
>>
>>> onto a carrier via a non-linear process), at an envelope detector the
>>> two
>>> sidebands will be additive. But if you independe ntly place a carrier
>>> at
>>> frequency (c), another carrier at (c-1 khz) and another carrier at
>>> (c+
>>> 1
>>> kHz), the composite can look like an AM signal, but it is not, and only
>>> by
>>> the most extreme luck will the sidebands be additive at the detector.
>>> They
>>> would probably cycle between additive and subtractive since they have no
>>> real relationship and were not the result of amplitude modulation.
>>>
>>
>>
>

3019. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:24:21 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46906699$0$12243$4c368faf@roadrunner.com>
Source record: 38927
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Rich Grise" <rich@example.net> wrote in message
news:pan.2007.07.05.23.42.45.964093@example.net...
> On Tue, 03 Jul 2007 22:42:20 -0700, isw wrote:
>
>> After you get done talking about modulation and sidebands, somebody
>> might want to take a stab at explaining why, if you tune a receiver to
>> the second harmonic (or any other harmonic) of a modulated carrier (AM
>> or FM; makes no difference), the audio comes out sounding exactly as it
>> does if you tune to the fundamental? That is, while the second harmonic
>> of the carrier is twice the frequency of the fundamental, the sidebands
>> of the second harmonic are *not* located at twice the frequencies of the
>> sidebands of the fundamental, but rather precisely as far from the
>> second harmonic of the carrier as they are from the fundamental.
>
> Have you ever actually observed this effect?
>
> Thanks,
> Rich
>

I have.
I tuned to the third harmonic of a strong local
AM broadcast station. There it was. Quite
a surprise. It is a bit distorted but intelligible.
Another odd thing is that it comes and goes
somewhat abruptly.

3020. Vertical above Beam interaction ??

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:33:35 UTC
From: mike <kyw1060@verizon.net>
Message-ID: <1183869215.804217.225600@c77g2000hse.googlegroups.com>
Source record: 38928

I want to mount my 10 meter Vertical directly above my MA5B Mini Beam.
Is there a rule to this. I have about 6-12" above the beam. Can I
expect any interaction. I am thinking not because of the different
polarity's. Can someone elaborate...interested to hear direct from
you. The vertical will have radials.
Thank you
Mike Manning
KB3IUL

3021. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:49:13 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-664E24.21491207072007@newsgroups.comcast.net>
Source record: 38929
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <468fe7df$0$16560$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

--snippety-snip--

> >> You said you are a physicist/engineer.
> >> What does "linear" mean?
> >
> > Let's not get too far off the subject here. We were discussing whether
> > the "tuning beat" that you use to tune a musical instrument involved a
> > nonlinear process (ie. "modulation").
>
> Then linearity is at the core of the matter.
> What does "linear" (or "nonlinear") mean to you?

OK, if you insist -- *in this case* it means "linear enough to not
produce IM products of significant amplitude".

> > I said that it does not, and that
> > it could be detected by instrumentation which was proveably linear (i.e.
> > not "perfectly" linear, because that's not required, but certainly
> > linear enough to discount the requirement for "modulation").
>
> No nonlinearity is necessary in order to hear
> a beat?
> Where does the beat come from?

As the phase of the two nearly equal waves move past each other, there
is simple vector summation which varies the amplitude.

Consider two sine waves of precisely the same frequency, where one of
them is adjustable in phase -- use a goniometer, for instance. Use a set
of resistors to sum the two signals, and observe the summing point with
a 'scope or a loudspeaker. By altering the phase of one source, you can
get any amplitude you want from zero up to twice the amplitude of either
one.

Now just twiddle that phase knob around and around as fast as you can.

You've just slightly altered the instantaneous frequency of one of the
generators (but only while you twiddle), and accomplished pretty much
the same effect as listening to the beat between two guitar strings at
nearly zero frequency offset. With no nonlinear processes in sight.

Isaac

3022. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:52:19 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B5BB93.6E733%dbowey@comcast.net>
Source record: 38930
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/7/07 9:17 PM, in article 469064fd$0$16540$4c368faf@roadrunner.com, "Ron
Baker, Pluralitas!" <this@aint.me> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B403C2.6DC94%dbowey@comcast.net...
>> On 7/4/07 8:42 PM, in article 468c6838$0$4664$4c368faf@roadrunner.com,
>> "Ron
>> Baker, Pluralitas!" <this@aint.me> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2B16AE5.6D5BC%dbowey@comcast.net...
>>>> On 7/4/07 10:16 AM, in article 468bd5ad$0$16531$4c368faf@roadrunner.com,
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>>>>
>>>>>
>>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>>> news:C2B1129D.6D573%dbowey@comcast.net...
>>>>>> On 7/4/07 7:52 AM, in article
>>>>>> 468bb3c0$0$24780$4c368faf@roadrunner.com,
>>>>>> "Ron
>>>>>> Baker, Pluralitas!" <this@aint.me> wrote:
>>>>>
>>>>> <snip>
>>>>>
>>>>>>>>>>
>>>>>>>>>> cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>>>>>>>>
>>>>>>>>>> Basically: multiplying two sine waves is
>>>>>>>>>> the same as adding the (half amplitude)
>>>>>>>>>> sum and difference frequencies.
>>>>>>>>>
>>>>>>>>> No, they aren't the same at all, they only appear to be the same
>>>>>>>>> before
>>>>>>>>> they are examined. The two sidebands will not have the correct phase
>>>>>>>>> relationship.
>>>>>>>
>>>>>>> What do you mean? What is the "correct"
>>>>>>> relationship?
>>>>>>>
>>>>>>>>>>
```

>>>>>> One could, temporarily, mistake the added combination for a full
>>>>>> carrier
>>>>>> with independent sidebands, however.
>>>>>>
>>>>>>
>>>>>>
>>>>>>>
>>>>>>> (For sines it is
>>>>>>> sin(a) * sin(b) = 0.5 * (cos[a-b]-cos[a+b])
>>>>>>> = 0.5 * (sin[a-b+90degrees] - sin[a+b+90degrees])
>>>>>>> = 0.5 * (sin[a-b+90degrees] + sin[a+b-90degrees])
>>>>>>>)
>>>>>>>
>>>>>>> --
>>>>>>> rb
>>>>>>>
>>>>>>
>>>>>
>>>>>
>>>>
>>>> When AM is correctly accomplished (a single voiceband signal is
>>>> modulated
>>>
>>> The questions I posed were not about AM. The
>>> subject could have been viewed as DSB but that
>>> wasn't the specific intent either.
>>
>> You should take some time to more carefully frame your questions.
>>
>> Do you understand that a DSB signal *is* AM?
>
> So all the AM broadcasters are wasting money by
> generating a carrier?

You are an ignorant, useless troll, and not worth my time

>
>>
>> Post your intention; it might help.
>>
>>>
>>>> onto a carrier via a non-linear process), at an envelope detector the
>>>> two
>>>> sidebands will be additive. But if you independe ntly place a carrier
>>>> at
>>>> frequency (c), another carrier at (c-1 khz) and another carrier at
>>>> (c+
>>>> 1
>>>> kHz), the composite can look like an AM signal, but it is not, and only
>>>> by
>>>> the most extreme luck will the sidebands be additive at the detector.

>>>> They
>>>> would probably cycle between additive and subtractive since they have no
>>>> real relationship and were not the result of amplitude modulation.
>>>>
>>>
>>>
>>
>
>

3023. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 04:56:41 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <80b7c$46906e83$944e306e$20475@STARBAND.NET>
Source record: 38831
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:469064fd$0$16540$4c368faf@roadrunner.com...
>> Do you understand that a DSB signal *is* AM?
>
> So all the AM broadcasters are wasting money by
> generating a carrier?

How did you jump to that conclusion.

3024. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 05:08:16 UTC
From: m II <c@in.the.hat>
Message-ID: <4j_ji.28917$xk5.5581@edtnps82>
Source record: 38832
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:

> Could it be that the human auditory system is not
> linear?

No. Humans had to evolve to incorporate a non linear response to sound when the electronics manufacturers started supplying ONLY non linear potentiometers for audio equipment use.

This mutation, which is now the norm, was completely unknown before the start of the twentieth century.

We, here at Densa Labs, call it Darwinian Decibelism

mike

3025. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 05:16:38 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1183871798.864063.70200@m37g2000prh.googlegroups.com>
Source record: 38833
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 7, 9:56 pm, "Dana" <raff...@yahoo.com> wrote:
> "Ron Baker, Pluralitas!" <t...@aint.me> wrote in
messagenews:469064fd$0$16540$4c368faf@roadrunner.com...
>
> >> Do you understand that a DSB signal *is* AM?
-
- - So all the AM broadcasters are wasting money by
- - generating a carrier?
-
- How did you jump to that conclusion.

Somewhere between the Original Post #1
and the 236 Replies to date. ~ RHF

3026. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 06:17:23 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com>
Source record: 38834
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>news:468fe7df$0$16560$4c368faf@roadrunner.com...

>> No nonlinearity is necessary in order to hear
>> a beat?
>> Where does the beat come from?

>An audible beat tone is produced by the constructive and destructive
>interference between two sound waves in air. Look at a pictorial
>representation (in the time domain) of the sum of sine waves,of similar
>amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>see it.
>
>Bob M.

I beg to differ. There's no mixing happening in the air. compression of air is very linear (Boyles Law or PV=constant). If there were mixing, you would be able to hear the beat note when one generates two ultrasonic tones. I belch 25KHz and 26KHz from two transducers, by our logic, air mixing would create a 1KHz beat note. It doesn't and you hear nothing.

What seems to be the problem here is the model of the human ear is not what one would assume. It is NOT a broadband detector. The cochlea cilia (hairs) resonate at individual frequencies. Each one resonantes at only one frequency (and possibly some sub-harmonics). Therefore, the human ear model is a collection of narrow band filters and detectors. Unless the two frequencies involved both cause a single cilia to simultaneously vibrate at both frequencies, there isn't going to be any mixing. Each detector can be individually quite non-linear, but as long as it vibrates at only one frequency, there isn't going to be any mixing.

Meanwhile, I would greatly appreciate it if everyone would kindly trim quotations. This thread is becoming difficult to read. Thanks.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3027. Re: Vertical above Beam interaction ??

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 06:22:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0d019353vq09l6hk13vsv9r48f05moln7u@4ax.com>
Source record: 38835

On Sat, 07 Jul 2007 21:33:35 -0700, mike <kyw1060@verizon.net> wrote:

>I want to mount my 10 meter Vertical directly above my MA5B Mini Beam.
>Is there a rule to this. I have about 6-12" above the beam. Can I
>expect any interaction.

Hi Mike,

Not particularly if the Mini Beam is properly choked (read balanced)
such that the vertical falls within its null(s).

>The vertical will have radials.

Well! That certainly threw a spanner into the gears if you mean to
have more than two of them (what's wrong with a vertical dipole?) and
those two aligned with the boom (to observe the null(s)).

73's
Richard Clark, KB7QHC

3028. noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 11:18:01 UTC
From: ml <m@di.net>
Message-ID: <m-EC7D79.07175708072007@news.verizon.net>
Source record: 38836

hi

about 6months ago my normally low noise level has been plagued with
some noise

it's on and off about 30sec to 1 min on and maybe 1min off but then
it seems to take a break and might go quite for say 5 min

seems to be on all the bands 160-10 and almost as strong equally

it sounds just like the noise level(norm background static sorta)
but comes in s7 solid so all but the most strongest stations get
wipped out

i turned off all the power in my apt via the main breaker and powered
up the rig w/my battery so w/only the rig w/power i still got it same

noise definately comes in stronger w/my roof dipole than say a small
vertical whip in the apt (i am on 4th fl of 13)

i barly hear the noise w/my indoor whip however i also barley hear any
singnals inside given all the concreate and steel mesh

so the question:

Obviously i need to hunt around for the noise whats the best way to
track this down unf i don't have a spectrum analyzer

i do have a ft817 but what is the best antenna but make for this? i
can't walk around the block w/anything to big

but am willing to get anything i need as long as it's not too$$

any tips appreciated because i can't realy use the lowbands anymore
really annoying

thanks

as an aside i discovered my friends zyzel modem puts out a tremendious
ammount of rf

3029. Re: 20 Questions - Redux

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 11:22:37 UTC
From: ml <m@di.net>
Message-ID: <m-A95D9D.07223808072007@news.verizon.net>
Source record: 38837

In article <odm0935ausqlddntr8gi63q7gp1e9g918o@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

> On Sat, 07 Jul 2007 22:16:05 -0500, Mike Coslo
> <mcoslo@youknow.comcast.net> wrote:
>
> >Richard Clark <kb7qhc@comcast.net> wrote in
> >news:ildv83t3smttts0p10au81bq63p45e2tvq@4ax.com:
> > >
> > >
> > >> Child's last question:
> > >> "Will his mother let him make toast?"
> > >
> > >
> > > Bravo, Bravo, Richard! I've read the post four times now, and it
> > >still makes me laugh. 8^)
> > >
> > > I think you may have missed your calling...
>
> Hi Mike,
>
> Depends on what I am being called, I suppose.
>
> 73's
> Richard Clark, KB7QHC

hi rich

I really like dry white toast but sometimes jelly toast is tasty too

3030. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 11:49:39 UTC
From: ml <m@di.net>
Message-ID: <m-537174.07493908072007@news.verizon.net>
Source record: 38838

In article <fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com>,
Walter Maxwell <walt@w2du.com> wrote:

> Hello to all my antenna friends. I've just now returned home after nine weeks
> in the hospital following major
> spinal surgery. The surgery was successful, but I contracted hideous
> intestinal infection C Diff, or colitis,
> in the hospital. Forty nine days were required to clear the infection, after
> which I could begin physical
> therapy. I'm still recuperating very slowly, learning to regain my balance
> and walk again. Have you ever
> wondered what it would feel like to stand up, but needing to hang onto
> something stationary to avoid falling
> down? And have you ever wondered what it would feel like to stand up, but
> unable to move a foot to start
> walking? I'm still learning how to walk, with the aid of both a walker and a
> cane. Long and tough, but I'm
> making it.
>
> Hope to join you great guys again occasionally as I continue to recover.
>
> 73 to All,
>
> Walt, W2DU

dear walt

Didn't know you were out, so please accept some late well wishes

didn't know you can 'catch' colitis but glad that it went away and
overall your procedure went well

hope that you have a speedy recovery and enjoy ham radio to take your
mind off things

be well- best wishes

myles

3031. Re: blocking radio waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 11:57:57 UTC
From: ml <m@di.net>
Message-ID: <m-0AF200.07575808072007@news.verizon.net>
Source record: 38839

In article <22598-4679908F-1257@storefull-3258.bay.webtv.net>,
richardharrison@webtv.net (Richard Harrison) wrote:

> Joe wrote:
> "I know there is a term for a room like this but I can not remember
> it..''
>
> The term that comes to mind for me is "screened room".
>
> I`ve used them in shortwave broadcasting stations where they provided
> excellent isolation. They were constructed of ordinary copper
> windowscreen wire which solders well for good continuity. Sometimes the
> rooms were double screened with wire on both sides of the supporting
> structure. You`ve already been given the caveats on joints and bypassing
> every conductor which punctures the structure. That`s necessary.
>
> Best regards, Richard Harrison, KB5WZI

you could find some rf absorbing paint it soaks up almost all
frequencies very effectively and is now commercially available

it's worth checking with the manufacture and see if it will do what you
need

3032. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 12:02:35 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6qjp6$5lv$1@aioe.org>
Source record: 38840

"Richard Harrison" wrote
> Fortunately, the length of radials does not need to be increased in
> direct proportion to wavelength below the broadcast band as skin effect
> varies with the square root of the frequency so as we go lower in
> frequency we need to increase length of the radials by the square root
> of the wavelength to keep the resistance of our contact constant.

Here is a quote about this from RADIO ANTENNA ENGINEERING
by Edmund Laport:

"The distance from the antenna at which returning ground currents are of such a low value as to be negligible is of the order of 0.5 wavelength."

At least across the AM broadcast band 530-1700 kHz, Laport, Terman, Kraus, and Balanis show _no_ dependence of the lengths of buried radials with frequency -- except, of course, that radials used with lower frequency systems need to be physically longer to reach the desired radius from the monopole, in free-space wavelengths.

The FCC uses a computer program (linked below) to calculate the groundwave inverse distance field at 1 km and 1 mile from a MW monopole, based on the radiator height and the number/length of buried radials.

On-line users of this program can enter their own system parameters to see their effects on the radiated field. The program does restrict entries to the minimum values acceptable to the FCC for commercial AM broadcast stations.

==> NOTE: The FCC program applet has no entry block for frequency.

Here is the link. The applet starts at the bottom of that web page.

http://www.fcc.gov/mb/audio/bickel/figure8.html

RF

3033. Re: noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 12:14:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Ey4ki.2413$V35.1149@trndny03>
Source record: 38841

the simplest thing is just a loop. maybe a foot or so in diameter, a couple turns is enough... just enough so that you can hear it and get a null off the side that you can hear or see on the meter.

"ml" <m@di.net> wrote in message news:m-EC7D79.07175708072007@news.verizon.net...
> hi
>
> about 6months ago my normally low noise level has been plagued with
> some noise
>
> it's on and off about 30sec to 1 min on and maybe 1min off but then
> it seems to take a break and might go quite for say 5 min
>
> seems to be on all the bands 160-10 and almost as strong equally
>
> it sounds just like the noise level(norm background static sorta)
> but comes in s7 solid so all but the most strongest stations get
> wipped out
>
>
> i turned off all the power in my apt via the main breaker and powered
> up the rig w/my battery so w/only the rig w/power i still got it same
>
> noise definately comes in stronger w/my roof dipole than say a small
> vertical whip in the apt (i am on 4th fl of 13)
>
> i barly hear the noise w/my indoor whip however i also barley hear any
> singnals inside given all the concreate and steel mesh
>
> so the question:
>
> Obviously i need to hunt around for the noise whats the best way to
> track this down unf i don't have a spectrum analyzer
>
> i do have a ft817 but what is the best antenna but make for this? i
> can't walk around the block w/anything to big
>
> but am willing to get anything i need as long as it's not too$$
>
> any tips appreciated because i can't realy use the lowbands anymore
> really annoying
>
>

> thanks
>
>
>
>
>
> as an aside i discovered my friends zyzel modem puts out a tremendious
> ammount of rf

3034. Clarification

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 12:31:48 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f6qlg0$ao4$1@aioe.org>
Source record: 38842

> ==> NOTE: The FCC program applet has no entry block for frequency.

Yes it does (sorry), but ...

==> NOTE: The FCC program results are essentially the same regardless of frequency for all systems of a given radiator height and radial length (in wavelengths), when using the same number of radials.

RF

3035. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 12:51:57 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4690dde9$0$24744$4c368faf@roadrunner.com>
Source record: 38843

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.01.12.57.51.594119@from.qrz.com...
>
> How high would you all feel comfortable about going with a Rohn 25G tower
> without guys, with a 6-foot concrete base and a 2 meter / 440 gain
> vertical antenna on top (e.g. Diamond X-700HNA)?
>

Probably not reccomended but a friend gave me one that had been up for 20
years that had an antenna package simliar(2m Ringo) to the one you mention
plus an HF tri-bander beam This antenna survived Hurricanne Hugo when
trees in the same yard didnt. Strange thing, we took the tribander down
first and the antenna swayed more after it was removed.

Jimmie

3036. Re: Shunt feed tower for Aircraft NDB beacon Help

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 13:11:09 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4690e27d$0$8913$4c368faf@roadrunner.com>
Source record: 38844

<WA4SZE@gmail.com> wrote in message
news:1183589814.366696.214530@q75g2000hsh.googlegroups.com...
>I have installed a FAA approved NDB beacon here at our private
> airport located in Manchester,TN .
>
> The Beacon is transmitting on 529 KHZ Carrier power is 50 watts the
> facility Id is : LYQ
>
> I have shunt feed a 120 foot high Rhon 25G tower. The tap wire (3/8
> dia aluminum 'power line' cable) is at the 90 foot level runs down
> the face of the tower with 24 inch spacing to the matching network.
>
> I am using the 'Gamma' match network : the SWR is down to 1.2 or so.
>
> The top of the tower has 4 ten foot radials
>
> The base of the tower has 8 200 foot 3/ 8 inch aluminum cable
> radials we plan to add more.
>
> The tower has a 3/8 'power line' type cable from the top to the base
> to ensure bonding of each section.
>
> When I fly the Company's Jetstar from 1000 to 41,000 feet, I get
> solid points on the RMI indicator:
>
> when I pass right over the beacon tower the RMI needle swings to the
> tail indicating positive station passage.
>
> The problem is the range of the LYQ beacon it seems to work 10 miles
> or less??? The airplane has dual ADF systems that work perfect.
>
> As an aside, 10 miles away, is another ADF beacon on 332 KHZ 25
> watts! using the traditional three strand 'flat top' suspended
> between two telephone poles. The vertical radiator for this beacon is
> less than 60 feet high : I can track the beacon out to 70 miles or so!
>
> Is a shunt feed tower lossy??? poor radiator??? comments???
>
> I am a Ham op WA4SZE : by the way, we will QSL the beacon when we
> get it commissioned.
>
> Thanks!!
>

The one that works is probably an FAA facility and has a better ground system. The one I helped install had 96 buried radials. I was surprised that they werent that long. Same length as the flat top , Guessing 30 ft. I do know the antenna was 10 meters tall tophat and radials were probably close to being the same.

Jimmie

3037. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 13:19:10 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4690e44a$0$12210$4c368faf@roadrunner.com>
Source record: 38845

<WA4SZE@gmail.com> wrote in message
news:1183677623.650527.200800@o61g2000hsh.googlegroups.com...
> We are going to drop using the shunt feed tower no matter how hard we
> work on it we don't think it's going to work any better that it does
> right now.
>
> We have two choices :
>
> We have two towers spaced 250 feet apart the towers are 95 feet
> high. We could install a 'flat top' wire run it from tower to tower.
>
> The horizontal run tower to tower would be 250 feet : The vertical
> drop to the ground would be 90 feet or so.
>
> The vertical wire would be connected to the flat top wire dead
> center
>
> We could series feed it against a good ground; 8 to 15 radials 500
> feet long
>
>
> Choice two:
>
> We have two towers spaced about 140 feet they are 150 feet high The
> 'flat top' wire would run 140 feet horizontal tower to tower The
> vertical drop would be 150 feet. same as above vertical wire
> connected dead center of flat top.
>
> series feed working against 8 to 15 500 foot ground radials.
>
>
> My question to the group:
>
> Is it better to have more (150 feet) vertical wire in the air with
> LESS (140 feet) flat top wire or :
>
> LESS vertical wire in the air (90 feet) but MORE flat top wire 250
> feet??????
>
>
> The flat top wire is insulated from the towers using power line
> fiberglass rods
>
> NDB freq is 529 KC

>
> P.S.
>
> Would their be a big difference if the 'flat top' has two runs of
> 3/8 aluminum cable side by side spaced about 30 inches ?? or
> would one 3/8 cable do the job???
>
> Thank you for your input
>
> Dave WA4SZE
>

The secret is in having a good ground, the FAA systems I have seen use buried grounds about 10 meters long. The only type of antenna I am familar with them using is a flattop that is about 10 meter tall with the horizontal portion about twice this. Nav aids aint my thing I was just suppling grunt duty at the time.

Jimmie

3038. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 13:24:36 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4690e590$0$14975$4c368faf@roadrunner.com>
Source record: 38846

<WA4SZE@gmail.com> wrote in message
news:1183677623.650527.200800@o61g2000hsh.googlegroups.com...
> We are going to drop using the shunt feed tower no matter how hard we
> work on it we don't think it's going to work any better that it does
> right now.
>
> We have two choices :
>
> We have two towers spaced 250 feet apart the towers are 95 feet
> high. We could install a 'flat top' wire run it from tower to tower.
>
> The horizontal run tower to tower would be 250 feet : The vertical
> drop to the ground would be 90 feet or so.
>
> The vertical wire would be connected to the flat top wire dead
> center
>
> We could series feed it against a good ground; 8 to 15 radials 500
> feet long
>
>
> Choice two:
>
> We have two towers spaced about 140 feet they are 150 feet high The
> 'flat top' wire would run 140 feet horizontal tower to tower The
> vertical drop would be 150 feet. same as above vertical wire
> connected dead center of flat top.
>
> series feed working against 8 to 15 500 foot ground radials.
>
>
> My question to the group:
>
> Is it better to have more (150 feet) vertical wire in the air with
> LESS (140 feet) flat top wire or :
>
> LESS vertical wire in the air (90 feet) but MORE flat top wire 250
> feet??????
>
>
> The flat top wire is insulated from the towers using power line
> fiberglass rods
>
> NDB freq is 529 KC

>
> P.S.
>
> Would their be a big difference if the 'flat top' has two runs of
> 3/8 aluminum cable side by side spaced about 30 inches ?? or
> would one 3/8 cable do the job???
>
> Thank you for your input
>
> Dave WA4SZE
>

You may want to check with the MIKE MARONEY AERONAUTICAL ACADAMEY in OKC.
This is The FAA tech school and engineering support.

3039. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 13:40:55 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <w6mdnRTIe4HIdA3bnZ2dnUVZ_g6dnZ2d@comcast.com>
Source record: 38847
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:1183806416.629704.23340@m37g2000prh.googlegroups.com...
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD
>
I did the refrigerator magnet test on several pieces of RG6, and the only
one that appears to be copperweld, for sure, was marked as 2300 MHz Digital
Satellite Cable. It is on my UHF TV antenna, and I think sold as RCA brand.

Tam/WB2TT

3040. aircom coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 15:59:30 UTC
From: ml <m@di.net>
Message-ID: <m-F04129.11592408072007@news.verizon.net>
Source record: 38848

hi

While the spec's are published i wonder if anyone has any first hand knowledge with the aircom coax

is it betther than say lmr or hardline given like for like overall from experience??

my guess would be that since it's got alot of hollow space water damage might be an issue but maybe it has some other fantastic quality that makes up for it??

anyone use it?

3041. Re: Horizontal Attic Loop Feed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:00:23 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <rS7ki.25349$BT3.22203@trnddc06>
Source record: 38849

"afcsman" <afcsman@hotmail.com> wrote in message
news:7bidnRNA5MCW-Q3bnZ2dnUVZ_hWdnZ2d@comcast.com...
> Wayne wrote:
>> Looks like I'll have to use a horizontal loop in the attic for a few
>> months. Any opinions on how to best feed it?
>> --open wire
>> --coax coil balun
>> --ferrite bead balun
>> --straight coax
>>
>> The loop is about 13 feet per side, and I want to operate 20 meters and
>> up. In the past I have simply used a coax feed without a balun. It
>> worked OK, but there was a lot of stray RF around the house.
>>
>> TIA
>
> SWR loss is less of a headache with open/ladder line feed.
> My principal DX antenna is an 8jk end-fire array cut for 20 meters. I've
> fitted it in the attic of all the homes I owned, fed it with ladder-line,
> and worked it with a "classic" balanced tuner on 30 through 10 meters.
> Yes, RF does get into the wiring (especially triggering slightly opened
> lamp dimmers), even with good grounding. The array is a gain antenna, and
> has given me very good results over the past 35 years I've operated with
> this antenna.
>
> W9NPI

The JK sounds great, but I only have a square area of about 15 feet per
side. My previous operation has been with coax and no balun. What methods
have you used to run the open wire line from the shack up into the attic?

3042. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:04:57 UTC
From: gb <w9gbnospam@arrl.nospan.net>
Message-ID: <xbOdnZgF9uCvlgzbnZ2dnUVZ_hqdnZ2d@comcast.com>
Source record: 38850
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Tim -

Belden made a very popular RG-6/U quad shield coax (7199?) that was a steel
center conductor with a copper flashed overlay.
Worked fine -- rated up to 1 GHz.

The last 1000' spool that I ordered was a newer cable (solid copper center
conductor) and good to 2 GHz.

w9gb

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:1183806416.629704.23340@m37g2000prh.googlegroups.com...
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD
>

3043. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:08:34 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf92302.2a1m.bit-bucket@shell.config.com>
Source record: 38851

On Sun, 8 Jul 2007 08:51:57 -0400, Jimmie D wrote:
>
> Strange thing, we took the tribander down
> first and the antenna swayed more after it was removed.
^^^^^^^
ITYM "tower"

Mass... Inertia... Mass moment of inertia...

Of course, if it ever starts swaying dramatically,
the same factors come into play.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

3044. Re: noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:17:37 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf923h1.2a1m.bit-bucket@shell.config.com>
Source record: 38852

On Sun, 08 Jul 2007 11:18:01 GMT, ml wrote:
>
> about 6months ago my normally low noise level has been plagued with
> some noise
> it's on and off about 30sec to 1 min on and maybe 1min off but then
> it seems to take a break and might go quite for say 5 min

Could be a heating pad. I once had a problem like that back in the days when The Public Service Company Of Colorado was relly helpful on those matters. (Now they're no longer The Public Service Company Of Colorado, and, they are no longer helpful. sigh...)

I had alreay eliminated my house as the source. The feller that came out from PSCo. found a heating pad being used for a doogie bed (24/7) in the house across the alley from me. The bi-metal control was carbon'ed up and arcing in use. The control was also STUFFED UNDER THE DOG'S BLANKET!!!, and the blanket was starting to char!

gl
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

3045. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:26:22 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46910fe5$0$8925$4c368faf@roadrunner.com>
Source record: 38853
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-664E24.21491207072007@newsgroups.comcast.net...
> In article <468fe7df$0$16560$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>
> --snippety-snip--
>
>> >> You said you are a physicist/engineer.
>> >> What does "linear" mean?
>> >
>> > Let's not get too far off the subject here. We were discussing whether
>> > the "tuning beat" that you use to tune a musical instrument involved a
>> > nonlinear process (ie. "modulation").
>>
>> Then linearity is at the core of the matter.
>> What does "linear" (or "nonlinear") mean to you?
>
> OK, if you insist -- *in this case* it means "linear enough to not
> produce IM products of significant amplitude".

Good enough.
Then spectrum analyzers and the human auditory
system are not linear.
Stay with me here.

>
>> > I said that it does not, and that
>> > it could be detected by instrumentation which was proveably linear
>> > (i.e.
>> > not "perfectly" linear, because that's not required, but certainly
>> > linear enough to discount the requirement for "modulation").
>>
>> No nonlinearity is necessary in order to hear
>> a beat?
>> Where does the beat come from?
>
> As the phase of the two nearly equal waves move past each other, there
> is simple vector summation which varies the amplitude.
>
> Consider two sine waves of precisely the same frequency, where one of
> them is adjustable in phase -- use a goniometer, for instance. Use a set
> of resistors to sum the two signals, and observe the summing point with

> a 'scope or a loudspeaker. By altering the phase of one source, you can
> get any amplitude you want from zero up to twice the amplitude of either
> one.
>
> Now just twiddle that phase knob around and around as fast as you can.
>
> You've just slightly altered the instantaneous frequency of one of the
> generators (but only while you twiddle), and accomplished pretty much
> the same effect as listening to the beat between two guitar strings at
> nearly zero frequency offset. With no nonlinear processes in sight.
>
> Isaac

You put some effort into that. I give you
credit for that.

The socratic thing isn't working, so here
you go.

Is an envelope detector linear? The answer is no.
But how can that be? If you put in a sine wave of
amplitude A you get A volts out (assuming its gain is 1).
If you put in a sine wave of amplitude 2A and you
get 2A volts out. Linear, right?
Now you put in a sine wave of amplitude A at
455 kHz plus a sine wave of amplitude A at
456 kHz. (Consider the envelope detector
of a typical AM radio here.) What do you get out? A
sine wave of amplitude A/2 at 1 kHz. Intermodulation.
An envelope detector is not linear. No envelope/
amplitude detector is linear.

The typical envelope detector is a diode rectifier
followed by a lowpass filter.
The diode rectifier is obviously nonlinear and
gives you all sorts of intermoduation. With a
single sine wave input you get a DC term and
various harmonics of the sine wave. The lowpass
filter filters out all the harmonics and leaves
the DC.
If you put in two sine waves (assuming their
frequencies are above the cutoff of the subsequent
lowpass and their difference is within the
lowpass) again the diode nonlinearity results
in intermodulation. You get a DC component,
the difference frequency, the sum, and various
higher frequencies. The filter leaves only the
difference frequency and the DC. In an AM
receiver the DC is subsequently blocked too.

Do you see how this applies to spectrum analyzers
and the human auditory system?

3046. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:29:13 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <469110d5$0$8030$4c368faf@roadrunner.com>
Source record: 38854

"Allodoxaphobia" <bit-bucket@config.com> wrote in message
news:slrnf92302.2a1m.bit-bucket@shell.config.com...
> On Sun, 8 Jul 2007 08:51:57 -0400, Jimmie D wrote:
>>
>> Strange thing, we took the tribander down
>> first and the antenna swayed more after it was removed.
> ^^^^^^^
> ITYM "tower"
>
> Mass... Inertia... Mass moment of inertia...
>
> Of course, if it ever starts swaying dramatically,
> the same factors come into play.
>
> Jonesy
> --
> Marvin L Jones | jonz | W3DHJ | linux
> 38.24N 104.55W | @ config.com | Jonesy | OS/2
> *** Killfiling google posts: <http://jonz.net/ng.htm>

Yes I meant "tower"

3047. Re: noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:38:05 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <469112e8$0$31228$4c368faf@roadrunner.com>
Source record: 38855

"ml" <m@di.net> wrote in message
news:m-EC7D79.07175708072007@news.verizon.net...
> hi
>
> about 6months ago my normally low noise level has been plagued with
> some noise
>
> it's on and off about 30sec to 1 min on and maybe 1min off but then
> it seems to take a break and might go quite for say 5 min
>
> seems to be on all the bands 160-10 and almost as strong equally
>
> it sounds just like the noise level(norm background static sorta)
> but comes in s7 solid so all but the most strongest stations get
> wipped out
>
>
> i turned off all the power in my apt via the main breaker and powered
> up the rig w/my battery so w/only the rig w/power i still got it same
>
> noise definately comes in stronger w/my roof dipole than say a small
> vertical whip in the apt (i am on 4th fl of 13)
>
> i barly hear the noise w/my indoor whip however i also barley hear any
> singnals inside given all the concreate and steel mesh
>
> so the question:
>
> Obviously i need to hunt around for the noise whats the best way to
> track this down unf i don't have a spectrum analyzer
>
> i do have a ft817 but what is the best antenna but make for this? i
> can't walk around the block w/anything to big
>
> but am willing to get anything i need as long as it's not too$$
>
> any tips appreciated because i can't realy use the lowbands anymore
> really annoying
>
>
> thanks
>
>
>

>
>
> as an aside i discovered my friends zyzel modem puts out a tremendious
> ammount of rf

Sounds like what my coffee pot was doing. I noticed every time I sat down to listen it would start, rest of the day fine. I always start a listening session with a fresh cup o coffee.

Jimmie

3048. Re: aircom coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 16:39:52 UTC
From: Alan WA4SCA <APBIDDLE@UNITED.NET>
Message-ID: <8t3293taveng6lkk460tv3al3g09t1s3he@4ax.com>
Source record: 38856

Aircom is one of several low loss lines I have used over the years in amateur satellite operations. Others have included 9913, LMR-400, Buryflex, etc. They all have worked fine, as long as you install the connectors properly, avoid sharp bends which can cause the center conductor to migrate, and do some basic waterproofing.

For instance, the original 9913 had a bad reputation of having water run out the end. I saw it happen in a digipeater installation. Recently, I took down some which had been in place for 20 years. Testing with a Bird, I found that it still met specs, and not a drop of water.

My current usage is LMR-400 to the rotators and preamps except for some hardline used on 1268 MHz, LMR-400-Ultrafex from there to the antennas. If I need to add another line, I will probably use Aircom, because there is a roll in the barn. I would not buy more, not that it is bad, but that there are other equivalent options which are less expensive. One consideration might be UV resistance, which is not a factor where I live. Of course, the slight difference in attenuation may be more important as the run gets longer.

--
Alan
WA4SCA

3049. Re: noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 17:50:42 UTC
From: dplatt@radagast.org
Message-ID: <iok7m4-78t.ln1@radagast.org>
Source record: 38857

>Obviously i need to hunt around for the noise whats the best way to
>track this down unf i don't have a spectrum analyzer

See if the noise is present on a portable AM broadcast-band radio, if you tune the radio between stations. If so, you'll probably find that it's fairly directional - the loopstick antenna in a portable radio has reasonably deep nulls - and you can take bearings.

MFJ sells a noise-hunting receiver, which uses a pair of telescoping whip antennas, and (if I recall correctly) an AM receiver tuned to the aircraft band at around 130 MHz.

>any tips appreciated because i can't realy use the lowbands anymore
>really annoying

The first thing to do is determine whether the noise source is within your house or not. Easiest way to do this is to run your radio from a battery, and turn off the house's main circuit breaker. If the noise goes away, the source is local... if not, it's outside the house.

What you're describing certainly sounds like the result of an electrical arc or switching of some sort. Some household devices which have been shown to cause this sort of intermittent noise have been things like electric-fence energizing systems, 12- and 24-volt battery chargers (solar or line-powered), fish-tank heaters, and even electric blankets.

Industrial systems like electrical welders can do it, too.

Another not-uncommon source is street lighting systems. Sodium- and mercury-vapor high intensity light systems can generate a lot of noise, especially if there are loose or corroded connections in their wiring or (I believe) if the bulbs are failing and the lights are cycling on and off. If you can track the noise with a portable AM radio, see if you can find a street or parking-lot lamp which is cycling on and off in synchronization with the noise.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3050. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 17:58:06 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-97799B.10580608072007@newsgroups.comcast.net>
Source record: 38858
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46910fe5$0$8925$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-664E24.21491207072007@newsgroups.comcast.net...
> > In article <468fe7df$0$16560$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >
> > --snippety-snip--
> >
> >> >> You said you are a physicist/engineer.
> >> >> What does "linear" mean?
> >> >
> >> > Let's not get too far off the subject here. We were discussing whether
> >> > the "tuning beat" that you use to tune a musical instrument involved a
> >> > nonlinear process (ie. "modulation").
> >>
> >> Then linearity is at the core of the matter.
> >> What does "linear" (or "nonlinear") mean to you?
> >
> > OK, if you insist -- *in this case* it means "linear enough to not
> > produce IM products of significant amplitude".
>
> Good enough.
> Then spectrum analyzers and the human auditory
> system are not linear.
> Stay with me here.
>
> >
> >> > I said that it does not, and that
> >> > it could be detected by instrumentation which was proveably linear
> >> > (i.e.
> >> > not "perfectly" linear, because that's not required, but certainly
> >> > linear enough to discount the requirement for "modulation").
> >>
> >> No nonlinearity is necessary in order to hear
> >> a beat?
> >> Where does the beat come from?
> >
> > As the phase of the two nearly equal waves move past each other, there
> > is simple vector summation which varies the amplitude.

> >
> > Consider two sine waves of precisely the same frequency, where one of
> > them is adjustable in phase -- use a goniometer, for instance. Use a set
> > of resistors to sum the two signals, and observe the summing point with
> > a 'scope or a loudspeaker. By altering the phase of one source, you can
> > get any amplitude you want from zero up to twice the amplitude of either
> > one.
> >
> > Now just twiddle that phase knob around and around as fast as you can.
> >
> > You've just slightly altered the instantaneous frequency of one of the
> > generators (but only while you twiddle), and accomplished pretty much
> > the same effect as listening to the beat between two guitar strings at
> > nearly zero frequency offset. With no nonlinear processes in sight.
> >
> > Isaac
>
> You put some effort into that. I give you
> credit for that.
>
> The socratic thing isn't working, so here
> you go.

I would appreciate it if you would take the time to list *in detail* any
errors in what I wrote. If it "isn't working", I need to know why,
because I don't like to be confused about things.

> Is an envelope detector linear? The answer is no.

That's correct, and I'm well aware of it, but so what?

--dissertation on how an envelope detector works snipped--

> Do you see how this applies to spectrum analyzers
> and the human auditory system?

Sure. But

1) It is possible -- if not practical -- to build a "detectorless" (in
the nonlinear process sense) spectrum analyzer, and

2) None of it is even remotely significant to the subject at hand.

Here it is again: the "beat" one hears when tuning a guitar or other
instrument does *not* require any nonlinear process for its production.
Period.

Isaac

3051. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:01:04 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-35196C.11010408072007@newsgroups.comcast.net>
Source record: 38859
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> "Bob Myers" <nospamplease@address.invalid> hath wroth:
>
> >"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> >news:468fe7df$0$16560$4c368faf@roadrunner.com...
>
> >> No nonlinearity is necessary in order to hear
> >> a beat?
> >> Where does the beat come from?
>
> >An audible beat tone is produced by the constructive and destructive
> >interference between two sound waves in air. Look at a pictorial
> >representation (in the time domain) of the sum of sine waves,of similar
> >amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
> >see it.
> >
> >Bob M.
>
> I beg to differ. There's no mixing happening in the air. compression
> of air is very linear (Boyles Law or PV=constant).

In general, that's true, but take a look at what happens in the throats
of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
by Beranek.

Isaac

3052. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:03:32 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-FB6BF9.11033208072007@newsgroups.comcast.net>
Source record: 38860
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <469064fd$0$16540$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

--big ol' snip--

> >>> When AM is correctly accomplished (a single voiceband signal is
> >>> modulated
> >>
> >> The questions I posed were not about AM. The
> >> subject could have been viewed as DSB but that
> >> wasn't the specific intent either.
> >>
> > You should take some time to more carefully frame your questions.
> >
> > Do you understand that a DSB signal *is* AM?
>
> So all the AM broadcasters are wasting money by
> generating a carrier?

Of course not. They're saving you (and everybody else) money by allowing
simple receiver designs -- and that was very important in the 1920's.

Isaac

3053. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:11:47 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6r9d2$q4i$1@usenet01.boi.hp.com>
Source record: 38861
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:4690647b$0$24729$4c368faf@roadrunner.com...
>> For the simple reason that there isn't actually a "tone" involved -
>> in other words, there is no actual signal at the difference frequency.
>> There can't be, since there is no "mixing" (multiplication) of the
>> two original tones.
>
> There is no multiplication of 1000 Hz and 1005 Hz
> either, is there? Why don't you hear 1000 Hz and
> 1005 Hz rather than a single tone varying in amplitude?

Because you can't distinguish two tones as separate tones
if they are close enough together in frequency, due to the
way in which the frequency-discrimination process in human
hearing operates.

> Could it be that the human auditory system is not
> linear?

There are a number of ways in which the human auditory
system is not linear; it's simply that these are not the dominant
cause of the perception of audible "beats."

Bob M.

3054. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:12:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5t92931ls25pqu5lbvccut7d1fp2fke4g5@4ax.com>
Source record: 38862
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw <isw@witzend.com> hath wroth:

>> I beg to differ. There's no mixing happening in the air. compression
>> of air is very linear (Boyles Law or PV=constant).
>
>In general, that's true, but take a look at what happens in the throats
>of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
>by Beranek.
>
>Isaac

What am I suppose to look for? I appreciate your recommended research project, but frankly, I don't care what happens inside a high powered horn loudspeaker. I prefer to stay fairly on topic about the original allegation that mixing somehow occurs in open air, which is not true.

Incidentally, if mixing did occur in open air or inside the ear, you would not be able to comfortably listen to hi-fi music, as all you would hear would be intermodulation products.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3055. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:14:58 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6r9j1$q74$1@usenet01.boi.hp.com>
Source record: 38863
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com...
>>An audible beat tone is produced by the constructive and destructive
>>interference between two sound waves in air. Look at a pictorial
>>representation (in the time domain) of the sum of sine waves,of similar
>>amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>>see it.
>>
>>Bob M.
>
> I beg to differ. There's no mixing happening in the air.

Nor did I say there was. The phenomenon of interference
between two compression waves in a given medium is not
an example of "mixing."

> of air is very linear (Boyles Law or PV=constant). If there were
> mixing, you would be able to hear the beat note when one generates two
> ultrasonic tones. I belch 25KHz and 26KHz from two transducers, by
> our logic, air mixing would create a 1KHz beat note. It doesn't and
> you hear nothing.

That was exactly my point. Please read ALL responses I've
made re this topic.

> What seems to be the problem here is the model of the human ear is not
> what one would assume. It is NOT a broadband detector. The cochlea
> cilia (hairs) resonate at individual frequencies. Each one resonantes
> at only one frequency (and possibly some sub-harmonics). Therefore,
> the human ear model is a collection of narrow band filters and
> detectors. Unless the two frequencies involved both cause a single
> cilia to simultaneously vibrate at both frequencies, there isn't going
> to be any mixing. Each detector can be individually quite non-linear,
> but as long as it vibrates at only one frequency, there isn't going to
> be any mixing.

This is also a point I noted earlier in this thread.

Bob M.

3056. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 18:19:40 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <6792931lcbm8ib6d0sb5rdf1fguo9mvm14@4ax.com>
Source record: 38864
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On 7 Jul 2007 11:38:12 GMT, phil-news-nospam@ipal.net wrote:

>In alt.tv.tech.hdtv "Roger (K8RI)" <validaddress@my.com> wrote:
>
>| The ones on my quadature array were a lot stronger than that. I
>| finally gave up as it's too difficult to get the proper spacing from
>| side to side across the entire UHF band. Besides at 90 feet I point
>| them (I have one to the NW and one to the S) to the weak UHF stations
>| and they do very well on the much stronger VHF.
>
>If the desired signal is a single channel, two antennas connected 180
>degrees out of phase (or flip one upside down), where they are spaced
>an odd multiple wavelength from the desired source, and equadistant to
>the multi-frequency side source (if there is a specific noisy source),
>might do the trick.

The individual antennas I have listed above work quite well. Each has its own coax and antenna mounted preamp. I just had problems with all the lobes on the quadature array on some channels.

http://www.rogerhalstead.com/ham_files/Tower30.htm The UHF TV antenna pointing to the NW is plainly visible. The one just below it pointing straight south is just barely visible.
>
>You might look into these antennas:
>
>http://simplicitytool.com/mu_series_uhf_quad_array.htm

These antennas are wayyyy too close to really take advantage of using the individual antennas as a quadature array. Regardless of their claims for gain it can't be much more than one antenna alone. Front to back *might* be legit and as they are so close as to perform like one antenna they probably have only minor side lobes.

Unfortunately a company that puts big antennas that close together makes me doubt their design criteria and performance figures.

Note how close their antennas are Vs boom length to the ones in http://www.rogerhalstead.com/ham_files/tower21.htm and these are big antennas.

One thing to remember when stacking antennas. A stacked pair will at best be 3 db better than one. A quadature array (4 antennas) will at best be 3 db better than the stacked pair or 6 db better than one. Again that is _at_best_

Vertical stacking does not add side lobes over the single antenna while horizontal stacking does. Horizontal stacking is also very frequency sensitive so when covering the entire UHF band the horizontally spaced antennas my exhibit quite different characteristics on different channels. This is what makes building a good quadature array that covers more than a few channels so difficult.

>http://simplicitytool.com/log%20periodic%20arrays.htm

3057. Re: Rohn 25G without guys, how high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 19:14:48 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <a9idnUpKus31qgzbnZ2dnUVZ_qiqnZ2d@comcast.com>
Source record: 38865

Depending on how it is supported at the base and where it might be supported
somewhere in the middle - freestanding to 50 ft. Any other height needs to
be guyed!

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:469110d5$0$8030$4c368faf@roadrunner.com...
>
> "Allodoxaphobia" <bit-bucket@config.com> wrote in message
> news:slrnf92302.2a1m.bit-bucket@shell.config.com...
>> On Sun, 8 Jul 2007 08:51:57 -0400, Jimmie D wrote:
>>>
>>> Strange thing, we took the tribander down
>>> first and the antenna swayed more after it was removed.
>> ^^^^^^^
>> ITYM "tower"
>>
>> Mass... Inertia... Mass moment of inertia...
>>
>> Of course, if it ever starts swaying dramatically,
>> the same factors come into play.
>>
>> Jonesy
>> --
>> Marvin L Jones | jonz | W3DHJ | linux
>> 38.24N 104.55W | @ config.com | Jonesy | OS/2
>> *** Killfiling google posts: <http://jonz.net/ng.htm>
>
> Yes I meant "tower"
>

3058. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 19:17:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <o7d293dphiou901mp3lvjlg4ge7t9mc9ts@4ax.com>
Source record: 38866
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com...
>>>An audible beat tone is produced by the constructive and destructive
>>>interference between two sound waves in air. Look at a pictorial
>>>representation (in the time domain) of the sum of sine waves,of similar
>>>amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>>>see it.
>>>
>>>Bob M.

>> I beg to differ. There's no mixing happening in the air.

>Nor did I say there was. The phenomenon of interference
>between two compression waves in a given medium is not
>an example of "mixing."

You didn't say that. You that a beat note would be produced. From
your posting at:
<http://groups.google.com/group/sci.electronics.basics/msg/f18c6dfefbd55a82>
"An audible beat tone is produced by the constructive and
destructive interference between two sound waves in air."

That's wrong. There's no audible beat note produced in the air.

You can demonstrate it to yourself with a suitable audio spectrum
analyzer and tone generators. I recommend "Visual Analyzer 8"
<http://digilander.libero.it/hsoft/>
Generate two sine waves at any frequencies. Use a cheap microphone to
pickup the audio and display it with the audio SA. You won't see any
sums, differences, or intermodulation products unless you over drive
the microphone or try to produce the tones from a single loudspeaker.

Kindly supply a suitable correction or explanation. I'll gladly
entertain the possibility that I'm wrong.

>That was exactly my point. Please read ALL responses I've
>made re this topic.

My appologies for not reading all of the 269 posting to this thread.
The thread is a classic case of topic drift. I though I would check
the topic de jure and found your posting.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3059. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 20:31:11 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4691498b$0$8055$4c368faf@roadrunner.com>
Source record: 38867
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:5t92931ls25pqu5lbvccut7d1fp2fke4g5@4ax.com...
> isw <isw@witzend.com> hath wroth:
>
>>> I beg to differ. There's no mixing happening in the air. compression
>>> of air is very linear (Boyles Law or PV=constant).
>>
>>In general, that's true, but take a look at what happens in the throats
>>of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
>>by Beranek.
>>
>>Isaac
>
> What am I suppose to look for? I appreciate your recommended research
> project, but frankly, I don't care what happens inside a high powered
> horn loudspeaker. I prefer to stay fairly on topic about the original
> allegation that mixing somehow occurs in open air, which is not true.
>
> Incidentally, if mixing did occur in open air or inside the ear, you
> would not be able to comfortably listen to hi-fi music, as all you
> would hear would be intermodulation products.
>
Yes everything would become ultra sonici

3060. Re: aircom coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 20:38:52 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46914b58$0$12241$4c368faf@roadrunner.com>
Source record: 38868

"Alan WA4SCA" <APBIDDLE@UNITED.NET> wrote in message
news:8t3293taveng6lkk460tv3al3g09t1s3he@4ax.com...
> Aircom is one of several low loss lines I have used over the years in
> amateur satellite operations. Others have included 9913, LMR-400,
> Buryflex, etc. They all have worked fine, as long as you install the
> connectors properly, avoid sharp bends which can cause the center
> conductor to migrate, and do some basic waterproofing.
>
> For instance, the original 9913 had a bad reputation of having water
> run out the end. I saw it happen in a digipeater installation.
> Recently, I took down some which had been in place for 20 years.
> Testing with a Bird, I found that it still met specs, and not a drop
> of water.
>

One of the more common mistakes in using 9913 is thinking you dont have to
seal the end in the shack.
Thermal pumping(heating and cooling of the coax) will draw a lot of moisture
into it from inside the shack.

Jimmie

3061. multiple transmitter dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 22:10:01 UTC
From: inphaseprod <inphaseprod@yahoo.com>
Message-ID: <1183932601.701832.146160@i38g2000prf.googlegroups.com>
Source record: 38869

Greetings. I am new to the group and hope that I can glean a wealth of wisdom
from the collective.

I have a dilemma.

I propose to operate 6 or 7 five watt FM transmitters on different frequencies.
This is in another country where FM bandwidth is fairly open so it will be possible
to space operating frequencies far apart. I do not need to transmit very far (300 meters
maximum) and not for very long periods of time (5 minute events). The surrounding
area is not heavily populated.

I will be transmitting from one location and I hope to minimize interference between
antennas and broadcast equipment (I am using a multiple output interface connected
to a laptop). The transmitters are a very small Chinese build PLL... not the best
in the West (or East). And the antennas are tuneable 1/4 wave with ground plane radials.

I would like to 1). be able to connect all transmitters to the same regulated power supply
(13.5V DC) and 2). use the minimum lengths of cabling due to weight considerations.

I am not concerned about much loss of efficiency as the distance needed to throw is
well within the capability of the transmitter strength.

Does anybody have any recommendations for spacing, orientation, power considerations?
And any idea approximately how many amps a 5watt transmitter might pull from the power
supply?

Sorry for my naivete or ignorance and thank you anyone who cares to shed light on this
dilemma.
yours,
robb kunz

3062. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 22:35:07 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <fcs293h5819tllimlu4j33rve5ghdgkr5n@4ax.com>
Source record: 38870

On Sun, 08 Jul 2007 11:49:39 GMT, ml <m@di.net> wrote:

>In article <fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com>,
> Walter Maxwell <walt@w2du.com> wrote:
>
>> Hello to all my antenna friends. I've just now returned home after nine weeks
>> in the hospital following major
>> spinal surgery. The surgery was successful, but I contracted hideous
>> intestinal infection C Diff, or colitis,
>> in the hospital. Forty nine days were required to clear the infection, after
>> which I could begin physical
>> therapy.
>> 73 to All,
>>
>> Walt, W2DU
>
>dear walt
>
>Didn't know you were out, so please accept some late well wishes
>
>didn't know you can 'catch' colitis but glad that it went away and
>overall your procedure went well
>
>hope that you have a speedy recovery and enjoy ham radio to take your
>mind off things
>
>
>be well- best wishes
>
>
>myles
Thanks for the kind words, Myles, I appreciate your thoughts.

Re colitis, otherwise known as 'C Diff', it is one of the most highly contagious diseases of the intestinal
system. It occurs when antibiotics are used prior to surgery in which the antibiotic kills the good bacteria
in the system, leaving the toxic bacteria to take over, resulting in continual diarreah(sp). I was fortunate
to survive it at my agee 88+, for it is quite common for older people in poor health to not survive. I am
fortuntate to have been in good health. It took 49 days for me to get rid of the C Diff.

Walt

3063. Re: multiple transmitter dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 22:36:47 UTC
From: Dave <noone@nowhere.com>
Message-ID: <3Gdki.3596$V35.374@trndny03>
Source record: 38871

at 5w from a 12v supply plan on 1a for each transmitter, maybe more if they have lots of lights and are inefficient. at worst probably 2a each. at 5w each they probably won't bother each other much, but its probably best to keep the antennas a few feet from the computer anyway. as far as the transmitters you can probably pile them up on top of each other unless they need room for air circulation, though for short times and only 5w they can't need much cooling unless they are really tiny.

"inphaseprod" <inphaseprod@yahoo.com> wrote in message
news:1183932601.701832.146160@i38g2000prf.googlegroups.com...
> Greetings. I am new to the group and hope that I can glean a wealth of
> wisdom
> from the collective.
>
> I have a dilemma.
>
> I propose to operate 6 or 7 five watt FM transmitters on different
> frequencies.
> This is in another country where FM bandwidth is fairly open so it
> will be possible
> to space operating frequencies far apart. I do not need to transmit
> very far (300 meters
> maximum) and not for very long periods of time (5 minute events). The
> surrounding
> area is not heavily populated.
>
> I will be transmitting from one location and I hope to minimize
> interference between
> antennas and broadcast equipment (I am using a multiple output
> interface connected
> to a laptop). The transmitters are a very small Chinese build PLL...
> not the best
> in the West (or East). And the antennas are tuneable 1/4 wave with
> ground plane radials.
>
> I would like to 1). be able to connect all transmitters to the same
> regulated power supply
> (13.5V DC) and 2). use the minimum lengths of cabling due to weight
> considerations.
>
> I am not concerned about much loss of efficiency as the distance
> needed to throw is
> well within the capability of the transmitter strength.
>

> Does anybody have any recommendations for spacing, orientation, power
> considerations?
> And any idea approximately how many amps a 5watt transmitter might
> pull from the power
> supply?
>
> Sorry for my naivete or ignorance and thank you anyone who cares to
> shed light on this
> dilemma.
> yours,
> robb kunz
>

3064. Re: multiple transmitter dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 22:51:39 UTC
From: jgboyles@aol.com
Message-ID: <1183935099.086809.34540@c77g2000hse.googlegroups.com>
Source record: 38872

On Jul 8, 5:10?pm, inphaseprod <inphasep...@yahoo.com> wrote:
> Greetings. I am new to the group and hope that I can glean a wealth of
> wisdom
> from the collective.
>
> I have a dilemma.
>
> I propose to operate 6 or 7 five watt FM transmitters on different
> frequencies.
> This is in another country where FM bandwidth is fairly open so it
> will be possible
> to space operating frequencies far apart. I do not need to transmit
> very far (300 meters
> maximum) and not for very long periods of time (5 minute events). The
> surrounding
> area is not heavily populated.
>
> I will be transmitting from one location and I hope to minimize
> interference between
> antennas and broadcast equipment (I am using a multiple output
> interface connected
> to a laptop). The transmitters are a very small Chinese build PLL...
> not the best
> in the West (or East). And the antennas are tuneable 1/4 wave with
> ground plane radials.
>
> I would like to 1). be able to connect all transmitters to the same
> regulated power supply
> (13.5V DC) and 2). use the minimum lengths of cabling due to weight
> considerations.
>
> I am not concerned about much loss of efficiency as the distance
> needed to throw is
> well within the capability of the transmitter strength.
>
> Does anybody have any recommendations for spacing, orientation, power
> considerations?
> And any idea approximately how many amps a 5watt transmitter might
> pull from the power
> supply?
>
> Sorry for my naivete or ignorance and thank you anyone who cares to
> shed light on this
> dilemma.

> yours,
> robb kunz

Hi Robb, As for power supplies, to run 7-5 watt input transmitters, you will need at a minimum a 13.5 volt 3 amp supply. This is a 40-50 watt supply. Check the name plate of the supply you intend to use to see if it will work.

No recommendations on spacing or orentation of antennas, just try and see what works.
73 Gary N4AST

3065. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-08 23:12:56 UTC
From: Rick Frazier <rickf@rickfrazier.com>
Message-ID: <46916F78.8070207@rickfrazier.com>
Source record: 38873

Rick (W-A-one-R-K-T) wrote:

> When electrically grounding one's station, is there any particular
> advantage of a single 8-foot ground rod over two 4-foot ground rods, or an
> 8-foot length of heavy gauge wire buried 6-12 inches under the ground?
>
>

The easy answer is "it depends".

Where I live, it is virtually impossible to get an 8 foot ground rod in vertically, without first having someone core-drill the site. Living on a volcano has it's problems, and one of them certainly is grounding.

Solid rock with perhaps a few feet of earth on top makes for tough grounding situations. Here, most electrical services are grounded to something called a "ufer" ground, which is about 20 feet of #6 copper inside the perimeter foundation and clamped to at least two 20 foot lengths of rebar, all of which is embedded in the concrete.... external ground rods (if any) are typically pounded onto the ground at an angle, so they can follow the interface of the lava and earth. If the individual is making any pretense of having a vertical rod, they'll bend it vertical just before it sticks up out of the earth.

Even at 4000 feet elevation, it is rare to see frost on the ground more than once every 3 to 5 years, so getting a ground below the "frost line" is easy. When I lived near sea level, I built a workshop of 32' x 52' and put about a thousand feet of bare copper wire underneath the slab in a gridded configuration, with all long runs brought to a single point where the ham shack was to be. It worked great as RF ground and was tied to the ufer as well, so everything was at the same potential.

Here, multiple short rods would be used (and accepted by the electrical inspector) for the sercvice entrance ground, if he hadn't already inspected the ufer ground prior to the concrete pour. (I know someone that put in the required ufer and poured the slab without getting the electrical inspection, and had to do just that, add several vertical rods, all tied together to satisfy the inspector). I've heard rumor that new code is minimum of 2 each 8 foot rods, but people here aren't on the newest code level by a long shot.

Best thing is to make sure what local code is first, then go for overkill if you are at all thinking it isn't enough, especially if you are putting in a tower and/or worried about lightning.

RF ground is a whole different matter than safety or lightning grounding, as you are likely aware already.

3066. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 01:20:52 UTC
From: William O'Hara <whoohara@yahoo.com>
Message-ID: <Xns9967D92E9F9ACKB1IUB223223n1eyLOCK@216.196.97.136>
Source record: 38874

AFAIK Callbook listing was acceptable proof for the element for Techicians prior to 1987. Seriously! What would be insufficient about it? Generals with 5 WPM did not get credit. They would have to retaken the element, if the license had expired. All moot, now.

Bill
n1ey

> I don't think a callbook listing would be acceptable "proof" for the
> FCC to give him credit for having passed the code test in the past.
> But, again, since no code test is required anymore, he can simply
> re-test for any class license and request his old call as a vanity
> callsign.
>
> Scott
> N0EDV

--

William O'Hara
www.N1ey.com - Amateur Radio and Railfan Blog
www.yahoogroups.com/group/illinoiscentral - premier discussion list re:
ICRR

3067. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 01:23:56 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6s2ndeot1@usenet01.boi.hp.com>
Source record: 38875
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:o7d293dphiou901mp3lvjlg4ge7t9mc9ts@4ax.com...
>>Nor did I say there was. The phenomenon of interference
>>between two compression waves in a given medium is not
>>an example of "mixing."
>
> You didn't say that. You that a beat note would be produced. From
> your posting at:
> <http://groups.google.com/group/sci.electronics.basics/msg/f18c6dfefbd55a82>
> "An audible beat tone is produced by the constructive and
> destructive interference between two sound waves in air."
>
> That's wrong. There's no audible beat note produced in the air.

Sigh - which, again, is as I explained it further on. I said that
there is no actual component at the "beat" frequency. You do
HEAR a "beat," however, and that is the result of the amplitude
variation caused by the interference, as noted. You cannot hear
the beat effect (I won't use the word "tone" here, which I admit
was a possible source of confusion in the original wording) if the
two original tones are too far apart, simply because you can only
perceive such amplitude variations if they occur below a certain
rate.

I have never ever said that "mixing" (multiplication) occurs in air.
If you're going to pick apart what someone is saying, then please
read everything they've said before starting.

And whether or not you READ all the postings in a thread is one
thing - whether or not you choose to respond to a given posting
out of its context is something else entirely.

Bob M.

3068. Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 02:14:51 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <vSgki.975$Y_3.350@trnddc04>
Source record: 38876

Hey, here's a question for you antenna heads..... I've googled and not found much but a million opinions
and ideas on which is better so I thought I'd come here and lay out the situation and get some advice.

I want to put an HF radio back in the house.

I only have a small yard and pesky neighbors.

I want to operate ham and MARS freqs.

I need to be somewhat incognito. A tower is out, and a big vertical is questionable.
I don't like the radial issue as I live on solid rock, nor the price issues.

My only option is to go out back... zero yard but a hillside that is almost limitless,
however; I live on top of a ridge so the hills all go downward. I'm assuming a long wire in the treetops or similar is my only hope.
[very few trees are higher than my house up here, LOL]

SO... if you only had one direction to throw an antenna out, but could arrow a 300 footer through the treetops if need be,
what would you do? Which style antenna would be best? Random or folded or ?
I'm assuming end-fed is my only option here, with only one direction to go.
[Southerly]

I'm considering a manual tuner in the shack, or auto-tuner like a marine unit that I could remote in the attic and coax up to it then wire to outside.

Is there a better way?? Ideas? Input?
thanks for the help!
Woody

3069. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 02:46:18 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <s86393tu9f0vh7srri3k0t9l9tuhsv30dd@4ax.com>
Source record: 38877
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:o7d293dphiou901mp3lvjlg4ge7t9mc9ts@4ax.com...
>>>Nor did I say there was. The phenomenon of interference
>>>between two compression waves in a given medium is not
>>>an example of "mixing."
>>
>> You didn't say that. You that a beat note would be produced. From
>> your posting at:
>> <http://groups.google.com/group/sci.electronics.basics/msg/f18c6dfefbd55a82>
>> "An audible beat tone is produced by the constructive and
>> destructive interference between two sound waves in air."
>>
>> That's wrong. There's no audible beat note produced in the air.

>Sigh - which, again, is as I explained it further on. I said that
>there is no actual component at the "beat" frequency.

So, there's no "component" of the "beat" frequency. Well, in my
limited knowledge of what the term "beat" means in RF circuitry, it's
normally used in the context of a multiplicative mixing function, such
as BFO (beat frequency oscillator). Is there some other way to create
a "beat" frequency other than multiplicative (mixing)? I don't know
of any.

Also, what's a "component" of the beat frequency? Is that just one of
the numerous N*F1 +/- M*F1 multiplicative mixer products?

>You do
>HEAR a "beat," however, and that is the result of the amplitude
>variation caused by the interference, as noted.

Interesting. So, using my original example, if I take two ultrasonic
tones, above human hearing, you suggest that I do *HEAR* a beat, but
that there's no actual component at the beat frequency. The does
present a problem because if this is true, then the mixing has to
occurring somewhere in order for my brain to detect the beat
frequency. Is it mixing in my ear, in the cochlea, in the nerves
going to the brain, or in the brain somewhere? I don't think it's any
of these because when I do this experiment, I don't hear any such beat
note.

I'm also having a problem with your use of the term interference. In the present context, I would presume this to be something involving interferometer or quantum wave mechanics. I guess I've been out of the broadcast business for too long.

I did manage to find a nifty Java applet that shows the effects of acoustic interference:
<http://falstad.com/interference/>
It appears to refer to variations in amplitude across the area where both tones are present. What's missing is any reference to any beat note. Certainly additive mixing is present as this is what causes the variations in amplitude. However, I don't see any reference to "beat" notes in any of the articles explaining audio interference phenomenon.
>You cannot hear
>the beat effect (I won't use the word "tone" here, which I admit
>was a possible source of confusion in the original wording) if the
>two original tones are too far apart, simply because you can only
>perceive such amplitude variations if they occur below a certain
>rate.

I'll make it easy. The difference of the two tones are in the audible range. For example, 25KHz and 26KHz to produce a 1KHz beat note. The amplitude component is certainly there as you demonstrated with your explanation of audio "interference". So, do I hear the 1KHz, or don't I hear the 1KHz? If I hear it, where does the mixing occur?

>I have never ever said that "mixing" (multiplication) occurs in air.
"An audible beat tone is produced by the constructive and destructive interference between two sound waves in air."
How else are you going to produce an *audible* beat note except by multiplicative mixing?

Actually, I have an issue with only one word in the above quotation. It's not audible. Drop that word and it's mostly correct.

>If you're going to pick apart what someone is saying, then please
>read everything they've said before starting.

Actually I did. I read most of the 270 odd articles in this thread, but I ignored any that were obviously a waste of time, such as those consisting of massive quotation with one line of worthless drivel added.

>And whether or not you READ all the postings in a thread is one
>thing - whether or not you choose to respond to a given posting
>out of its context is something else entirely.

Are my comments really out of context? I had issues with much of what was said in this thread. Never mind the topic drift and inane responses. I resisted temptation and did not respond to any of these until someone, in this case you, went off what I consider to be the deep end. I did not question your qualifications, did not send you off on some reading adventure, and addressed your specific statements directly, as I'm doing in this reply.

However, I can do it your way. Your previous reply reeks of
blustering and I would advise you cease and desist.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3070. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 02:54:23 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4691a35e$0$31277$4c368faf@roadrunner.com>
Source record: 38878

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:4690e590$0$14975$4c368faf@roadrunner.com...
>
> <WA4SZE@gmail.com> wrote in message
> news:1183677623.650527.200800@o61g2000hsh.googlegroups.com...
>> We are going to drop using the shunt feed tower no matter how hard we
>> work on it we don't think it's going to work any better that it does
>> right now.
>>
>> We have two choices :
>>
>> We have two towers spaced 250 feet apart the towers are 95 feet
>> high. We could install a 'flat top' wire run it from tower to tower.
>>
>> The horizontal run tower to tower would be 250 feet : The vertical
>> drop to the ground would be 90 feet or so.
>>
>> The vertical wire would be connected to the flat top wire dead
>> center
>>
>> We could series feed it against a good ground; 8 to 15 radials 500
>> feet long
>>
>>
>> Choice two:
>>
>> We have two towers spaced about 140 feet they are 150 feet high The
>> 'flat top' wire would run 140 feet horizontal tower to tower The
>> vertical drop would be 150 feet. same as above vertical wire
>> connected dead center of flat top.
>>
>> series feed working against 8 to 15 500 foot ground radials.
>>
>>
>> My question to the group:
>>
>> Is it better to have more (150 feet) vertical wire in the air with
>> LESS (140 feet) flat top wire or :
>>
>> LESS vertical wire in the air (90 feet) but MORE flat top wire 250
>> feet??????
>>
>>
>> The flat top wire is insulated from the towers using power line

>> fiberglass rods
>>
>> NDB freq is 529 KC
>>
>> P.S.
>>
>> Would their be a big difference if the 'flat top' has two runs of
>> 3/8 aluminum cable side by side spaced about 30 inches ?? or
>> would one 3/8 cable do the job???
>>
>> Thank you for your input
>>
>> Dave WA4SZE
>>
>
> You may want to check with the MIKE MARONEY AERONAUTICAL ACADAMEY in OKC.
> This is The FAA tech school and engineering support.
>

BTW are you aware NDBs are being phased out. I think they are all supposed
to be gone by 2012. They arent needed with GPS

Jimmie

3071. Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:05:27 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183950327.527232.151180@o61g2000hsh.googlegroups.com>
Source record: 38879

Just had some interesting reading on moon dust, mars dust e.t.c
I am amased that scientists had not figured out what the dust really
is.
Actually it fits very nicely in my thesis where errent particles fly
thru space
in swarm form as per radio communication. Just one thing escapes me
and that is particles pointed at the moons surface which penetrate the
extreme earths fields and then go on to hit the moon and then reflect
back.
Yet on the moons surface are zillians of these static particles stuck
to its surface.
The question is thus why is the moon which is covered with static
particles
also allow static particles to deflect? I don't know to much about
the moon but this would suggest the moon has a minimum gravitational
pull .
Not enough strength to totally absorb the impact of static
particles which are then allowed to bounce back to earth where it
becomes atached to diagmatic materials in radio antenna form.
This fits my thesis on radio propagation. What really bothers me is
that people in the space industry seem to not have any inclination
of the nature of this dus tis.. Anybody aware of papers that discuss
the
phenomina of surface covering materials of orbiting masses in the
Universe? I sure would appreciate pointers where the specifications
of surface dust is located together with comparisons to that covering
other orbiting units in the universe.
Art

3072. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <prm8m4-ibf.ln1@mail.specsol.com>
Source record: 38880

art <aunwin@insightbb.com> wrote:
> Just had some interesting reading on moon dust, mars dust e.t.c
> I am amased that scientists had not figured out what the dust really
> is.

Then you haven't read anything newer than pre-Apollo.

Actually, it was known long before that; Apollo just proved it.

<snip insanity>

--
Jim Pennino

Remove .spam.sux to reply.

3073. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:39:09 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183952349.378094.50040@n2g2000hse.googlegroups.com>
Source record: 38782

On 8 Jul, 20:05, art <aun...@insightbb.com> wrote:
> Just had some interesting reading on moon dust, mars dust e.t.c
> I am amased that scientists had not figured out what the dust really
> is.
> Actually it fits very nicely in my thesis where errent particles fly
> thru space
> in swarm form as per radio communication. Just one thing escapes me
> and that is particles pointed at the moons surface which penetrate the
> extreme earths fields and then go on to hit the moon and then reflect
> back.
> Yet on the moons surface are zillians of these static particles stuck
> to its surface.
> The question is thus why is the moon which is covered with static
> particles
> also allow static particles to deflect? I don't know to much about
> the moon but this would suggest the moon has a minimum gravitational
> pull .
> Not enough strength to totally absorb the impact of static
> particles which are then allowed to bounce back to earth where it
> becomes atached to diagmatic materials in radio antenna form.
> This fits my thesis on radio propagation. What really bothers me is
> that people in the space industry seem to not have any inclination
> of the nature of this dus tis.. Anybody aware of papers that discuss
> the
> phenomina of surface covering materials of orbiting masses in the
> Universe? I sure would appreciate pointers where the specifications
> of surface dust is located together with comparisons to that covering
> other orbiting units in the universe.
> Art

I forgot to mention something else. Moon dust in my terms consists
of static particles that lay on the surface of diagmatic materials
which means it would also adhere to spacemans uniform because of
bodily
attaction i.e. the human body is mostly water together with oxygen
which is diagmatic as is any radio antenna. The fact that static
particles are attached to orbiting masses surface suggest that a
correllation can be made between gravitational pull to the mass itself
which will then determine that the mass is in fact a diagmatic
material
of which there are relatively few. Methinks that I need to study
up a bit more unless there is a physisist on board this news group
that can guide me
Art KB9MZ

3074. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:41:18 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f6saov$l5n$1@usenet01.boi.hp.com>
Source record: 38783
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:s86393tu9f0vh7srri3k0t9l9tuhsv30dd@4ax.com...
> So, there's no "component" of the "beat" frequency.

"At" the beat frequency is what I said; by that, I mean there is no
signal at that frequency. "Component" is commonly used when
speaking in the frequency domain.

> Well, in my
> limited knowledge of what the term "beat" means in RF circuitry,

And you're correct within that context, but remember we're talking
about sound waves in air in the examples being discussed here. Within
THAT context, "beat" is commonly used to refer to the audible wavering
of the perceived sound when two tones are sounded which are very
close in frequency. For instance, when tuning a stringed instrument - a
guitar, let's say - you will often sound the desired pitch by fingering a
string which is already known to be in tune, and then adjusting the string
being tuned by listening for the "beat" between its note and the reference.
As the "beat" slows and eventually vanishes altogether, you know you
have properly tuned that string.

> it's
> normally used in the context of a multiplicative mixing function, such
> as BFO (beat frequency oscillator). Is there some other way to create
> a "beat" frequency other than multiplicative (mixing)? I don't know
> of any.

See above. Different context, different use of the same word.

> Also, what's a "component" of the beat frequency? Is that just one of
> the numerous N*F1 +/- M*F1 multiplicative mixer products?

Again, the phrase was "component AT the beat frequency." Meaning
that, of the total signal being considered (which must always be either
a pure sinusoid itself, or something which can be represented as the sum
of sinusoids), no part of that complete signal is a sinusoid at the "beat"
frequency.

> Interesting. So, using my original example, if I take two ultrasonic
> tones, above human hearing, you suggest that I do *HEAR* a beat,

Not at all - remember, the "beat" in question here is actually just the
low-frequency amplitude variation of the combined signal (which is
the sum of two sinusoids). But if you can't hear a signal at the

frequencies
in question anyway, you certainly can't hear the amplitude variation.
Again, take a look at what this summed signal looks like in the time
domain, and you'll see what I mean.

> I'm also having a problem with your use of the term interference. In
> the present context, I would presume this to be something involving
> interferometer or quantum wave mechanics. I guess I've been out of
> the broadcast business for too long.

"Interference" is commonly used to refer to the effect that two signals
have upon each other, esp. when said signals are at similar or
identical frequencies. For example, if two signals are added which are
at the same frequency and amplitude, but 180 degrees out of phase, you
have complete cancellation - which may then be referred to as an example
of "destructive interference." Addition of the same signals but IN phase
would be "constructive interference."

>
> I did manage to find a nifty Java applet that shows the effects of
> acoustic interference:
> <http://falstad.com/interference/>
> It appears to refer to variations in amplitude across the area where
> both tones are present. What's missing is any reference to any beat
> note. Certainly additive mixing is present as this is what causes the
> variations in amplitude.

Exactly - and this is the "beat" as that word is used in acoustic or
musical contexts. Again, please keep in mind that we've been discussing
the behavior of sound waves in air, not electrical signals within a
circuit. This would typically not be referred to as "mixing," though,
in any context in which that might be confused with the effects of
multiplication.

> I'll make it easy. The difference of the two tones are in the audible
> range. For example, 25KHz and 26KHz to produce a 1KHz beat note. The
> amplitude component is certainly there as you demonstrated with your
> explanation of audio "interference". So, do I hear the 1KHz, or don't
> I hear the 1KHz? If I hear it, where does the mixing occur?
>

You do not hear it, per the above. Thee is no actual 1 kHz tone
generated, but there IS an amplitude variation in the "envelope" of
the combined signal. (You wouldn't hear it even if the signals in
question were within the audible range, as a 1 kHz variation is too
rapid for human perception to detect.)

>>I have never ever said that "mixing" (multiplication) occurs in air.
> "An audible beat tone is produced by the constructive and
> destructive interference between two sound waves in air."
> How else are you going to produce an *audible* beat note except by
> multiplicative mixing?

I've already said that my use of the word "tone" was a possible source of confusion. There IS, however, an audible effect at the beat rate, if the signals in question are close enough together in frequency. Have you ever tuned an instrument?

> However, I can do it your way. Your previous reply reeks of
> blustering and I would advise you cease and desist.

Hopefully, you now, at this point, have a different opinion. If not, well, I don't suppose there's much more to be said.

Bob M.

3075. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:41:32 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183952492.808695.191940@w3g2000hsg.googlegroups.com>
Source record: 38784

On 8 Jul, 20:35, j...@specsol.spam.sux.com wrote:
> art <aun...@insightbb.com> wrote:
> > Just had some interesting reading on moon dust, mars dust e.t.c
> > I am amased that scientists had not figured out what the dust really
> > is.
>
> Then you haven't read anything newer than pre-Apollo.
>
> Actually, it was known long before that; Apollo just proved it.
>
> <snip insanity>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Proved what specific details?
Art

3076. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 03:57:34 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183953454.053322.195160@c77g2000hse.googlegroups.com>
Source record: 38785

On 8 Jul, 20:41, art <aun...@insightbb.com> wrote:
> On 8 Jul, 20:35, j...@specsol.spam.sux.com wrote:
>
> > art <aun...@insightbb.com> wrote:
> > > Just had some interesting reading on moon dust, mars dust e.t.c
> > > I am amased that scientists had not figured out what the dust really
> > > is.
>
> > Then you haven't read anything newer than pre-Apollo.
>
> > Actually, it was known long before that; Apollo just proved it.
>
> > <snip insanity>
>
> > --
> > Jim Pennino
>
> > Remove .spam.sux to reply.
>
> Proved what specific details?
> Art

If as you say they knew of the specifics of moon dust
before they got there one must presume that materials used
for the landrover did not consist of aluminum or any
other diagmatic material as that would certainly
limit its useful life
Art

3077. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 04:17:25 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-B1A0F7.21172508072007@newsgroups.comcast.net>
Source record: 38786
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <5t92931ls25pqu5lbvccut7d1fp2fke4g5@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> isw <isw@witzend.com> hath wroth:
>
> >> I beg to differ. There's no mixing happening in the air. compression
> >> of air is very linear (Boyles Law or PV=constant).
> > >
> > >In general, that's true, but take a look at what happens in the throats
> > >of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
> > >by Beranek.
> > >
> > >Isaac
> >
> What am I suppose to look for?

Information about the nonlinearity of air; what else? You said
"compression of air is very linear", but there are situations in
acoustics where it is not.

Isaac

3078. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 05:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <cpr8m4-ckr.ln1@mail.specsol.com>
Source record: 38787

art <aunwin@insightbb.com> wrote:
> On 8 Jul, 20:41, art <aun...@insightbb.com> wrote:
> > On 8 Jul, 20:35, j...@specsol.spam.sux.com wrote:
> >
> > > art <aun...@insightbb.com> wrote:
> > > > Just had some interesting reading on moon dust, mars dust e.t.c
> > > > I am amased that scientists had not figured out what the dust really
> > > > is.
> >
> > > Then you haven't read anything newer than pre-Apollo.
> >
> > > Actually, it was known long before that; Apollo just proved it.
> >
> > > <snip insanity>
> >
> > > --
> > > Jim Pennino
> >
> > > Remove .spam.sux to reply.
> >
> > Proved what specific details?
> > Art

> If as you say they knew of the specifics of moon dust
> before they got there one must presume that materials used
> for the landrover did not consist of aluminum or any
> other diagmatic material as that would certainly
> limit its useful life
> Art

There is no such word in English as "diagmatic" and you are talking
to yourself.

Yet another sign of dementia.

--
Jim Pennino

Remove .spam.sux to reply.

3079. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 06:16:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dhk3931mlgguj973vevd53tqbt80biatk6@4ax.com>
Source record: 38788

On Mon, 09 Jul 2007 02:14:51 GMT, "Woody" <ts520@hotmail.com> wrote:

>SO... if you only had one direction to throw an antenna out, but could arrow
>a 300 footer through the treetops if need be,
>what would you do?

Hi Woody,

Go for it!

It's not like an act of desperation or anything like that. I had a
similar situation (although more options) with an ad-hoc hillside
longwire (same size, height, etc.). It worked like gang-busters.

> Which style antenna would be best? Random or folded or ?

Just as you described it. Anything more convoluted is unlikely to
give you more performance.

73's
Richard Clark, KB7QHC

3080. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 06:24:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <msk393dfeg8ihgjeijdr80qiaveltc0q48@4ax.com>
Source record: 38789

On Sun, 08 Jul 2007 20:39:09 -0700, art <aunwin@insightbb.com> wrote:

>Methinks that I need to study
>up a bit more unless there is a physisist on board this news group
>that can guide me

Have you invented your own vocabulary to substitute for what is more commonly known as Pixie Dust? Research that term first to confirm or deny.

As an aside, what has this got to do with the focus (eg. antennas) of this forum? Did the moderators kick you out of eHam?

73's
Richard Clark, KB7QHC

3081. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 07:24:41 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <4691e39b$2$329$e4fe514c@news.xs4all.nl>
Source record: 38790
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:

As I stated earlier in this thread
(though more towards its tail)...

< quote >
We hear the average of two frequencies if both frequencies
are indistinguishably close, say with a difference of some few
hertz. For example, the combination of a 220 Hz signal and
a 224 Hz signal with the same amplitude will be perceived as
a 4 Hz beat of a 222 Hz tone.
< unquote >

Let me use this example to take away
some possible misinterpretations.

>>> "An audible beat tone is produced by the constructive and
>>> destructive interference between two sound waves in air."

The statement above is true if you leave out the word "tone".
From the example: there's no 222 Hz tone in the air.
In our perception however the 222 Hz tone 'exists'
and that's why we don't have to leave out the word "audible".
Yet, I'd preferred this one:
A beat is produced by the constructive and destructive
interference between two sound waves in air.
To be complete, using the word "tone" referring to 4 Hz
would make the statement misleading because we do not
hear frequences as low as 4 Hz.

> I did manage to find a nifty Java applet that shows the effects of
> acoustic interference:
> <http://falstad.com/interference/>
> It appears to refer to variations in amplitude across the area where
> both tones are present. What's missing is any reference to any beat
> note.

Well, try this one.
http://www.ngsir.netfirms.com/englishhtm/Beats.htm

> I'll make it easy. The difference of the two tones are in the audible
> range. For example, 25 kHz and 26 kHz to produce a 1 kHz beat note.

We can hear beat frequencies up to say 15 Hz.
Our auditory organ is not able to follow faster amplitude

variations.
So take another example: 25000 Hz and 25006 Hz.
Again, constructive and destructive interference produce 6 Hz
amplitude variations in the air.
But, as we can't hear ultrasonic frequencies, we will not produce
a 25003 Hz perception in our brain. So ther's nothing to hear,
no tone and consequently, no beat.

And with two very different frequencies within the audible
range, for instance 220 Hz and 880 Hz, we here only these
two frequencies. No average frequency and no beat.

HTH

gr, Hein

3082. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 07:58:25 UTC
From: richardharrison@webtv.net
Message-ID: <2899-4691EAA1-1063@storefull-3252.bay.webtv.net>
Source record: 38791

WA4SZE wrote:
"We are going to drop using the shunt feed tower no matter how hard we work on it we don`t think it`s going to work any better than it does right now."

Shunt feed is a valid means to excite a grounded radiator. Its disadvantage is difficulty in predicting the best place to tap into the radiator to feed it if you want a particular impedance.

Bill Orr wrote: "The
performance of a shunt-fed antenna is substantially the same as one with conventional series feed, provided the resistance of the ground return path is low.

Unloaded vertical antennas as short as 0.15 wavelength may be shunt-fed. Below this length, the tap point of the feed wire may be higher than the physical height of the antenna."
See "Vertical Antennas" Radio Publications, Inc., ISBN 0-933616-09-0, 1986.

E.A. Laport has extensive information on low-frequency and medium frequency antennas in "Radio Antenna Engineering".

Any unbalanced antenna must work against some sort of ground system. The shorter the antenna is with respect to respnant length, the more critical its grounding is because its radiation resistance is similarly lowered, thus even a very small ground resistance can make it inefficient.

The T antenna needs a good ground too, but the capacitive top loading provided by the horizontal section brings the antenna closer to resonance and raises its radiation resistance which improves its efficiency. Balanced currents in opposite directions of the horizontal section eliminate its radiation. The vertical section of the T is its radiator.

Advantage of the shunt-fed tower is its near lossless capacitor needed to tune the loop which feeds it. A series-fed short tower needs a large inductance to bring it to resonance and it is usually lossy.

WA4SZE`s problem can be fixed by simply adding ground radials to to the tower until he hits the point of diminishing returns.

Best regards, Richard Harrison, KB5WZI

3083. Re: Ham license Archive

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 11:15:08 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <TaGdnQTvWoojhQ_bnZ2dnUVZ_u-unZ2d@bright.net>
Source record: 38792

My thinking was that with all the computer "paint" programs, a guy could
scan the page from an old callbook and "edit" the listing to make
himself any class he desired. I always thought the FCC required an
original license to be shown along with a CSCE to prove Morse credit.
But as we've both said, it doesn't matter anymore...

Scott
N0EDV

William O'Hara wrote:
> AFAIK Callbook listing was acceptable proof for the element for Techicians
> prior to 1987. Seriously! What would be insufficient about it? Generals
> with 5 WPM did not get credit. They would have to retaken the element, if
> the license had expired. All moot, now.
>
> Bill
> n1ey
>
>
>>I don't think a callbook listing would be acceptable "proof" for the
>>FCC to give him credit for having passed the code test in the past.
>>But, again, since no code test is required anymore, he can simply
>>re-test for any class license and request his old call as a vanity
>>callsign.
>>
>>Scott
>>N0EDV
>
>
>
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

3084. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 11:16:49 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1183979809.243926.264380@w3g2000hsg.googlegroups.com>
Source record: 38793

Thread a longwire through the trees... Have a quarter wave radial on the ground for each band you intend to operate - this is the RF counterpoise for the antenna tuner so it doesn't bite your fingers... Operate and enjoy.. On a ridge as you describe, it should work just fine...

denny

3085. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 11:38:39 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183981119.875235.229940@57g2000hsv.googlegroups.com>
Source record: 38794

On 8 Jul, 23:24, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 08 Jul 2007 20:39:09 -0700, art <aun...@insightbb.com> wrote:
> >Methinks that I need to study
> >up a bit more unless there is a physisist on board this news group
> >that can guide me
>
> Have you invented your own vocabulary to substitute for what is more
> commonly known as Pixie Dust? Research that term first to confirm or
> deny.
>
> As an aside, what has this got to do with the focus (eg. antennas) of
> this forum? Did the moderators kick you out of eHam?
>
> 73's
> Richard Clark, KB7QHC

Every thing!
They are static particles that rest on diamagnetic materials
used for antennas. These particular lunar particle coverings was
predicted more than a hundred years ago by the masters which
is before radio was even thought of . I would have thought
that the subject of antennas would fit right in here!

3086. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 11:58:22 UTC
From: Derek <blueyhi5s@yahoo.com.au>
Message-ID: <1183982302.788634.210330@i38g2000prf.googlegroups.com>
Source record: 38795

On Jul 9, 1:05 pm, j...@specsol.spam.sux.com wrote
>
> There is no such word in English as "diagmatic"

Suggest you do a Google search next time "before" you put your foot in
your mouth.

bluey

3087. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 12:31:20 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <oga4931cmq6boirkrambpth1rhbh05j428@4ax.com>
Source record: 38796

On Mon, 09 Jul 2007 02:14:51 GMT, "Woody" <ts520@hotmail.com> wrote:

>Hey, here's a question for you antenna heads..... I've googled and not found
>much but a million opinions
>and ideas on which is better so I thought I'd come here and lay out the
>situation and get some advice.
>
>I want to put an HF radio back in the house.
>
>I only have a small yard and pesky neighbors.
>
>I want to operate ham and MARS freqs.
>
>I need to be somewhat incognito. A tower is out, and a big vertical is
>questionable.
>I don't like the radial issue as I live on solid rock, nor the price issues.
>
>My only option is to go out back... zero yard but a hillside that is almost
>limitless,
>however; I live on top of a ridge so the hills all go downward. I'm assuming
>a long wire in the treetops or similar is my only hope.
>[very few trees are higher than my house up here, LOL]
>
>SO... if you only had one direction to throw an antenna out, but could arrow
>a 300 footer through the treetops if need be,
>what would you do? Which style antenna would be best? Random or folded or ?
>I'm assuming end-fed is my only option here, with only one direction to go.
>[Southerly]
>
>I'm considering a manual tuner in the shack, or auto-tuner like a marine
>unit that I could remote in the attic and coax up to it then wire to
>outside.
>
>Is there a better way?? Ideas? Input?
>thanks for the help!
>Woody
>
I am happy with my SGC-237 tuner. It has a wide range of matching
capability and keeps the RF at the antenna instead of the shack.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3088. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 12:44:24 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <j2b49353gq3795elhvm87sn05spmd8ei9o@4ax.com>
Source record: 38797

>BTW are you aware NDBs are being phased out. I think they are all supposed
>to be gone by 2012. They arent needed with GPS
>
>Jimmie
>
I know my experience is out of date, but I recall a lot of times in
General Aviation when I was shooting a NDB approach while the techs
were busy on the ground trying to restore more complex Nav Aids and
Radar after a Thunder Storm. I don't believe the GPS system can
survive a serious attack any more than the World Trade Center.

I would like to be wrong on this point...

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3089. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 14:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <n4t9m4-4kr.ln1@mail.specsol.com>
Source record: 38798

Derek <blueyhi5s@yahoo.com.au> wrote:
> On Jul 9, 1:05 pm, j...@specsol.spam.sux.com wrote
> >
> > There is no such word in English as "diagmatic"

> Suggest you do a Google search next time "before" you put your foot in
> your mouth.

Google shows 24 hits for "diagmatic".

4 are non-English sites.

1 is from eHam.net in an article by Art.

The rest are apparently typos.

Webster's Encyclopedic Unabridged Dictionary of the English Language;
no "diagmatic".

Dictionary.com; no results found for "diagmatic".

Suggest you do a Google and dictionary search next time before you put
your foot in your mouth.

--
Jim Pennino

Remove .spam.sux to reply.

3090. Re: multiple transmitter dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 14:36:06 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <tu2dndZkcoBI2g_bnZ2dnUVZ_h6vnZ2d@comcast.com>
Source record: 38799

"inphaseprod" <inphaseprod@yahoo.com> wrote in message
news:1183932601.701832.146160@i38g2000prf.googlegroups.com...
> Greetings. I am new to the group and hope that I can glean a wealth of
> wisdom
> from the collective.
>
> I have a dilemma.
>
> I propose to operate 6 or 7 five watt FM transmitters on different
> frequencies.
> This is in another country where FM bandwidth is fairly open so it
> will be possible
> to space operating frequencies far apart. I do not need to transmit
> very far (300 meters
> maximum) and not for very long periods of time (5 minute events). The
> surrounding
> area is not heavily populated.
>
> I will be transmitting from one location and I hope to minimize
> interference between
> antennas and broadcast equipment (I am using a multiple output
> interface connected
> to a laptop). The transmitters are a very small Chinese build PLL...
> not the best
> in the West (or East). And the antennas are tuneable 1/4 wave with
> ground plane radials.
>
> I would like to 1). be able to connect all transmitters to the same
> regulated power supply
> (13.5V DC) and 2). use the minimum lengths of cabling due to weight
> considerations.
>
> I am not concerned about much loss of efficiency as the distance
> needed to throw is
> well within the capability of the transmitter strength.
>
> Does anybody have any recommendations for spacing, orientation, power
> considerations?
> And any idea approximately how many amps a 5watt transmitter might
> pull from the power
> supply?
>
> Sorry for my naivete or ignorance and thank you anyone who cares to
> shed light on this

> dilemma.
> yours,
> robb kunz
>
5 W will give you a range of about 30 KM. If I understand you correctly, you want to transmit 300 meters. 0.1 W seems to be about right, and that may be too much.

Tam/WB2TT

3091. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 14:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <gpt9m4-4kr.ln1@mail.specsol.com>
Source record: 38800

art <aunwin@insightbb.com> wrote:
> On 8 Jul, 23:24, Richard Clark <kb7...@comcast.net> wrote:
> > On Sun, 08 Jul 2007 20:39:09 -0700, art <aun...@insightbb.com> wrote:
> > >Methinks that I need to study
> > >up a bit more unless there is a physisist on board this news group
> > >that can guide me
> >
> > Have you invented your own vocabulary to substitute for what is more
> > commonly known as Pixie Dust? Research that term first to confirm or
> > deny.
> >
> > As an aside, what has this got to do with the focus (eg. antennas) of
> > this forum? Did the moderators kick you out of eHam?
> >
> > 73's
> > Richard Clark, KB7QHC

> Every thing!
> They are static particles that rest on diamagnetic materials
> used for antennas. These particular lunar particle coverings was
> predicted more than a hundred years ago by the masters which
> is before radio was even thought of . I would have thought
> that the subject of antennas would fit right in here!

OK, now we have an English word to work with.

From http://en.wikipedia.org:

"Diamagnetism is a form of magnetism that is only exhibited by a substance
in the presence of an externally applied magnetic field."

"All materials show a diamagnetic response in an applied magnetic field;
however for materials which show some other form of magnetism (such as
ferromagnetism or paramagnetism), the diamagnetism is completely
overpowered. Substances which only, or mostly, display diamagnetic
behaviour are termed diamagnetic materials, or diamagnets. Materials
that are said to be diamagnetic are those which are usually considered
by non-physicists as "non magnetic", and include water, DNA, most organic
compounds such as petroleum and some plastics, and many metals such as
mercury, gold and bismuth."

So would Art's magic pixie dust particles rest on a ferromagnetic
antenna such as one constructed of a ferrous based alloy?

--
Jim Pennino

Remove .spam.sux to reply.

3092. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 14:56:43 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183993003.799408.69720@w3g2000hsg.googlegroups.com>
Source record: 38801

On 9 Jul, 07:35, j...@specsol.spam.sux.com wrote:
> Derek <blueyh...@yahoo.com.au> wrote:
> > On Jul 9, 1:05 pm, j...@specsol.spam.sux.com wrote
>
> > > There is no such word in English as "diagmatic"
> > Suggest you do a Google search next time "before" you put your foot in
> > your mouth.
>
> Google shows 24 hits for "diagmatic".
>
> 4 are non-English sites.
>
> 1 is from eHam.net in an article by Art.
>
> The rest are apparently typos.
>
> Webster's Encyclopedic Unabridged Dictionary of the English Language;
> no "diagmatic".
>
> Dictionary.com; no results found for "diagmatic".
>
> Suggest you do a Google and dictionary search next time before you put
> your foot in your mouth.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

It could well be a use of the word diagmatic since it is used
extensively
in quantum studies of chemicals and the human body. It may well be a
derivative
of the word diagmagnetic or it may well be a word that is gaining in
use.
Either way I would decline to call it a non word on what I know.
I would have thought the subject matter would have been more
important
than just name calling but I will ascede to your wishes and contain
myself
to the word
DIAGMAGNETIC and try to avoid latin derivitations

3093. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 15:19:01 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1183994341.513551.234960@k79g2000hse.googlegroups.com>
Source record: 38802

snip
Jim Benito

I'm sorry but I will have to let you go. I am like others
prone to spelling errors when using the internet and it is
certainly not my intent to offend others who want to
procrastinate about such things to the exclusion of
every thing else However you do have a history of name
calling and procrastination which is testing my civility
to its limits. I wish you well in your future endeavers
with the expectation that they do not involve me. For myself
I also will avoid involvement with you
Bye Bye
Art

3094. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 16:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hj3am4-b6h.ln1@mail.specsol.com>
Source record: 38803

art <aunwin@insightbb.com> wrote:
> On 9 Jul, 07:35, j...@specsol.spam.sux.com wrote:
> > Derek <blueyh...@yahoo.com.au> wrote:
> > > On Jul 9, 1:05 pm, j...@specsol.spam.sux.com wrote
> > >
> > > > > There is no such word in English as "diagmatic"
> > > > Suggest you do a Google search next time "before" you put your foot in
> > > > your mouth.
> > >
> > > Google shows 24 hits for "diagmatic".
> > >
> > > 4 are non-English sites.
> > >
> > > 1 is from eHam.net in an article by Art.
> > >
> > > The rest are apparently typos.
> > >
> > > Webster's Encyclopedic Unabridged Dictionary of the English Language;
> > > no "diagmatic".
> > >
> > > Dictionary.com; no results found for "diagmatic".
> > >
> > > Suggest you do a Google and dictionary search next time before you put
> > > your foot in your mouth.
> > >
> > > --
> > > Jim Pennino
> > >
> > > Remove .spam.sux to reply.

> It could well be a use of the word diagmatic since it is used
> extensively
> in quantum studies of chemicals and the human body. It may well be a
> derivative
> of the word diagmagnetic or it may well be a word that is gaining in
> use.
> Either way I would decline to call it a non word on what I know.
> I would have thought the subject matter would have been more
> important
> than just name calling but I will ascede to your wishes and contain
> myself
> to the word
> DIAGMAGNETIC and try to avoid latin derivitations

It could well be that you and the other 19 Google posters just don't
know how to spell.

--
Jim Pennino

Remove .spam.sux to reply.

3095. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 16:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <eo3am4-b6h.ln1@mail.specsol.com>
Source record: 38804

art <aunwin@insightbb.com> wrote:
> snip
> Jim Benito

> I'm sorry but I will have to let you go. I am like others
> prone to spelling errors when using the internet and it is
> certainly not my intent to offend others who want to
> procrastinate about such things to the exclusion of
> every thing else However you do have a history of name
> calling and procrastination which is testing my civility
> to its limits. I wish you well in your future endeavers
> with the expectation that they do not involve me. For myself
> I also will avoid involvement with you
> Bye Bye
> Art

Do you have the slightest clue what "procrastinate" and "procrastination"
mean?

It doesn't appear so.

--
Jim Pennino

Remove .spam.sux to reply.

3096. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 17:19:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mdr4935l1505811udvsm38g3626rpqf41n@4ax.com>
Source record: 38805

On Mon, 09 Jul 2007 04:38:39 -0700, art <aunwin@insightbb.com> wrote:

>I would have thought
> that the subject of antennas would fit right in here!

So would most, but your topic is Pixie Dust (look at the subject
line).

This is probably why eHam has revoked your privileges.

73's
Richard Clark, KB7QHC

3097. Re: ADF NDB beacon antenna change seeking comments

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 17:33:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k5s493le7ikri6sl6ek3g82h1f506jntar@4ax.com>
Source record: 38806

On Mon, 09 Jul 2007 12:44:24 GMT, John Ferrell
<johnferrell@sprintmail.com> wrote:

> I don't believe the GPS system can
>survive a serious attack any more than the World Trade Center.
>
>I would like to be wrong on this point...

Hi John,

Well, perhaps not wrong currently. Military systems and the future of
the Web is migrating towards what is called Network Programming (in
distinct contrast to prime time TV programming) where content is
massively parallel and noise (an attack) is rejected.

73's
Richard Clark, KB7QHC

3098. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 17:49:49 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f6tsft$4j4$1@nntp1.jpl.nasa.gov>
Source record: 38807
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Tim Shoppa wrote:
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
there is NO mil spec for RG6.. (nor for RG8, RG213, etc.)
Those specs (for PVC insulated cables) were abondoned 20 odd years ago.
(and in any case, would more properly be something like MIL-C-17/74C for
RG213 or MIL-C-17/2 for RG6)

As it happens MIL-C-17/2 does call out copperweld and double shield, so
something purporting to be RG6 would have a copperweld center conductor.

The new replacement would be MIL-C-17/180-00001, which has a crosslinked
polyolefin jacket and no "RG" number, double shield, but not copperweld
center. (at least as of MIl-C-17G, 1990)

What you can get is "RG-6 type" or "similar to what used to be RG-6", etc.

>
> Tim KA0BTD
>

3099. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 18:01:37 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f6tt62$51k$1@nntp1.jpl.nasa.gov>
Source record: 38810
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Roy Lewallen wrote:
> I'd be a little suspicious of el cheapo cable with copper plated steel
> center conductor. I'd be surprised if it was Copperweld, which has a
> very thick copper coating. Copper plating thickness would be a logical
> place for cost-conscious vendors to skimp.
>
> An extra thin layer of copper wouldn't hurt at VHF and above, but it
> could really be a killer at HF, where significant current could flow in
> the steel.

skin depth in copper at 1 MHz is about 2.6 mils(thousandths of an
inch). At 10 MHz, 0.8 mils (goes as the square root of frequency)

AWG18 is about 40 mils in diameter. If the copper thickness were, say,
3 or 4 skin depths.. call it 4-10 mils, almost all the current is
carried in copper.

Copper clad steel is usually specified as a percentage of conductivity
of pure copper (in AC powerline applications, for instance) as say, 40%.
If we make the assumption that steel is an insulator, 40% CCS would
have 40% of the cross sectional area.. that would mean the cladding is
about 11% of the overall diameter.
Using AWG18 as an example, 11% of 40 mils is about 4 mils, so certainly
at higher HF frequencies, 40% CCS would be pretty close to pure copper.
even 20% CCS (which would have cladding about half the thickness of 40%)
wouldn't be all that lossy.

At the VHF and higher frequencies typically used for 75 ohm coax, a very
thin cladding would be as good as solid copper.

(I note that there is coax with silver plated stainless steel as the
center conductor and shield for microwaves in cryogenic applications)

(Steel is extra lossy at RF because its permeability further
> reduces the skin depth by a large factor.) I'd definitely measure the
> loss if I intended to use it at HF.

Always a wise idea, of course...

>
> Of course, many (or most) amateurs would probably be pleased by the wide
> bandwidth and low SWR and noise level they'd get with lossy cable.
>
> Roy Lewallen, W7EL

3100. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 18:26:55 UTC
From: Jerseyj <jerseyj69@comcast.net>
Message-ID: <jerseyj69-0D9CE2.14265509072007@comcast.dca.giganews.com>
Source record: 38808

In article <fcs293h5819tllimlu4j33rve5ghdgkr5n@4ax.com>,
Walter Maxwell <walt@w2du.com> wrote:

> On Sun, 08 Jul 2007 11:49:39 GMT, ml <m@di.net> wrote:
>
> >In article <fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com>,
> > Walter Maxwell <walt@w2du.com> wrote:
> >
> >> Hello to all my antenna friends. I've just now returned home after nine
> >> weeks
> >> in the hospital following major
> >> spinal surgery. The surgery was successful, but I contracted hideous
> >> intestinal infection C Diff, or colitis,
> >> in the hospital. Forty nine days were required to clear the infection,
> >> after
> >> which I could begin physical
> >> therapy.
> >> 73 to All,
> >>
> >> Walt, W2DU
> >
> >dear walt
> >
> >Didn't know you were out, so please accept some late well wishes
> >
> >didn't know you can 'catch' colitis but glad that it went away and
> >overall your procedure went well
> >
> >hope that you have a speedy recovery and enjoy ham radio to take your
> >mind off things
> >
> >
> >be well- best wishes
> >
> >
> >myles
> Thanks for the kind words, Myles, I appreciate your thoughts.
>
> Re colitis, otherwise known as 'C Diff', it is one of the most highly
> contagious diseases of the intestinal
> system. It occurs when antibiotics are used prior to surgery in which the
> antibiotic kills the good bacteria
> in the system, leaving the toxic bacteria to take over, resulting in
> continual diarreah(sp). I was fortunate

> to survive it at my agee 88+, for it is quite common for older people in poor
> health to not survive. I am
> fortuntate to have been in good health. It took 49 days for me to get rid of
> the C Diff.
>
> Walt

Indeed, my 82 year old mother recently had this, at one point the
doctor's called me saying she had 12 to 48 hours to live...somehow she
pulled a miraculous recovery...still in the hospital and nursing homes
on and off for the last 2 months, but now well enough to have surgery
she needs tomorow morning. I'm so glad you have recovered.

jerry
KB2GCG

3101. 60m mod for TS440S?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 18:31:02 UTC
From: "Juan M." <jdmollanNOSPAMPLEASE@juno.com>
Message-ID: <ypednWIUo8t64w_bnZ2dnUVZ_segnZ2d@centurytel.net>
Source record: 38809
Cross-posted to: alt.radio.amateur,news.misc.radio.amateur.antenna,rec.radio.amateur.antenna

Does anyone have an easy mod for the TS440S or TS430 to allow it to transmit in the 60m band?

3102. Re: 60m mod for TS440S?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 19:46:18 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <1395442pgb2bl68@corp.supernews.com>
Source record: 38811
Cross-posted to: alt.radio.amateur,news.misc.radio.amateur.antenna,rec.radio.amateur.antenna

perform the MARS mod and it will work anywhere you tune to except the broadcast am band.

KF5DE
"Juan M." <jdmollanNOSPAMPLEASE@juno.com> wrote in message news:ypednWIUo8t64w_bnZ2dnUVZ_segnZ2d@centurytel.net...
> Does anyone have an easy mod for the TS440S or TS430 to allow it to
> transmit in the 60m band?
>
>

3103. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 19:52:22 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <13954fedvn7pj94@corp.supernews.com>
Source record: 38812
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

I have several ppeices of RG-6 in my garage that our cableman gave me off
his scraps in the truck and not one inch is coperweld.

KF5DE
"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:1183806416.629704.23340@m37g2000prh.googlegroups.com...
> Is the center conductor of the el-cheapo RG-6 found in home
> improvement stores always copperweld? It seems to be 18AWG copperweld
> but maybe I'm being naive...
>
> Is this part of the RG-6 mil-spec, or just the way they make it today?
>
> Tim KA0BTD
>

3104. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 20:36:34 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <q2a593d54t5nuis931q72jm6879akcfadr@4ax.com>
Source record: 38813

On Mon, 09 Jul 2007 14:26:55 -0400, Jerseyj <jerseyj69@comcast.net> wrote:

>In article <fcs293h5819tllimlu4j33rve5ghdgkr5n@4ax.com>,
> Walter Maxwell <walt@w2du.com> wrote:
>
>> On Sun, 08 Jul 2007 11:49:39 GMT, ml <m@di.net> wrote:
>>
>> >In article <fmva83lm81icuk4vn3gbqt44010c3f1ulc@4ax.com>,
>> > Walter Maxwell <walt@w2du.com> wrote:
>> >
>> >> Hello to all my antenna friends. I've just now returned home after nine
>> >> weeks
>> >> in the hospital following major
>> >> spinal surgery. The surgery was successful, but I contracted hideous
>> >> intestinal infection C Diff, or colitis,
>> >> in the hospital. Forty nine days were required to clear the infection,
>> >> after
>> >> which I could begin physical
>> >> therapy.
>> >> 73 to All,
>> >>
>> >> Walt, W2DU
>> >
>> >dear walt
>> >
>> >Didn't know you were out, so please accept some late well wishes
>> >
>> >didn't know you can 'catch' colitis but glad that it went away and
>> >overall your procedure went well
>> >
>> >hope that you have a speedy recovery and enjoy ham radio to take your
>> >mind off things
>> >
>> >
>> >be well- best wishes
>> >
>> >
>> >myles
>> Thanks for the kind words, Myles, I appreciate your thoughts.
>>
>> Re colitis, otherwise known as 'C Diff', it is one of the most highly
>> contagious diseases of the intestinal
>> system. It occurs when antibiotics are used prior to surgery in which the
>> antibiotic kills the good bacteria

>> in the system, leaving the toxic bacteria to take over, resulting in
>> continual diarreah(sp). I was fortunate
>> to survive it at my agee 88+, for it is quite common for older people in poor
>> health to not survive. I am
>> fortuntate to have been in good health. It took 49 days for me to get rid of
>> the C Diff.
>>
>> Walt
>Indeed, my 82 year old mother recently had this, at one point the
>doctor's called me saying she had 12 to 48 hours to live...somehow she
>pulled a miraculous recovery...still in the hospital and nursing homes
>on and off for the last 2 months, but now well enough to have surgery
>she needs tomorow morning. I'm so glad you have recovered.
>
>jerry
>KB2GCG

Thanks for the nice words, Jerry. I'm so pleased that your Mother recovered and hope she continues to
recuperate. It's a hellish situation--I had never been as sick in my life as with this situation. I'm not
totally recovered yet, but on the way. I still need a walker to keep my balance when standing or walking, and
am still in physical therapy.

Walt

3105. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 20:58:43 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f6u7i4$b5v$1@nntp1.jpl.nasa.gov>
Source record: 38816

Dave wrote:
> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> news:pan.2007.07.07.19.31.49.798607@from.qrz.com...
>
>>When electrically grounding one's station, is there any particular
>>advantage of a single 8-foot ground rod over two 4-foot ground rods, or an
>>8-foot length of heavy gauge wire buried 6-12 inches under the ground?
>>
>>
>
>
> yes. first there is the electrical safety code that you must comply with
> which i believe generally calls for 8' rods. 4' rods may not be below the
> frost line in the winter so may not provide any useful grounding for part of
> the year. shallow buried wire has the same problem.
>
> on rf issues, lots of shallow buried radials can help reduce ground loss
> under certain antennas... but these are not substitutes for good electrical
> safety grounds.
>
>
The NEC allows a wide variety of electrical safety grounds (and, interestingly, a ground rod is not usually allowed as the only grounding electrode). The old standby of "cold water pipe" is specifically not allowed any more (too many places with plastic pipe from street to house).

The preferred ground in most jurisdictions is a concrete encased grounding electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. 20 ft of appropriate conductor encased in concrete.

As far as rods go, you can dig a trench and lay it sideways and meet the code requirement. 2 rods 4 feet long might meet code (if all of the rod is buried and they are far enough apart).

However, in addition to any regulatory requirements, there's a difference between a "good ground" for
a) electrical safety
b) RF
c) lightning

A grounding system that's good for one isn't necessarily good for the others.

There's a good writeup on grounds, with particular attention to antennas, cable TV, telephone, etc. at Mike Holt's website (He's a electrical code guru that does seminars, etc.)

http://www.mikeholt.com/ is the site, look for the "low voltage handbook", which is a free download and has all the relevant code sections explained, with diagrams, etc.

3106. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 21:14:37 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1184015677.119531.89210@n2g2000hse.googlegroups.com>
Source record: 38814

```
Osnip.
>
> This is probably why eHam has revoked your privileges.
>
> 73's
> Richard Clark, KB7QHC

You wish
```

3107. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 21:39:03 UTC
From: richardharrison@webtv.net
Message-ID: <10443-4692AAF7-185@storefull-3254.bay.webtv.net>
Source record: 38815

Art wrote:
"What really bothers me is that people in the space industry seem not to have any inclination of the nature of (what) this dust is."

It is believed that in prehistoric times, an ice comet collided with the earth with so much force at a spot near the Yucatan Peninsula, that a chunck was dislodged and hurled into orbit. This collected and compacted becoming the earth`s moon. The moon should be expected to contain minerals similar to those on earth. NASA`s missions to the moon confirmed it wasn`t really green cheese but rather very similar to the stuff on earth.

NASA`s business is finding and confirming scientific information. NASA has landed on Mars and sent rovers over its surface in a search for conditions permitting some sort of life.

On January 21, NASA and ESA (European Space Agency) landed a scientific package on Titan, one of Saturn`s moons with some similarities to Earth. It reports back that the atmosphere is 96.3% H2 (hydrogen). Titan is too far to go for a clean-burning fuel.

The package landed on Titan was thought to need a radio repeater aboard its orbiting mother-ship to relay data to earth. Crossed signals in this arrangement did not immediately work. Fortunately, the Robert C. Byrd radio telescope in Green Bank. W. VA was able to pick up the data signals directly from the data package on the ground at Titan and there was much relief on earth.

NASA has used spectrum analyzers on light from many bodies in the cosmos to determine what atonic elements are associated with various bodies in space. They now have a good idea of their compositions.

An atom is the smallest particle with unique characteristics. Subatomic particles are similar regardless of their source.

Best regards, Richard Harrison, KB5WZI

3108. Re: Guy from university physics dept. makes claims to incite/provoke amateurs!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 21:59:06 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1184018346.793246.279820@g4g2000hsf.googlegroups.com>
Source record: 38817

On 17 Jun, 18:40, John Smith I <assemblywiz...@gmail.com> wrote:
> art wrote:
>
> > ...> I assume that the testing people know their business so why can't hams
> > accept it?
>
> > ...
>
> He states it uses a "2-dimensional helix", think about that (since I
> can't find a pic or construction details), flatten a helix and you end
> up with a zig-zag pattern of wire.
>
> .
> .
> .
> .
> .
> .
> .
> .
> .
> .
> .
> . ... etc. ... (poorly represented in ascii here)
>
> This must drop the inductance of the "helix coil" drastically, leaving
> you with only the self-capacitance of the conductor (-jX), which
> requires a "loading coil" of +jX ...
>
> Also, there is some text I interpret to suggest there is some additional
> coupling somewhere at the center, however, I can't find enough material
> to confirm or reject this ...
>
> JS

I have had a rethink on this antenna. There is a already
a helix antenna in the ARRL handbook
This "new " antenna is the same thing in that the coil is
wound tighter and the capacitance lost is replaced by a
top hat. I cannot see how this antenna can be seen as a
advance in the state of the art. There are lots of whips
that have an inductance plus a top hat so there is no
advance in the state of the art. Yes it works but so

does all the other whips with a inductance and a top hat.
This would fit in with the PTO rejecting the initial
patent request as it does not provide an advance in
the art of antennas compared to the norm that is
naturally anticipated by those skilled in the state
of the art. All in all I can't see it getting a patent
unless it is so totally itemised specifically in
dimension such that it could be rendered useless by
commercial users. In fact I see nothing that prevents
manufacture by anybody for monetary advantage if one so chooses
Art Unwin KB9MZ

3109. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 22:46:51 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <vVyki.11963$g44.3730@trnddc02>
Source record: 38819

Ok, maybe that's what I'll do then... So should I use a balun of any kind or
just make a coax connection of my own?
Woody

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:dhk3931mlgguj973vevd53tqbt80biatk6@4ax.com...
> On Mon, 09 Jul 2007 02:14:51 GMT, "Woody" <ts520@hotmail.com> wrote:
>
>>SO... if you only had one direction to throw an antenna out, but could
>>arrow
>>a 300 footer through the treetops if need be,
>>what would you do?
>
> Hi Woody,
>
> Go for it!
>
> It's not like an act of desperation or anything like that. I had a
> similar situation (although more options) with an ad-hoc hillside
> longwire (same size, height, etc.). It worked like gang-busters.
>
>> Which style antenna would be best? Random or folded or ?
>
> Just as you described it. Anything more convoluted is unlikely to
> give you more performance.
>
> 73's
> Richard Clark, KB7QHC

3110. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 22:52:27 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <L_yki.11964$g44.5336@trnddc02>
Source record: 38820

OK.... so work with the ignorant here.. I've never used anything other than my trusty dipole/folded dipoles...
How do I put in radials under a longwire?? I'm kind of on a cliff so not sure where I could do any digging back there...

A good website for the longwire user would be fantastic and I could just research it.
thanks!
Woody

"Denny" <k8do@mailblocks.com> wrote in message news:1183979809.243926.264380@w3g2000hsg.googlegroups.com...
> Thread a longwire through the trees... Have a quarter wave radial on
> the ground for each band you intend to operate - this is the RF
> counterpoise for the antenna tuner so it doesn't bite your fingers...
> Operate and enjoy.. On a ridge as you describe, it should work just
> fine...
>
>
> denny
>

3111. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 22:54:39 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <P0zki.11965$g44.7579@trnddc02>
Source record: 38821

Ya know ... if I had my druthers... and I don't.. lol...
I'd go for a Motorola Micom 500e setup or a Harris, or an SGC radio...
Not sure I can afford any of them though!
Collecting my pennies though.
Woody

"John Ferrell" <johnferrell@sprintmail.com> wrote in message
news:oga4931cmq6boirkrambpth1rhbh05j428@4ax.com...
> On Mon, 09 Jul 2007 02:14:51 GMT, "Woody" <ts520@hotmail.com> wrote:
>
>>Hey, here's a question for you antenna heads..... I've googled and not
>>found
>>much but a million opinions
>>and ideas on which is better so I thought I'd come here and lay out the
>>situation and get some advice.
>>
>>I want to put an HF radio back in the house.
>>
>>I only have a small yard and pesky neighbors.
>>
>>I want to operate ham and MARS freqs.
>>
>>I need to be somewhat incognito. A tower is out, and a big vertical is
>>questionable.
>>I don't like the radial issue as I live on solid rock, nor the price
>>issues.
>>
>>My only option is to go out back... zero yard but a hillside that is
>>almost
>>limitless,
>>however; I live on top of a ridge so the hills all go downward. I'm
>>assuming
>>a long wire in the treetops or similar is my only hope.
>>[very few trees are higher than my house up here, LOL]
>>
>>SO... if you only had one direction to throw an antenna out, but could
>>arrow
>>a 300 footer through the treetops if need be,
>>what would you do? Which style antenna would be best? Random or folded or
>>?
>>I'm assuming end-fed is my only option here, with only one direction to
>>go.
>>[Southerly]
>>

>>I'm considering a manual tuner in the shack, or auto-tuner like a marine
>>unit that I could remote in the attic and coax up to it then wire to
>>outside.
>>
>>Is there a better way?? Ideas? Input?
>>thanks for the help!
>>Woody
>>
> I am happy with my SGC-237 tuner. It has a wide range of matching
> capability and keeps the RF at the antenna instead of the shack.
>
> John Ferrell W8CCW
> "Life is easier if you learn to
> plow around the stumps"

3112. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 23:09:17 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1184022557.490615.167750@r34g2000hsd.googlegroups.com>
Source record: 38822

On 9 Jul, 14:39, richardharri...@webtv.net (Richard Harrison) wrote:
> Art wrote:
>
> "What really bothers me is that people in the space industry seem not to
> have any inclination of the nature of (what) this dust is."
>
> It is believed that in prehistoric times, an ice comet collided with the
> earth with so much force at a spot near the Yucatan Peninsula, that a
> chunck was dislodged and hurled into orbit. This collected and compacted
> becoming the earth`s moon. The moon should be expected to contain
> minerals similar to those on earth. NASA`s missions to the moon
> confirmed it wasn`t really green cheese but rather very similar to the
> stuff on earth.
>
> NASA`s business is finding and confirming scientific information. NASA
> has landed on Mars and sent rovers over its surface in a search for
> conditions permitting some sort of life.
>
> On January 21, NASA and ESA (European Space Agency) landed a scientific
> package on Titan, one of Saturn`s moons with some similarities to Earth.
> It reports back that the atmosphere is 96.3% H2 (hydrogen). Titan is too
> far to go for a clean-burning fuel.
>
> The package landed on Titan was thought to need a radio repeater aboard
> its orbiting mother-ship to relay data to earth. Crossed signals in this
> arrangement did not immediately work. Fortunately, the Robert C. Byrd
> radio telescope in Green Bank. W. VA was able to pick up the data
> signals directly from the data package on the ground at Titan and there
> was much relief on earth.
>
> NASA has used spectrum analyzers on light from many bodies in the cosmos
> to determine what atonic elements are associated with various bodies in
> space. They now have a good idea of their compositions.
>
> An atom is the smallest particle with unique characteristics. Subatomic
> particles are similar regardless of their source.
>
> Best regards, Richard Harrison, KB5WZI

And ?????.............

Yes We have read all that on the net but why are you repeating that?
Did you intend to make a specific point but accidently hit "send"?
I look forward to the point that you were preparing to make and to
what it was directed to

3113. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 23:35:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <49f593tbd36sjrk9gv5omk2870ufi4jqm6@4ax.com>
Source record: 38823

On Mon, 09 Jul 2007 22:46:51 GMT, "Woody" <ts520@hotmail.com> wrote:

>Ok, maybe that's what I'll do then... So should I use a balun of any kind or
>just make a coax connection of my own?

Hi Woody,

To answer this and your other question about radials, I will use my
own experience.

I drove a ground rod at a remote point, about 12 feet from the house
and closer to the woods. My shack was at ground level and this rod
was more an anchor for a former vertical (where the rod extended up
out of the ground for a foot). Anyway, my principle ground was the
service ground 6 feet from my operating position with both rods tied
together.

At the remote rod (basically at the crest of the ridge), I fanned out
radials down the slope. Don't worry about tuning them, or cutting
them for a band, the proximity of ground completely negates any sense
of tune.

At this remote point, I built a box that contained a choke (a short
length of coax with 50 or 70 beads) that terminated in a BNC bulkhead
connector at one end, and two porcelain posts.

One post was tied to the radial field, the other post was tied to the
skywire. This put the system ground out at the feedpoint when I ran
battery (I always do unless I am on a float charge). This means any
house noise was 12 feet further away than would have normally been
encountered and snubbed properly by the choke. I measured this and
found it to be quite effective for noise control alone.

The sky wire (12 ga THNN) merely lifted off from about 1 foot off the
ground up to the canopy (Maples) around 60 feet above. The wire ran
down the hill, on top of the canopy for about 200 feet. At the remote
end, I simply tied it to a limb (at ground level, the wire ending
somewhere high above) through a length of 1/16th inch nylon line
(crab-pot line). So, from the feedpoint to on-high, the wire
basically described a sideways V with ground (as the slope also fell
beneath it too at roughly the same angle of 25 degrees).

During a storm, two of my Maples snapped about 30 feet above ground
level (but down the slope) and one lay over horizontal, and was
suspended there 20 feet above ground by snagging other trees. The
traditional term for that 30 foot length of tree in this area is
called a "widow maker." On its way down, it hit my wire, ripped the

box off the post, yanked the coax along until it strained my house connection and broke the coax connection there.

After the storm, I hove the wire over the widow maker, confirmed the 1/16th inch nylon withstood the strain (who wulda thought?) and repaired the stripped BNC house connection. Amazingly only the ground wire to the radial field broke when the box started to fly.

We get messages here from those who agonize about setting the woods on fire - never happened to me, and I never worried about it.

73's
Richard Clark, KB7QHC

3114. Re: 60m mod for TS440S?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 23:39:23 UTC
From: merlin-7 <merlin-7@sc.rr.com>
Message-ID: <4692b99b$0$8968$4c368faf@roadrunner.com>
Source record: 38818
Cross-posted to: alt.radio.amateur,news.misc.radio.amateur.antenna,rec.radio.amateur.antenna

Take care with this mod....

It will anywhere you tune....most all bands, from 10m thru 80m ..stay
legal...

I have not checked the output on my 440s for everyband but I do know it can
transmit at frequency's way out of band for an amateur radio license.. and
keeping it under 50 watts on 60 meters, can be done if your carefull.

Joe
KI4ILB

"Butch Magee" <lynyrd@cableone.net> wrote in message
news:1395442pgb2bl68@corp.supernews.com...
> perform the MARS mod and it will work anywhere you tune to except the
> broadcast am band.
>
> KF5DE
> "Juan M." <jdmollanNOSPAMPLEASE@juno.com> wrote in message
> news:ypednWIUo8t64w_bnZ2dnUVZ_segnZ2d@centurytel.net...
> > Does anyone have an easy mod for the TS440S or TS430 to allow it to
> > transmit in the 60m band?
> >
> >
>

3115. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-09 23:54:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9jh593ljifrsfc3hvqrn2v0q55ffiqmk7e@4ax.com>
Source record: 38824

On Mon, 09 Jul 2007 14:14:37 -0700, art <aunwin@insightbb.com> wrote:

>Osnip.
>>
>> This is probably why eHam has revoked your privileges.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>You wish

Not at all, Arthur. WELCOME BACK TO THE PIT OF HELL! where you seek solace from your bruising. The acclaim to your theories at eHam is about as amusing as they are here. ;-)

I particularly enjoyed Tom's response about clicking Ruby Slippers to make something come true. I wouldn't wish the hall monitors to snub your fulminations (although it appears several of your new-found correspondents wouldn't mind) as I anxiously await your inundating Tom with a gallon of spit.

Isn't amazing how these academic idylls of civil discourse (populated by gentlemany of infinite wisdom) crumble into viper's nests when you arrive? The term correlation comes to mind, but I don't know what word it would be in your vocabulary so as to make the concept meaningful to you.

For others who haven't read that comic strip, Arthur has proven Einstein was wrong! Well, proven in the sense that Arthur proves anything. Which is to say "he said so." After all, there is nothing mentioned about anything specific from Einstein (special theory? general theory? the photon theory? the cosmological constant?). That is best left to our imagination as Arthur has dismissed it all with a wave of the hand, whiting out Einstein's name on the Nobel prize to pencil in Art.

73's
Richard Clark, KB7QHC

3116. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 00:03:21 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <duc593ls7iif3d4lrgvke989qh69v44bhs@4ax.com>
Source record: 38825
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 08 Jul 2007 11:12:56 -0700, Jeff Liebermann
<jeffl@cruzio.com> wrote:

>isw <isw@witzend.com> hath wroth:
>
>>> I beg to differ. There's no mixing happening in the air. compression
>>> of air is very linear (Boyles Law or PV=constant).
>>
>>In general, that's true, but take a look at what happens in the throats
>>of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
>>by Beranek.
>>
>>Isaac
>
>What am I suppose to look for? I appreciate your recommended research
>project, but frankly, I don't care what happens inside a high powered
>horn loudspeaker. I prefer to stay fairly on topic about the original
>allegation that mixing somehow occurs in open air, which is not true.

That's not true. The original allegation was mine, and was that
since the ear is a device with an "output" which doesn't change
linearly with linearly changing input amplitudes, it's a non-linear
device, is incapable of _not_ producing harmonics and heterodynes
and, as such, is where the mixing occurs.

My contention was that zero-beat was the difference frequency
between two input tones close to unison, and I still maintain that's
true and that that difference frequency is in there. However, your
contention that zero-beat is the result of the vector summation of
two tones close to unison is also valid, since a non-linear detector
is capable of doing that summation well enough to allow that be the
dominant phenomenon as evidenced by the fact that the ear is
incapable of directly detecting (say) a 1Hz tone but is fully
capable of hearing the 1Hz amplitude warble which would result from
the vector addition of the two tones.

>Incidentally, if mixing did occur in open air or inside the ear, you
>would not be able to comfortably listen to hi-fi music, as all you
>would hear would be intermodulation products.

All you would hear?

That's grossly untrue. What do you think would happen to the
played notes?

They'd all disappear in a cacophony of chaos just because some
lower-level cross-products were being produced?

Nonsense.

In fact, contrary to what you may believe, the ear _is_ a non-linear
detector and, consequently, _cannot_ help but heterodyne its inputs.

That's why, after thousands of years of experimenting with what
notes sound good when they're played together and which notes don't,
music is written the way it is.

Something else you may not be aware of is that musical instruments
are inherently non-linear and, as such, will generate harmonics of
any fundamental notes played on them and heterodynes if two or more
notes are played simultaneously.

--
JF

3117. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 00:20:28 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f6ujcc$jd0$1@news.service.uci.edu>
Source record: 38827
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:

> Jim Kelley wrote:
>
>>On Jul 5, 9:38 pm, John Fields wrote:
>>
>>>>Sure enough, I heard the beat even though it came from different
>>>>sources, but I couldn't quite get it down to DC even with the
>>>>scope's trace at 0V.
>>
>>Of course you heard beats. What you didn't hear is the sum of the
>>frequencies. I've had the same setup on my bench for several months.
>>It's also one of the experiments the students do in the first year
>>physics labs. Someone had made the claim a while back that what we
>>hear is the 'average' of the two frequencies. Didn't make any sense
>>so I did the experiment. The results are as I have explained.
>
>
> We hear the average of two frequencies if both frequencies
> are indistinguishably close, say with a difference of some few
> hertz. For example, the combination of a 220 Hz signal and
> a 224 Hz signal with the same amplitude will be perceived as
> a 4 Hz beat of a 222 Hz tone.
>
> gr, Hein

I have also read this accounting, but from what I've been able to determine it lacks mathematical and phenomenological support. Here's why. As two audio frequencies are moved closer and closer together, there is no point where an average of the two frequencies can be perceived. There is however a point where no difference in the two frequencies is perceived. Obviously if we cannot discern the difference between 220Hz and 224Hz (as an example), we are not going to be able to discern half their difference either. I suspect the notion may have originated from a trigonometric identity which has what could be interpreted as an average term in it.

sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))

A plot of the function reveals that cos(.5(a-b)) describes the envelope. The period of the 'enveloped' waveform (or the arcane, beat modulated waveform) then can be seen to vary continuously and repetitiously over time - from 1/a at one limit to 1/b at the other.

At a particular instant in time the period does in fact equal the average of the two. But this is true only for an instant every 1/(a-b) seconds.

An interesting related experiment can be performed by setting a sweep generator to sweep over a narrow range of frequencies. The range can be adjusted as well as the sweep time. One can then study what sorts of effects are discernible.

I have found that it is very difficult to fool the ear in some of the ways that have been suggested. It does not appear, for example, that the claim for 'perceiving the average' is valid for two arbitrarily close frequencies any more than it is for any two other frequencies. But I would appreciate learning of any contradictory research that you might be able to cite.

Regards,
jk

3118. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 00:27:34 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <6bj593lmtsn56t4lqqi233rrivjj7r9ueo@4ax.com>
Source record: 38826
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 08 Jul 2007 19:46:18 -0700, Jeff Liebermann

>Interesting. So, using my original example, if I take two ultrasonic
>tones, above human hearing, you suggest that I do *HEAR* a beat, but
>that there's no actual component at the beat frequency. The does
>present a problem because if this is true, then the mixing has to
>occurring somewhere in order for my brain to detect the beat
>frequency. Is it mixing in my ear, in the cochlea, in the nerves
>going to the brain, or in the brain somewhere? I don't think it's any
>of these because when I do this experiment, I don't hear any such beat
>note.

Agreed. I've done the same experiment, and it seems that if the
non-linear detector is presented with tones it can't recognize then
no cross-products are generated.

Same like a mixer with lowpass filters on its inputs, but I can't
seem to pin down your position.

What point are you arguing?

--
JF

3119. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 01:56:31 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <2rKdnaK3yvyTeg_bnZ2dnUVZ_sOknZ2d@comcast.com>
Source record: 38828

Isn't concrete an insulator??

"The preferred ground in most jurisdictions is a concrete encased grounding
electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. "

What am I missing here?

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f6u7i4$b5v$1@nntp1.jpl.nasa.gov...
> Dave wrote:
>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
>> news:pan.2007.07.07.19.31.49.798607@from.qrz.com...
>>
>>>When electrically grounding one's station, is there any particular
>>>advantage of a single 8-foot ground rod over two 4-foot ground rods, or
>>>an
>>>8-foot length of heavy gauge wire buried 6-12 inches under the ground?
>>>
>>>
>>
>>
>> yes. first there is the electrical safety code that you must comply with
>> which i believe generally calls for 8' rods. 4' rods may not be below
>> the frost line in the winter so may not provide any useful grounding for
>> part of the year. shallow buried wire has the same problem.
>>
>> on rf issues, lots of shallow buried radials can help reduce ground loss
>> under certain antennas... but these are not substitutes for good
>> electrical safety grounds.
> The NEC allows a wide variety of electrical safety grounds (and,
> interestingly, a ground rod is not usually allowed as the only grounding
> electrode). The old standby of "cold water pipe" is specifically not
> allowed any more (too many places with plastic pipe from street to house).
>
> The preferred ground in most jurisdictions is a concrete encased grounding
> electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. 20 ft
> of appropriate conductor encased in concrete.
>
> As far as rods go, you can dig a trench and lay it sideways and meet the
> code requirement. 2 rods 4 feet long might meet code (if all of the rod
> is buried and they are far enough apart).
>
>
> However, in addition to any regulatory requirements, there's a difference
> between a "good ground" for

> a) electrical safety
> b) RF
> c) lightning
>
> A grounding system that's good for one isn't necessarily good for the
> others.
>
>
> There's a good writeup on grounds, with particular attention to antennas,
> cable TV, telephone, etc. at Mike Holt's website (He's a electrical code
> guru that does seminars, etc.)
>
> http://www.mikeholt.com/ is the site, look for the "low voltage handbook",
> which is a free download and has all the relevant code sections explained,
> with diagrams, etc.

3120. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 03:24:17 UTC
From: "David L. Wilson" <dwilson314@verizon.net>
Message-ID: <BZCki.842$mS3.200@trnddc03>
Source record: 38829
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:f6ujcc$jd0$1@news.service.uci.edu...
...
> sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>
> A plot of the function reveals that cos(.5(a-b)) describes the envelope.

Ok.

The period of the 'enveloped' waveform (or the arcane, beat
> modulated waveform) then can be seen to vary continuously and
> repetitiously over time - from 1/a at one limit to 1/b at the other.

?

> At a particular instant in time the period does in fact equal the average
> of the two. But this is true only for an instant every 1/(a-b) seconds.

??

How do you come up with anything but a period of of the average of the two
for the enveloped waveform?

3121. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 03:35:17 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <8MWdnaHmUvruYw_bnZ2dnUVZ_vShnZ2d@comcast.com>
Source record: 38830
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:1390cii1m5hlt56@corp.supernews.com...
> I'd be a little suspicious of el cheapo cable with copper plated steel
> center conductor. I'd be surprised if it was Copperweld, which has a very
> thick copper coating. Copper plating thickness would be a logical place
> for cost-conscious vendors to skimp.
>
> An extra thin layer of copper wouldn't hurt at VHF and above, but it could
> really be a killer at HF, where significant current could flow in the
> steel. (Steel is extra lossy at RF because its permeability further
> reduces the skin depth by a large factor.) I'd definitely measure the loss
> if I intended to use it at HF.
>
> Of course, many (or most) amateurs would probably be pleased by the wide
> bandwidth and low SWR and noise level they'd get with lossy cable.
>
> Roy Lewallen, W7EL

Looking at a Belden listing for 5 different kinds of RG6, The loss at 10 MHz is .9 DB/100' for the copperweld, and .7 DB for the solid copper. The db loss at 1 MHz is about 1/2 the 10 MHz number. All have a loss of 7.3 DB at 1000 MHz, except the 9290 solid copper, which is 8.8 . I looked at less than half of their different kinds of RG6, but a quick scan did not point out anything odd.

Tam/WB2TT

3122. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 03:56:37 UTC
From: craigm <none@domain.invalid>
Message-ID: <lnDki.61$LF.114801@news.sisna.com>
Source record: 38732
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

Jim Kelley wrote:

> I suspect the
> notion may have originated from a trigonometric identity which has
> what could be interpreted as an average term in it.
>
> sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>
> A plot of the function reveals that cos(.5(a-b)) describes the
> envelope. The period of the 'enveloped' waveform (or the arcane, beat
> modulated waveform) then can be seen to vary continuously and
> repetitiously over time - from 1/a at one limit to 1/b at the other.
> At a particular instant in time the period does in fact equal the
> average of the two. But this is true only for an instant every
> 1/(a-b) seconds.
>
>

If you have two values, a and b, the average is (a+b)/2, which is precisely the frequency in your above equation. So the sin(.5(a+b)) term is at the average frequency.

The sin's term amplitude is modified by the cos term, 2cos(.5(a-b)). This does not change the timing of the zero crossings of the sin term in any way. Therefore the period of the resulting waveform is fixed.

The cos term does add a few additional zero crossings when it evaluates to 0, but there is no continuous variation in the period as you have described.

3123. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 03:58:17 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4693037c$0$31221$4c368faf@roadrunner.com>
Source record: 38733
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Dana" <raff242@yahoo.com> wrote in message
news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>> Do you understand that a DSB signal *is* AM?
>>
>> So all the AM broadcasters are wasting money by
>> generating a carrier?
>
> How did you jump to that conclusion.

Is "DSBSC" DSB?

3124. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:05:13 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <5f553$4693056f$944e306e$960@STARBAND.NET>
Source record: 38734
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:4693037c$0$31221$4c368faf@roadrunner.com...
>
> "Dana" <raff242@yahoo.com> wrote in message
> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>> Do you understand that a DSB signal *is* AM?
>>>
>>> So all the AM broadcasters are wasting money by
>>> generating a carrier?
>>
>> How did you jump to that conclusion.
>
> Is "DSBSC" DSB?

Why can't you answer the question?
How or why do you think AM broadcasters are wasting money by generating a carrier??

>
>

3125. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:07:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13961f8qpnm9f53@corp.supernews.com>
Source record: 38735
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Tam/WB2TT wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:1390cii1m5hlt56@corp.supernews.com...
>> I'd be a little suspicious of el cheapo cable with copper plated steel
>> center conductor. I'd be surprised if it was Copperweld, which has a very
>> thick copper coating. Copper plating thickness would be a logical place
>> for cost-conscious vendors to skimp.
>>
>> An extra thin layer of copper wouldn't hurt at VHF and above, but it could
>> really be a killer at HF, where significant current could flow in the
>> steel. (Steel is extra lossy at RF because its permeability further
>> reduces the skin depth by a large factor.) I'd definitely measure the loss
>> if I intended to use it at HF.
>>
>> Of course, many (or most) amateurs would probably be pleased by the wide
>> bandwidth and low SWR and noise level they'd get with lossy cable.
>>
>> Roy Lewallen, W7EL
>
> Looking at a Belden listing for 5 different kinds of RG6, The loss at 10 MHz
> is .9 DB/100' for the copperweld, and .7 DB for the solid copper. The db
> loss at 1 MHz is about 1/2 the 10 MHz number. All have a loss of 7.3 DB at
> 1000 MHz, except the 9290 solid copper, which is 8.8 . I looked at less than
> half of their different kinds of RG6, but a quick scan did not point out
> anything odd.
>
> Tam/WB2TT

Belden isn't in the category of "el cheapo" cable, which was the subject
of my posting.

Roy Lewallen, W7EL

3126. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:17:07 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469307e6$0$4721$4c368faf@roadrunner.com>
Source record: 38736
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com...
> "Bob Myers" <nospamplease@address.invalid> hath wroth:
>
>>"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>news:468fe7df$0$16560$4c368faf@roadrunner.com...
>
>>> No nonlinearity is necessary in order to hear
>>> a beat?
>>> Where does the beat come from?
>
>>An audible beat tone is produced by the constructive and destructive
>>interference between two sound waves in air. Look at a pictorial
>>representation (in the time domain) of the sum of sine waves,of similar
>>amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>>see it.
>>
>>Bob M.
>
> I beg to differ. There's no mixing happening in the air. compression
> of air is very linear (Boyles Law or PV=constant). If there were
> mixing, you would be able to hear the beat note when one generates two
> ultrasonic tones. I belch 25KHz and 26KHz from two transducers, by
> our logic, air mixing would create a 1KHz beat note. It doesn't and
> you hear nothing.
>
> What seems to be the problem here is the model of the human ear is not
> what one would assume. It is NOT a broadband detector. The cochlea
> cilia (hairs) resonate at individual frequencies. Each one resonantes
> at only one frequency (and possibly some sub-harmonics). Therefore,
> the human ear model is a collection of narrow band filters and
> detectors. Unless the two frequencies involved both cause a single
> cilia to simultaneously vibrate at both frequencies, there isn't going
> to be any mixing. Each detector can be individually quite non-linear,
> but as long as it vibrates at only one frequency, there isn't going to
> be any mixing.

Well done.
Finally, someone who gets it.

>
> Meanwhile, I would greatly appreciate it if everyone would kindly trim
> quotations. This thread is becoming difficult to read. Thanks.

>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

3127. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:19:19 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4693086a$0$20578$4c368faf@roadrunner.com>
Source record: 38737
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"isw" <isw@witzend.com> wrote in message
news:isw-35196C.11010408072007@newsgroups.comcast.net...
> In article <1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com>,
> Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>> "Bob Myers" <nospamplease@address.invalid> hath wroth:
>>
>> >"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> >news:468fe7df$0$16560$4c368faf@roadrunner.com...
>>
>> >> No nonlinearity is necessary in order to hear
>> >> a beat?
>> >> Where does the beat come from?
>>
>> >An audible beat tone is produced by the constructive and destructive
>> >interference between two sound waves in air. Look at a pictorial
>> >representation (in the time domain) of the sum of sine waves,of similar
>> >amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
>> >see it.
>> >
>> >Bob M.
>>
>> I beg to differ. There's no mixing happening in the air. compression
>> of air is very linear (Boyles Law or PV=constant).
>
> In general, that's true, but take a look at what happens in the throats
> of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
> by Beranek.
>
> Isaac

Red herring.

3128. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:25:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hrdbm4-rda.ln1@mail.specsol.com>
Source record: 38738

John Doe <hgorden@adelphia.net> wrote:

> Isn't concrete an insulator??

> "The preferred ground in most jurisdictions is a concrete encased grounding
> electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. "

> What am I missing here?

That while dry concrete is a pretty good insulator it is hard to
find such just about anywhere other than Southern Arizona.

--
Jim Pennino

Remove .spam.sux to reply.

3129. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:46:18 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46930ebd$0$24769$4c368faf@roadrunner.com>
Source record: 38739
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> wrote in message
news:f6s2ndeot1@usenet01.boi.hp.com...
>
> "Jeff Liebermann" <jeffl@cruzio.com> wrote in message
> news:o7d293dphiou901mp3lvjlg4ge7t9mc9ts@4ax.com...
>>>Nor did I say there was. The phenomenon of interference
>>>between two compression waves in a given medium is not
>>>an example of "mixing."
>>
>> You didn't say that. You that a beat note would be produced. From
>> your posting at:
>> <http://groups.google.com/group/sci.electronics.basics/msg/f18c6dfefbd55a82>
>> "An audible beat tone is produced by the constructive and
>> destructive interference between two sound waves in air."
>>
>> That's wrong. There's no audible beat note produced in the air.
>
> Sigh -

Argument from histrionics.

> which, again, is as I explained it further on. I said that
> there is no actual component at the "beat" frequency. You do
> HEAR a "beat,"

So one hears it but it is not there.

> however, and that is the result of the amplitude

And amplitude is an absolute linear phenomenon
and independent of perception.

> variation caused by the interference, as noted. You cannot hear
> the beat effect (I won't use the word "tone" here, which I admit
> was a possible source of confusion in the original wording) if the
> two original tones are too far apart, simply because you can only

simply because...

> perceive such amplitude variations if they occur below a certain
> rate.

a "certain rate" is natural truth and certainly
not a limitation of human physiology.

>
> I have never ever said that "mixing" (multiplication) occurs in air.
> If you're going to pick apart what someone is saying, then please
> read everything they've said before starting.
>
> And whether or not you READ all the postings in a thread is one
> thing - whether or not you choose to respond to a given posting
> out of its context is something else entirely.
>
> Bob M.
>
>
>

3130. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 04:50:23 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46930fb2$0$16557$4c368faf@roadrunner.com>
Source record: 38740
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"David L. Wilson" <dwilson314@verizon.net> wrote in message
news:Wcyki.7231$MV6.3335@trnddc01...
>
> "Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
> news:4691e39b$2$329$e4fe514c@news.xs4all.nl...
> ...
>> So take another example: 25000 Hz and 25006 Hz.
>> Again, constructive and destructive interference produce 6 Hz
>> amplitude variations in the air.
>> But, as we can't hear ultrasonic frequencies, we will not produce
>> a 25003 Hz perception in our brain. So ther's nothing to hear,
>> no tone and consequently, no beat.
> ...
> If one looks at an oscilloscope of the audio converted to voltage, one
> still can see the 6Hz variations on the 25003 Hz and still refers to those
> as tone and beat. These exist in mathematically formulation of the
> resulting waveforms not just as something in the brain.

What is the mathematical formulation?

3131. Re: Is RG/6 center conductor copperweld?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 05:28:26 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46931908.4C1868FB@earthlink.net>
Source record: 38741
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.components

Roy Lewallen wrote:
>
> Belden isn't in the category of "el cheapo" cable, which was the subject
> of my posting.

Unless you collect thosands of feet of it from the local CATV dumpster
where they toss out partial boxes and reels. When I moved south I had
over a mile of it. It was all new scrap, and some pieces were over 300
feet.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3132. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 05:54:41 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46931ec3$0$4718$4c368faf@roadrunner.com>
Source record: 38742
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"isw" <isw@witzend.com> wrote in message
news:isw-97799B.10580608072007@newsgroups.comcast.net...
> In article <46910fe5$0$8925$4c368faf@roadrunner.com>,
> "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>
>> "isw" <isw@witzend.com> wrote in message
>> news:isw-664E24.21491207072007@newsgroups.comcast.net...
>> > In article <468fe7df$0$16560$4c368faf@roadrunner.com>,
>> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
>> >
>> >
>> > --snippety-snip--
>> >
>> >> >> You said you are a physicist/engineer.
>> >> >> What does "linear" mean?
>> >> >
>> >> > Let's not get too far off the subject here. We were discussing
>> >> > whether
>> >> > the "tuning beat" that you use to tune a musical instrument involved
>> >> > a
>> >> > nonlinear process (ie. "modulation").
>> >>
>> >> Then linearity is at the core of the matter.
>> >> What does "linear" (or "nonlinear") mean to you?
>> >
>> > OK, if you insist -- *in this case* it means "linear enough to not
>> > produce IM products of significant amplitude".
>>
>> Good enough.
>> Then spectrum analyzers and the human auditory
>> system are not linear.
>> Stay with me here.
>>
>> >
>> >> > I said that it does not, and that
>> >> > it could be detected by instrumentation which was proveably linear
>> >> > (i.e.
>> >> > not "perfectly" linear, because that's not required, but certainly
>> >> > linear enough to discount the requirement for "modulation").
>> >>
>> >> No nonlinearity is necessary in order to hear
>> >> a beat?
```

>> >> Where does the beat come from?
>> >
>> > As the phase of the two nearly equal waves move past each other, there
>> > is simple vector summation which varies the amplitude.
>> >
>> > Consider two sine waves of precisely the same frequency, where one of
>> > them is adjustable in phase -- use a goniometer, for instance. Use a
>> > set
>> > of resistors to sum the two signals, and observe the summing point with
>> > a 'scope or a loudspeaker. By altering the phase of one source, you can
>> > get any amplitude you want from zero up to twice the amplitude of
>> > either
>> > one.
>> >
>> > Now just twiddle that phase knob around and around as fast as you can.
>> >
>> > You've just slightly altered the instantaneous frequency of one of the
>> > generators (but only while you twiddle), and accomplished pretty much
>> > the same effect as listening to the beat between two guitar strings at
>> > nearly zero frequency offset. With no nonlinear processes in sight.
>> >
>> > Isaac
>>
>> You put some effort into that. I give you
>> credit for that.
>>
>> The socratic thing isn't working, so here
>> you go.
>
> I would appreciate it if you would take the time to list *in detail* any
> errors in what I wrote. If it "isn't working", I need to know why,
> because I don't like to be confused about things.
>
>> Is an envelope detector linear? The answer is no.
>
> That's correct, and I'm well aware of it, but so what?

No you're not.

"Yup. And the spectrum analyzer is (hopefully) a very linear system,
producing no intermodulation of its own."

Hopefully?

Is a spectrum analyzer linear?
"I'm sure there's more than one way to do it, but I feel certain..."
Dodging the question.

Which of them is linear?

"a bolometer just turns the signal power into heat; nothing
nonlinear there..."

(Bolometers are no more linear than envelope detectors.)

What does "linear" mean?

"Let's not get too far off the subject here."

Dodging the subject because you don't
understand the subject.

>
> --dissertation on how an envelope detector works snipped--

Vain "editing".

>
>> Do you see how this applies to spectrum analyzers
>> and the human auditory system?
>
> Sure. But
>
> 1) It is possible -- if not practical -- to build a "detectorless" (in
> the nonlinear process sense) spectrum analyzer, and

Red herring.

>
> 2) None of it is even remotely significant to the subject at hand.

A repeat of your earlier dodging.

>
> Here it is again: the "beat" one hears when tuning a guitar or other
> instrument does *not* require any nonlinear process for its production.
> Period.

You didn't know a spectrum analyzer is nonlinear.
You didn't/don't know that a bolometer is nonlinear.
You wouldn't and don't know nonlinearity even when you
hear it.

>
> Isaac

You are a poseur.

3133. Re: aircom coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 09:43:17 UTC
From: ml <m@di.net>
Message-ID: <m-A55F41.05431410072007@news.verizon.net>
Source record: 38743

In article <m-F04129.11592408072007@news.verizon.net>, ml <m@di.net>
wrote:

> hi
>
>
> While the spec's are published i wonder if anyone has any first hand
> knowledge with the aircom coax
>
> is it betther than say lmr or hardline given like for like overall
> from experience??
>
> my guess would be that since it's got alot of hollow space water
> damage might be an issue but maybe it has some other fantastic
> quality that makes up for it??
>
>
> anyone use it?

so far what i gather is that aside from 1 person nobody has used this
stuff out here in nntp land??

alan thanks for the reply, that you use it, could and you mentioned
it' works fine, but was their any advantage/disadvantage to it vs
it's direct compitition?

3134. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 10:26:49 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46935ee4$0$30624$4c368faf@roadrunner.com>
Source record: 38744
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:4693037c$0$31221$4c368faf@roadrunner.com...
>
> "Dana" <raff242@yahoo.com> wrote in message
> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>> Do you understand that a DSB signal *is* AM?
>>>
>>> So all the AM broadcasters are wasting money by
>>> generating a carrier?
>>
>> How did you jump to that conclusion.
>
> Is "DSBSC" DSB?
>

There have been attempts to remove the carrier but receivers could not be
manufatured at a reasonable price that would demodulate the signal with the
fidelity of an AM BCB signal. Probably could be done today but what would
you l do with all those AM rx that suddenly dont work when the transition is
made.

3135. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 11:19:44 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184066384.165502.36230@c77g2000hse.googlegroups.com>
Source record: 38745

Woody,
you have received plenty of advice... Let me simplify if I may..

The tuner has to sit within reach <usually>, so that means the end of the long wire drops down into the shack to the tuner, no coax involved... No baluns, etc. are needed or advised...

On certain bands the case of the antenna tuner is likely to bite you when you touch it <and the rig also> The cure for this is to run a quarter wave radial for each band from the ground terminal of the tuner... These can be run around in the room, or exit out the window and fan out on the ground <can be slit into the dirt, whatever> MFJ actually makes a tuner for the ground radials.. Works quite well...

The purpose of the ground radial is to act as a counterpoise for the antenna currents <reduces ground current losses> and to move the RF peak voltage out to the end of the quarter wave radial leaving the tuner/radio at low RF potential...

Don't over analyze this... Just hang your longwire, put out your ground radials, and have fun on the bands...

denny / k8do

3136. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 13:34:16 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <kf279359tup83jcmgkivjof8h9v5gnc7e4@4ax.com>
Source record: 38746

On Tue, 10 Jul 2007 04:19:44 -0700, Denny <k8do@mailblocks.com> wrote:

>Woody,
>you have received plenty of advice... Let me simplify if I may..
>
>The tuner has to sit within reach <usually>, so that means the end of
>the long wire drops down into the shack to the tuner, no coax
>involved... No baluns, etc. are needed or advised...
>
>On certain bands the case of the antenna tuner is likely to bite you
>when you touch it <and the rig also> The cure for this is to run a
>quarter wave radial for each band from the ground terminal of the
>tuner...
The SGC-237 keeps the bite outside with the antenna. No RF in the
shack! It does need a source of 12 Volts to power it. There may be
less expensive auto tuners but I am really tired of having to buy
cheaper models only to eventually buy the top of the line...

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3137. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 14:47:26 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <2_Mki.21057$z64.17009@trnddc07>
Source record: 38747

Great, thanks! Really appreciate it,
Woody

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:49f593tbd36sjrk9gv5omk2870ufi4jqm6@4ax.com...
> On Mon, 09 Jul 2007 22:46:51 GMT, "Woody" <ts520@hotmail.com> wrote:
>
>>Ok, maybe that's what I'll do then... So should I use a balun of any kind
>>or
>>just make a coax connection of my own?
>
> Hi Woody,
>
> To answer this and your other question about radials, I will use my
> own experience.
>
> I drove a ground rod at a remote point, about 12 feet from the house
> and closer to the woods. My shack was at ground level and this rod
> was more an anchor for a former vertical (where the rod extended up
> out of the ground for a foot). Anyway, my principle ground was the
> service ground 6 feet from my operating position with both rods tied
> together.
>
> At the remote rod (basically at the crest of the ridge), I fanned out
> radials down the slope. Don't worry about tuning them, or cutting
> them for a band, the proximity of ground completely negates any sense
> of tune.
>
> At this remote point, I built a box that contained a choke (a short
> length of coax with 50 or 70 beads) that terminated in a BNC bulkhead
> connector at one end, and two porcelain posts.
>
> One post was tied to the radial field, the other post was tied to the
> skywire. This put the system ground out at the feedpoint when I ran
> battery (I always do unless I am on a float charge). This means any
> house noise was 12 feet further away than would have normally been
> encountered and snubbed properly by the choke. I measured this and
> found it to be quite effective for noise control alone.
>
> The sky wire (12 ga THNN) merely lifted off from about 1 foot off the
> ground up to the canopy (Maples) around 60 feet above. The wire ran
> down the hill, on top of the canopy for about 200 feet. At the remote
> end, I simply tied it to a limb (at ground level, the wire ending
> somewhere high above) through a length of 1/16th inch nylon line

> (crab-pot line). So, from the feedpoint to on-high, the wire
> basically described a sideways V with ground (as the slope also fell
> beneath it too at roughly the same angle of 25 degrees).
>
> During a storm, two of my Maples snapped about 30 feet above ground
> level (but down the slope) and one lay over horizontal, and was
> suspended there 20 feet above ground by snagging other trees. The
> traditional term for that 30 foot length of tree in this area is
> called a "widow maker." On its way down, it hit my wire, ripped the
> box off the post, yanked the coax along until it strained my house
> connection and broke the coax connection there.
>
> After the storm, I hove the wire over the widow maker, confirmed the
> 1/16th inch nylon withstood the strain (who wulda thought?) and
> repaired the stripped BNC house connection. Amazingly only the ground
> wire to the radial field broke when the box started to fly.
>
> We get messages here from those who agonize about setting the woods on
> fire - never happened to me, and I never worried about it.
>
> 73's
> Richard Clark, KB7QHC

3138. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 14:55:18 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B8EBE6.6EB5C%dbowey@comcast.net>
Source record: 38748
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/10/07 3:26 AM, in article 46935ee4$0$30624$4c368faf@roadrunner.com,
"Jimmie D" <GFENDER@carolina.rr.com> wrote:

>
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:4693037c$0$31221$4c368faf@roadrunner.com...
>>
>> "Dana" <raff242@yahoo.com> wrote in message
>> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>>
>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>>> Do you understand that a DSB signal *is* AM?
>>>>
>>>> So all the AM broadcasters are wasting money by
>>>> generating a carrier?
>>>
>>> How did you jump to that conclusion.
>>
>> Is "DSBSC" DSB?

I see Jimmie talked all around your question.

I'll answer it AGAIN, though I'm still sure your only a troll.....

DSB says nothing about the carrier; DSBSC is still DSB.

You can have DSBSC (Suppressed Carrier), DSBRC (Reduced Carrier), and DSB
with Full Carrier. You can look up the abbreviation for the latter if you
need it.

Broadcast medium wave radio, slang term "AM Radio," is DSB with full
Carrier.

>>
>
> There have been attempts to remove the carrier but receivers could not be
> manufatured at a reasonable price that would demodulate the signal with the
> fidelity of an AM BCB signal. Probably could be done today but what would
> you l do with all those AM rx that suddenly dont work when the transition is
> made.
>
>

3139. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 15:14:06 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <2nNki.7340$MV6.1016@trnddc01>
Source record: 38749

Hi Denny, thanks again for the help... I guess I should expand a bit.. I'm not just thinking of a manual tuner, but also an auto tuner, like used Triton, SGC or Icom marine/military type, so I sometimes get my wires crossed. I've read about a lot of folks using ladder line and such to feed the antenna and that was also a question. For the longwire originating in the shack, I've played with that setup before when testing radios I sell, and it really plays havoc with my electronics and computers, so I may just forego the whole manual tuner thing completely. I'd prefer to find a way to feed with coax if possible.

thanks!
Woody

"Denny" <k8do@mailblocks.com> wrote in message
news:1184066384.165502.36230@c77g2000hse.googlegroups.com...
> Woody,
> you have received plenty of advice... Let me simplify if I may..
>
> The tuner has to sit within reach <usually>, so that means the end of
> the long wire drops down into the shack to the tuner, no coax
> involved... No baluns, etc. are needed or advised...
>
> On certain bands the case of the antenna tuner is likely to bite you
> when you touch it <and the rig also> The cure for this is to run a
> quarter wave radial for each band from the ground terminal of the
> tuner... These can be run around in the room, or exit out the window
> and fan out on the ground <can be slit into the dirt, whatever>
> MFJ actually makes a tuner for the ground radials.. Works quite
> well...
>
> The purpose of the ground radial is to act as a counterpoise for the
> antenna currents <reduces ground current losses> and to move the RF
> peak voltage out to the end of the quarter wave radial leaving the
> tuner/radio at low RF potential...
>
> Don't over analyze this... Just hang your longwire, put out your
> ground radials, and have fun on the bands...
>
> denny / k8do
>
>

3140. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 15:16:55 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f707t9$c9c$1@usenet01.boi.hp.com>
Source record: 38750
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:4693037c$0$31221$4c368faf@roadrunner.com...

>>> So all the AM broadcasters are wasting money by
>>> generating a carrier?
>>
>> How did you jump to that conclusion.
>
> Is "DSBSC" DSB?

Obviously, since it has both sidebands. What it's
missing, vs. "normal" AM, is the carrier.

Bob M.

3141. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 15:18:33 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <drNki.7342$MV6.3899@trnddc01>
Source record: 38751

Yup, Now there, I agree totally... thanks much for the help!
rb

"John Ferrell" <johnferrell@sprintmail.com> wrote in message
news:kf279359tup83jcmgkivjof8h9v5gnc7e4@4ax.com...
> On Tue, 10 Jul 2007 04:19:44 -0700, Denny <k8do@mailblocks.com> wrote:
>
>>Woody,
>>you have received plenty of advice... Let me simplify if I may..
>>
>>The tuner has to sit within reach <usually>, so that means the end of
>>the long wire drops down into the shack to the tuner, no coax
>>involved... No baluns, etc. are needed or advised...
>>
>>On certain bands the case of the antenna tuner is likely to bite you
>>when you touch it <and the rig also> The cure for this is to run a
>>quarter wave radial for each band from the ground terminal of the
>>tuner...
> The SGC-237 keeps the bite outside with the antenna. No RF in the
> shack! It does need a source of 12 Volts to power it. There may be
> less expensive auto tuners but I am really tired of having to buy
> cheaper models only to eventually buy the top of the line...
>
> John Ferrell W8CCW
> "Life is easier if you learn to
> plow around the stumps"

3142. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 15:22:48 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <BTdrWUFIR6kGFwDw@g3ohx.demon.co.uk>
Source record: 38753
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In message <C2B8EBE6.6EB5C%dbowey@comcast.net>, Don Bowey
<dbowey@comcast.net> writes
>On 7/10/07 3:26 AM, in article 46935ee4$0$30624$4c368faf@roadrunner.com,
>"Jimmie D" <GFENDER@carolina.rr.com> wrote:
>
>>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:4693037c$0$31221$4c368faf@roadrunner.com...
>>>
>>> "Dana" <raff242@yahoo.com> wrote in message
>>> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>>>
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>>>> Do you understand that a DSB signal *is* AM?
>>>>>
>>>>> So all the AM broadcasters are wasting money by
>>>>> generating a carrier?
>>>>
>>>> How did you jump to that conclusion.
>>>
>>> Is "DSBSC" DSB?
>
>I see Jimmie talked all around your question.
>
>I'll answer it AGAIN, though I'm still sure your only a troll.....
>
>DSB says nothing about the carrier; DSBSC is still DSB.
>
>You can have DSBSC (Suppressed Carrier), DSBRC (Reduced Carrier), and DSB
>with Full Carrier. You can look up the abbreviation for the latter if you
>need it.
>
>Broadcast medium wave radio, slang term "AM Radio," is DSB with full
>Carrier.
>
>>>
>>
>> There have been attempts to remove the carrier but receivers could not be
>> manufatured at a reasonable price that would demodulate the signal with the
>> fidelity of an AM BCB signal. Probably could be done today but what would
>> you l do with all those AM rx that suddenly dont work when the transition is

>> made.
>>
>>
>
Just out of interest....
http://www.vkham.com/vk8da/documents/ModesOfOperation.pdf
Ian.
--

3143. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 15:24:03 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <nwNki.36429$G23.3258@newsreading01.news.tds.net>
Source record: 38752

In an earlier message you had written
>It occurs when antibiotics are used prior to surgery in which the
>antibiotic kills the good bacteria in the system, leaving the
>toxic bacteria to take over, resulting in continual diarreah(sp).

Have you tried to repopulate your intestinal flora by using probotics such as Culturelle http://www.culturelle.com/ or Lyosan's Acidophilus http://www.lyo-san.ca/english/autre.html#lactique ?

John, N9JG

= = = Original Message = = =
"Walter Maxwell" <walt@w2du.com> wrote in message news:q2a593d54t5nuis931q72jm6879akcfadr@4ax.com...
[snip]
> Thanks for the nice words, Jerry. I'm so pleased that your Mother
> recovered and hope she continues to
> recuperate. It's a hellish situation--I had never been as sick in my life
> as with this situation. I'm not
> totally recovered yet, but on the way. I still need a walker to keep my
> balance when standing or walking, and
> am still in physical therapy.
>
> Walt

3144. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 16:05:10 UTC
From: richardharrison@webtv.net
Message-ID: <62-4693AE36-1087@storefull-3256.bay.webtv.net>
Source record: 38754

Art wrote:
"And?"

My point is that Art is full of it when he says people in the space industry don`t have a clue about "Surface dust on the orbiting Universe".

Art is likely to say that the experts` dust isn`t Art`s dust. Art`s dust would best be gone with the wind and Gaussian antennas.

Best regards, Richard Harrison, KB5WZI

3145. Re: 60m mod for TS440S?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 17:48:33 UTC
From: You <You@shadow.orgs>
Message-ID: <You-D3D0C4.09483410072007@netnews.worldnet.att.net>
Source record: 38755
Cross-posted to: alt.radio.amateur,news.misc.radio.amateur.antenna,rec.radio.amateur.antenna

In article <1395442pgb2bl68@corp.supernews.com>,
"Butch Magee" <lynyrd@cableone.net> wrote:

> perform the MARS mod and it will work anywhere you tune to except the
> broadcast am band.
>
> KF5DE
> "Juan M." <jdmollanNOSPAMPLEASE@juno.com> wrote in message
> news:ypednWIUo8t64w_bnZ2dnUVZ_segnZ2d@centurytel.net...
> > Does anyone have an easy mod for the TS440S or TS430 to allow it to
> > transmit in the 60m band?
> >
> >
>

the Mod I did on my 3 TS-430's allow both Beacon and Broadcast
Transmissions, basically from 150Khz - 30 Mhz....

3146. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 19:01:54 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184094114.167004.291580@22g2000hsm.googlegroups.com>
Source record: 38756

On Jul 10, 11:14 am, "Woody" <t...@hotmail.com> wrote:
> Hi Denny, thanks again for the help... I guess I should expand a bit.. I'm
> not just thinking of a manual tuner, but also an auto tuner, like used
> Triton, SGC or Icom marine/military type,

Well, with the remote autotuner you will have less RF in the shack...
But even then I would hang ground radials off the tuner case to keep
it at lower voltage potentials...
Since you are willing to spring for an SGC, etc. given your
description of your site I would think about an off center fed wire
antenna... Run your longwire through the trees... Roughly an 1/8 wave
< lowest band> back from one end of the antenna drop a vertical wire
to the ground and use the tuner to feed the end of the drop wire... A
ground stake and some radials and you are likely to be in business...
You can fool with snipping a bit off the long end of the wire if one
of the bands gives the tuner a hard time... This should play...

Now, ALL the tuners you mentioned and I know of are single ended, i.e.
are not truely balanced for balanced feed line and putting a "balun"
on the end of the ladder line does not make it a balanced tuner...

Now, I use open wire feed for the majority of my antennas, but I build
my own balanced tuners and open wire...

cheers ... denny

3147. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 19:04:24 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f70l7p$s05$1@nntp1.jpl.nasa.gov>
Source record: 38758

John Doe wrote:
> Isn't concrete an insulator??
>
> "The preferred ground in most jurisdictions is a concrete encased grounding
> electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. "
>
> What am I missing here?

Concrete is a conductor, and generally a better conductor than the soil around it (it's hygroscopic), so rather than the sort of iffy contact between the rod and soil, you have a much larger contact area between 20 feet of wire and concrete, and an even larger contact surface area between the concrete and the soil. Run some numbers, and it turns out that capacitive coupling from concrete to soil is probably lower impedance than resistance.

There ARE high resistivity concretes (used for things like supporting rails on electric trains), but that's unusual.

There's lots and lots of field tests, lab work, and theoretical analysis to back up the consistent good performance of Ufer grounds.

3148. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 19:05:27 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f70l9n$s05$2@nntp1.jpl.nasa.gov>
Source record: 38759

jimp@specsol.spam.sux.com wrote:
> John Doe <hgorden@adelphia.net> wrote:
>
>
>>Isn't concrete an insulator??
>
>
>>"The preferred ground in most jurisdictions is a concrete encased grounding
>>electrode (aka a Ufer Ground, after the inventor's name Herb Ufer).. "
>
>
>>What am I missing here?
>
>
> That while dry concrete is a pretty good insulator it is hard to
> find such just about anywhere other than Southern Arizona.
>
And even there, the concrete is probably damper and a better conductor
than the surrounding soil. Ufer's original work was developing
grounding techniques for ammo bunkers in desert areas, since the ground
rods didn't work.

3149. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 19:15:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f70ls1cln1@news.service.uci.edu>
Source record: 38757
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

David L. Wilson wrote:

> "Jim Kelley" <jwkelley@uci.edu> wrote in message
> news:f6ujcc$jd0$1@news.service.uci.edu...
> ...
>
>>sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>>
>>A plot of the function reveals that cos(.5(a-b)) describes the envelope.
>
>
> Ok.
>
> The period of the 'enveloped' waveform (or the arcane, beat
>
>>modulated waveform) then can be seen to vary continuously and
>>repetitiously over time - from 1/a at one limit to 1/b at the other.
>
>
> ?
>
>
>>At a particular instant in time the period does in fact equal the average
>>of the two. But this is true only for an instant every 1/(a-b) seconds.
>
>
> ??
>
> How do you come up with anything but a period of of the average of the two
> for the enveloped waveform?

The error here is in assuming that the sin and cos terms in the equivalent expression are representative of individual waves. They are not. The resultant wave can only be accurately described as the sum of the constituent waves sin(a) and sin(b), or as the function 2sin(.5(a+b))cos(.5(a-b)). That function, plotted against time appears exactly as I have described. I have simply reported what is readily observable.

jk

3150. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 20:40:15 UTC
From: dplatt@radagast.org
Message-ID: <fe7dm4-c7n.ln1@radagast.org>
Source record: 38761

>Well, with the remote autotuner you will have less RF in the shack...
>But even then I would hang ground radials off the tuner case to keep
>it at lower voltage potentials...

Definitely! One of the characteristics of the SGC autotuners is that they seem to *require* a really good RF ground. Their tuning circuitry "wants" to work into a ground connection which has a lower impedance than the wire. SGC's manual makes this point repeatedly, and identifies "grounding problems" (poor bonding, high inductance, etc.) as the commonest cause of "Hey, this thing won't tune" problems with their autotuners.

My own experience with a used, older-model SGC 230 (so old it's in a non-waterproof metal case) seems to back this up. When used with a relatively simple ground, the tuner has serious problems in achieving a match, and frequently won't ever find one.

I tend to think that these arbitrary-wire tuners work best in their original environment - bolted to a really big, solid chunk of metal such as a ship body or a tank.

Another "gotcha" - the tuner I have, at least, can become seriously "confused" if you try to use it with a radio that has aggressive "high SWR power reduction" circuitry to protect the finals. In such a radio (my Kenwood TS-2000 is one), the output power jumps around a lot as the autotuner tries different L-network match settings, and the tuner firmware seems to misinterpret these transmitter power changes and never actually finds a low-SWR match. The same tuner, and the same wire and grounding setup, will often match within a few seconds when power is applied from another transmitter which doesn't alter its output power so abruptly (e.g. a Ten-Tec Scout 555).

I've given up trying to use my old SGC-230 - it's so quirky that I just can't depend on it to work acceptably in my environment, with my radio.

Other vendors' autotuners may be less of a problem in this respect.

>Since you are willing to spring for an SGC, etc. given your
>description of your site I would think about an off center fed wire
>antenna... Run your longwire through the trees... Roughly an 1/8 wave
>< lowest band> back from one end of the antenna drop a vertical wire
>to the ground and use the tuner to feed the end of the drop wire... A
>ground stake and some radials and you are likely to be in business...

I'd recommend following SGC's recommendations... which probably add up to "lots of heavy radials".

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3151. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 20:56:49 UTC
From: craigm <none@domain.invalid>
Message-ID: <GjSki.83$p42.319529@news.sisna.com>
Source record: 38760
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote:

> David L. Wilson wrote:
>
>> "Jim Kelley" <jwkelley@uci.edu> wrote in message
>> news:f6ujcc$jd0$1@news.service.uci.edu...
>> ...
>>
>>>sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>>>
>>>A plot of the function reveals that cos(.5(a-b)) describes the envelope.
>>
>>
>> Ok.
>>
>> The period of the 'enveloped' waveform (or the arcane, beat
>>
>>>modulated waveform) then can be seen to vary continuously and
>>>repetitiously over time - from 1/a at one limit to 1/b at the other.
>>
>>
>> ?
>>
>>
>>>At a particular instant in time the period does in fact equal the average
>>>of the two. But this is true only for an instant every 1/(a-b) seconds.
>>
>>
>> ??
>>
>> How do you come up with anything but a period of of the average of the
>> two for the enveloped waveform?
>
> The error here is in assuming that the sin and cos terms in the
> equivalent expression are representative of individual waves. They
> are not. The resultant wave can only be accurately described as the
> sum of the constituent waves sin(a) and sin(b), or as the function
> 2sin(.5(a+b))cos(.5(a-b)). That function, plotted against time
> appears exactly as I have described. I have simply reported what is
> readily observable.
>
> jk

I would submit you plotted it wrong and/or misinterpreted the results.

3152. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 21:14:34 UTC
From: Nick <a@b.com>
Message-ID: <_ESki.21416$uR5.12138@newsfe7-gui.ntli.net>
Source record: 38762

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f70l9n$s05$2@nntp1.jpl.nasa.gov...
> jimp@specsol.spam.sux.com wrote:
>> John Doe <hgorden@adelphia.net> wrote:
>>
>>
>>>Isn't concrete an insulator??
>>
>>
>>>"The preferred ground in most jurisdictions is a concrete encased
>>>grounding electrode (aka a Ufer Ground, after the inventor's name Herb
>>>Ufer).. "
>>
>>
>>>What am I missing here?
>>
>>
>> That while dry concrete is a pretty good insulator it is hard to
>> find such just about anywhere other than Southern Arizona.
>>
> And even there, the concrete is probably damper and a better conductor
> than the surrounding soil. Ufer's original work was developing grounding
> techniques for ammo bunkers in desert areas, since the ground rods didn't
> work.
>

I, too, am amazed - I though concrete, whilst it would be damp on the
outside underground bit, would be
substantially dry after setting, and a good insulator, being essentially
sand.. I guess its porous or microporous..

Nick

3153. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 21:31:18 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <1ut7939ne82m3f4odlufg438qblmdhgoag@4ax.com>
Source record: 38763
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On Sat, 7 Jul 2007 14:44:28 -0600, "Bob Myers"
<nospamplease@address.invalid> wrote:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:rksv83pukok2t7qumuhjlqcapcqms52ccm@4ax.com...
>> Digital is nothing more than an analog device with too much gain and
>> hysteresis, where the output is stuck at either high or low. Dig deep
>> enough into any digital contrivance, and you'll find analog devices
>> operating in this way. The real world is analog. (Just ask any
>> analog engineer).

>We've been here before, too. The real world is the real world
>- it is neither "digital" nor "analog," which are terms used (at
>least when used correctly) to refer to two methods of encoding
>information about (or describing) the real world or some specific
>real-world parameter.

In college, the senior electrical engineering class was polarized into
two camps, analog and ditital, largely by their choice of senior
projects. I made the mistake of designing a project that straddled
both camps (Secode Selector using RTL and DCL). Life was hell. The
debate came to a grinding halt when someone noticed that DNA sequences
were digital. So, if you dig deep enough into an analog world, you
eventually hit a digital bottom. I'll call it a win for whichever
side pays better this week.

>And in case it makes you feel better about the answer, yes, I am
>(or at least have been) an "analog engineer." (Or rather, an
>engineer involved in the design of "analog" circuits and systems.)

Ditto. I did RF design for various companies, which in the 70's and
80's was mostly analog (FM, AM, SSB). For obvious reasons, I tend to
favor the analog view of reality. Now daze, it's all conglomerations
of analog and digital techniques and infested by longer acronyms.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558 jeffl@comix.santa-cruz.ca.us
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3154. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 21:48:21 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f70ur6$k7$1@usenet01.boi.hp.com>
Source record: 38764
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@comix.santa-cruz.ca.us> wrote in message
news:1ut7939ne82m3f4odlufg438qblmdhgoag@4ax.com...
> In college, the senior electrical engineering class was polarized into
> two camps, analog and ditital, largely by their choice of senior
> projects. I made the mistake of designing a project that straddled
> both camps (Secode Selector using RTL and DCL). Life was hell. The
> debate came to a grinding halt when someone noticed that DNA sequences
> were digital. So, if you dig deep enough into an analog world, you
> eventually hit a digital bottom. I'll call it a win for whichever
> side pays better this week.

I've tended to take a slightly different approach, which I hinted
at in my earlier response. It generally gets me some odd looks and
a "no, that can't be right" sort of reply, but I find it IS a helpful way
to look at things - at the very least, a different perspective that can
give you some new insights into how all this stuff "really" works.

As I'd said, I tend to think of the "real world" as just that - it is
neither
"analog" nor "digital." From this perspective, those two terms simply
point to different means of encoding information for communication or
storage. I find that, all too often (again, at least from this
perspective),
we tend to use the words "analog" and "digital" when what we really
mean to say are things like "linear," "continuous," "discrete," "quantized,"
and so forth. Fundamentally, I tend to see "analog" as simply meaning
" a system whereby information about a given parameter is encoded
by causing some other parameter (voltage, for instance) to vary in an
analogous manner." It doesn't necessarily mean "linear" or even
"continuous." Similarly, "digital" winds up with an even simpler
definition - "information encoded in the form of digits (numerical
values." I've never found a situation where I couldn't use these words
with those interpretations. And like I said, it IS often helpful - for one
thing, you wind up with a much better feeling for the real advantages
and disadvantages of "digital" and "analog" systems. (And you also
wind up not worrying about certain sillinesses, like whether power
systems are "analog" or "digital" - since the world no longer has to
be divided up exclusively as one or the other.)

Some people can't seem to wrap their minds around such things, but
then, I'm not really going to worry about that.

Bob M.

3155. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:16:54 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <eg0893dfkct78fra8nk9odoevsmr9i62s8@4ax.com>
Source record: 38765
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On Tue, 10 Jul 2007 15:48:21 -0600, "Bob Myers"
<nospamplease@address.invalid> wrote:

>
>"Jeff Liebermann" <jeffl@comix.santa-cruz.ca.us> wrote in message
>news:1ut7939ne82m3f4odlufg438qblmdhgoag@4ax.com...
>> In college, the senior electrical engineering class was polarized into
>> two camps, analog and ditital, largely by their choice of senior
>> projects. I made the mistake of designing a project that straddled
>> both camps (Secode Selector using RTL and DCL). Life was hell. The
>> debate came to a grinding halt when someone noticed that DNA sequences
>> were digital. So, if you dig deep enough into an analog world, you
>> eventually hit a digital bottom. I'll call it a win for whichever
>> side pays better this week.

>I've tended to take a slightly different approach, which I hinted
>at in my earlier response. It generally gets me some odd looks and
>a "no, that can't be right" sort of reply, but I find it IS a helpful way
>to look at things - at the very least, a different perspective that can
>give you some new insights into how all this stuff "really" works.

That would be nice, but that's not the way engineering works these
days. At some point, most designers end up being either analog or
digital. Except in systems design, it's a rare engineer that can
function well in both camps. The result is usually microprocessor
acting as a marginal replacement for an op amp, or an analog circuit
that can't work in the real world because the tolerances and error
accumulation far exceed what could be done with digital. If you only
have a hammer, everything looks like a nail.

>As I'd said, I tend to think of the "real world" as just that - it is
>neither
>"analog" nor "digital." From this perspective, those two terms simply
>point to different means of encoding information for communication or
>storage. I find that, all too often (again, at least from this
>perspective),
>we tend to use the words "analog" and "digital" when what we really
>mean to say are things like "linear," "continuous," "discrete," "quantized,"
>and so forth.

I just hate to agree with anyone, but you're correct. Analog/Digital
have become so vague that more specific terminology is required.
Still, the terms will not go away and must be dealt with as they

appear. Try searching Google for "analog engineering" and "digital engineering" with the quotes. It's going to take a while for all those hits to go away and be replaced by something more specific.

>Fundamentally, I tend to see "analog" as simply meaning
>" a system whereby information about a given parameter is encoded
>by causing some other parameter (voltage, for instance) to vary in an
>analogous manner." It doesn't necessarily mean "linear" or even
>"continuous." Similarly, "digital" winds up with an even simpler
>definition - "information encoded in the form of digits (numerical
>values."

Agreed.

>I've never found a situation where I couldn't use these words
>with those interpretations.

Now you've done it. I'll be spending most of the day dreaming up situations where the type of information encoding is ambiguous. Offhand, quantum mechanics doesn't it either world, but then it doesn't really fit any sane world, so that's not a good example.

>And like I said, it IS often helpful - for one
>thing, you wind up with a much better feeling for the real advantages
>and disadvantages of "digital" and "analog" systems. (And you also
>wind up not worrying about certain sillinesses, like whether power
>systems are "analog" or "digital" - since the world no longer has to
>be divided up exclusively as one or the other.)

Agreed.

>Some people can't seem to wrap their minds around such things, but
>then, I'm not really going to worry about that.

There's always a way to misinterpret something, no matter how clearly it is stated. Besides, I like my illusions, even if they're wrong.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558 jeffl@comix.santa-cruz.ca.us
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3156. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:36:56 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <nj5893dm4kktkc0infnu220d6n7473jdte@4ax.com>
Source record: 38766

On Tue, 10 Jul 2007 15:24:03 GMT, "John, N9JG" <john@Xremove.MeYgotwals.com> wrote:

>In an earlier message you had written
>>It occurs when antibiotics are used prior to surgery in which the
>>antibiotic kills the good bacteria in the system, leaving the
>>toxic bacteria to take over, resulting in continual diarreah(sp).
>
>Have you tried to repopulate your intestinal flora by using probotics such
>as Culturelle http://www.culturelle.com/ or Lyosan's Acidophilus
>http://www.lyo-san.ca/english/autre.html#lactique ?
>
>John, N9JG

No John, I was unaware of the culture you referred to. I was under the care of the hosp doc, and the only
antibiotic he gave me was flagyl, also with horrible results.

Walt

>= = = Original Message = = =
>"Walter Maxwell" <walt@w2du.com> wrote in message
>news:q2a593d54t5nuis931q72jm6879akcfadr@4ax.com...
>[snip]
>> Thanks for the nice words, Jerry. I'm so pleased that your Mother
>> recovered and hope she continues to
>> recuperate. It's a hellish situation--I had never been as sick in my life
>> as with this situation. I'm not
>> totally recovered yet, but on the way. I still need a walker to keep my
>> balance when standing or walking, and
>> am still in physical therapy.
>>
>> Walt
>

3157. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:37:28 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f711n7$m3v$1@news.service.uci.edu>
Source record: 38767

craigm wrote:
> Jim Kelley wrote:
>
>
>>David L. Wilson wrote:
>>
>>
>>>"Jim Kelley" <jwkelley@uci.edu> wrote in message
>>>news:f6ujcc$jd0$1@news.service.uci.edu...
>>>...
>>>
>>>
>>>>sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>>>>
>>>>A plot of the function reveals that cos(.5(a-b)) describes the envelope.
>>>
>>>
>>>Ok.
>>>
>>>The period of the 'enveloped' waveform (or the arcane, beat
>>>
>>>
>>>>modulated waveform) then can be seen to vary continuously and
>>>>repetitiously over time - from 1/a at one limit to 1/b at the other.
>>>
>>>
>>>?
>>>
>>>
>>>
>>>>At a particular instant in time the period does in fact equal the average
>>>>of the two. But this is true only for an instant every 1/(a-b) seconds.
>>>
>>>
>>>??
>>>
>>>How do you come up with anything but a period of of the average of the
>>>two for the enveloped waveform?
>>
>>The error here is in assuming that the sin and cos terms in the
>>equivalent expression are representative of individual waves. They
>>are not. The resultant wave can only be accurately described as the
>>sum of the constituent waves sin(a) and sin(b), or as the function

>>2sin(.5(a+b))cos(.5(a-b)). That function, plotted against time
>>appears exactly as I have described. I have simply reported what is
>>readily observable.
>>
>>jk
>
>
>
> I would submit you plotted it wrong and/or misinterpreted the results.

Always a possibility, admitedly. However the superposition of two
waves each having a different frequency does not yield a resultant
waveform having a constant period. But you are certainly welcome to
try to demonstrate otherwise.

jk

3158. Interesting patent

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:43:03 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f7122n$6ce$1@nnrp.linuxfan.it>
Source record: 38768

http://www.freepatentsonline.com/4439772.pdf

You must create an account with them, it's free ...

JS

3159. bizarre antenna ...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:45:48 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f7127t$6ce$2@nnrp.linuxfan.it>
Source record: 38769

John Smith I wrote:

http://www.freepatentsonline.com/5089827.pdf

JS

3160. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 22:49:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f712f7$6ce$3@nnrp.linuxfan.it>
Source record: 38770
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

Jeff Liebermann wrote:

> [stuff]

So, I should start investing in all the analog am/fm/tv/etc. stations
which appear doomed ...

Then wait for analog to make a big comeback? Like the horse and buggy,
err, well, that never did quite make the comeback, did it?

Naaa, someone else can use "risk investment money!"

JS

3161. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-10 23:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <kbgdm4-7gb.ln1@mail.specsol.com>
Source record: 38771
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

In rec.radio.amateur.antenna Jeff Liebermann <jeffl@comix.santa-cruz.ca.us> wrote:
> On Sat, 7 Jul 2007 14:44:28 -0600, "Bob Myers"
> <nospamplease@address.invalid> wrote:

> >"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
> >news:rksv83pukok2t7qumuhjlqcapcqms52ccm@4ax.com...
> >> Digital is nothing more than an analog device with too much gain and
> >> hysteresis, where the output is stuck at either high or low. Dig deep
> >> enough into any digital contrivance, and you'll find analog devices
> >> operating in this way. The real world is analog. (Just ask any
> >> analog engineer).

> >We've been here before, too. The real world is the real world
> >- it is neither "digital" nor "analog," which are terms used (at
> >least when used correctly) to refer to two methods of encoding
> >information about (or describing) the real world or some specific
> >real-world parameter.

> In college, the senior electrical engineering class was polarized into
> two camps, analog and ditital, largely by their choice of senior
> projects. I made the mistake of designing a project that straddled
> both camps (Secode Selector using RTL and DCL). Life was hell. The
> debate came to a grinding halt when someone noticed that DNA sequences
> were digital. So, if you dig deep enough into an analog world, you
> eventually hit a digital bottom. I'll call it a win for whichever
> side pays better this week.

> >And in case it makes you feel better about the answer, yes, I am
> >(or at least have been) an "analog engineer." (Or rather, an
> >engineer involved in the design of "analog" circuits and systems.)

> Ditto. I did RF design for various companies, which in the 70's and
> 80's was mostly analog (FM, AM, SSB). For obvious reasons, I tend to
> favor the analog view of reality. Now daze, it's all conglomerations
> of analog and digital techniques and infested by longer acronyms.

Until the graviton is proven, the world is analog, at which point
I will switch positions.

--
Jim Pennino, analog engineer until proven otherwise

Remove .spam.sux to reply.

3162. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 00:54:59 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <eMmdnTtbgvPptwnbRVnyjwA@bt.com>
Source record: 38772

```
"Nick" <a@b.com> wrote in message
news:_ESki.21416$uR5.12138@newsfe7-gui.ntli.net...
>
> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> news:f70l9n$s05$2@nntp1.jpl.nasa.gov...
> > jimp@specsol.spam.sux.com wrote:
> >> John Doe <hgorden@adelphia.net> wrote:
> >>
> >>
> >>>Isn't concrete an insulator??
> >>
> >>
> >>>"The preferred ground in most jurisdictions is a concrete encased
> >>>grounding electrode (aka a Ufer Ground, after the inventor's name Herb
> >>>Ufer).. "
> >>
> >>
> >>>What am I missing here?
> >>
> >>
> >> That while dry concrete is a pretty good insulator it is hard to
> >> find such just about anywhere other than Southern Arizona.
> >>
> > And even there, the concrete is probably damper and a better conductor
> > than the surrounding soil. Ufer's original work was developing
grounding
> > techniques for ammo bunkers in desert areas, since the ground rods
didn't
> > work.
> >
>
>
> I, too, am amazed - I though concrete, whilst it would be damp on the
> outside underground bit, would be
> substantially dry after setting, and a good insulator, being essentially
> sand.. I guess its porous or microporous..
>
> Nick
>
>
Concrete never truly sets. The chemical reactions continue for centuries.
Concrete structures put up 2000 years ago by the Romans are still perfectly
useable today and under the surface remain chemically active. Many Roman
structures such as the Colosseum and aquaducts would not have been possible
```

without concrete. Some of the techniques developed then are still in use in building today such as making the higher levels of a structure using lighter, smaller aggregate.

Embedding steel or copper rods in concrete will pretty much guarantee that the metalwork will remain in contact with moisture and conductive salts for as long as the structure holds together. The constant exposure to moisture and corrosive salts is the main reason for failure of modern ferro-concrete structures. Concrete will suck up whatever moisture is around, either from the air or the soil and is always damp inside, hence the steel rusting out unless protected by heavy galvanisation and sacrificial electrodes.

Even in the worst environments, a couple of 8 foot copper rods embeded in concrete should give a DC or low frequency AC resistance/impedance of less than 200 ohms. Of course you could always use a dipole and balun. :-)

Mike G0ULI

3163. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 01:16:06 UTC
From: ricknj10@hotmail.com
Message-ID: <46942de3.28520015@news.optonline.net>
Source record: 38773

>>Have you tried to repopulate your intestinal flora by using probotics such
>>as Culturelle

Reminds me of a typical morning QSO on 75 meters SSB !!!

(Welcome back Walt. You're the best. I am so glad you are back on your feet.) Let's start talking antennas, yeah! and reflections, SWR, conjugate matching !! You know, like, "Hey, where does my power go once it is reflected back from my antenna, does it burn up my 807's ?" Or, "Hey Walt, I got this horrible 1.2 SWR. How much farther will I reach out if I get it to 1:1?"

Rick K2XT

3164. Segmentation question, + Eznec

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 01:22:30 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <rhWki.1797$m%.667@newssvr17.news.prodigy.net>
Source record: 38775

Recently got W4RNL's collection of .EZ
models. and many were written for more advanced
versions than my Basic EZ (limited to 500
Segments) And tho, when you reduce those segments
to the limits of 500, And seem to work fine,have 2
DUMB query's about them .

1), when looking at MOST models, they end in a
ODD number of segments, say I reduce those segs
from 19 to 16, for a given wire,,does this make
all that much difference in the calculations?, and

2) as I have gone from ODD number's to an EVEN
numbers, is THIS anything to worry about? Even
with the Driven Element (which, as I see it, would
place the feedpoint (you would expect 50 % off the
ends,IF you use Even # segments, what happens
when the feed is, say 9 (or 4-1/2) segments, at 50
% feed point ?

But other folks might also be curious
about these effects, tho from what I've seen, they
appear minimal. Your thoughts, Please! Jim NN7K

3165. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 01:23:07 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <M9GdnW71T70krQnbnZ2dnUVZ_oqmnZ2d@comcast.com>
Source record: 38774

```
"Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
news:eMmdnTtbgvPptwnbRVnyjwA@bt.com...
>
> "Nick" <a@b.com> wrote in message
> news:_ESki.21416$uR5.12138@newsfe7-gui.ntli.net...
>>
>> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
>> news:f70l9n$s05$2@nntp1.jpl.nasa.gov...
>> > jimp@specsol.spam.sux.com wrote:
>> >> John Doe <hgorden@adelphia.net> wrote:
>> >>
>> >>
>> >>>Isn't concrete an insulator??
>> >>
>> >>
>> >>>"The preferred ground in most jurisdictions is a concrete encased
>> >>>grounding electrode (aka a Ufer Ground, after the inventor's name Herb
>> >>>Ufer).. "
>> >>
>> >>
>> >>>What am I missing here?
>> >>
>> >>
>> >> That while dry concrete is a pretty good insulator it is hard to
>> >> find such just about anywhere other than Southern Arizona.
>> >>
>> > And even there, the concrete is probably damper and a better conductor
>> > than the surrounding soil. Ufer's original work was developing
> grounding
>> > techniques for ammo bunkers in desert areas, since the ground rods
> didn't
>> > work.
>> >
>>
>>
>> I, too, am amazed - I though concrete, whilst it would be damp on the
>> outside underground bit, would be
>> substantially dry after setting, and a good insulator, being essentially
>> sand.. I guess its porous or microporous..
>>
>> Nick
>>
>>
> Concrete never truly sets. The chemical reactions continue for centuries.
```

> Concrete structures put up 2000 years ago by the Romans are still
> perfectly
> useable today and under the surface remain chemically active. Many Roman
> structures such as the Colosseum and aquaducts would not have been
> possible
> without concrete. Some of the techniques developed then are still in use
> in
> building today such as making the higher levels of a structure using
> lighter, smaller aggregate.
>
> Embedding steel or copper rods in concrete will pretty much guarantee that
> the metalwork will remain in contact with moisture and conductive salts
> for
> as long as the structure holds together. The constant exposure to moisture
> and corrosive salts is the main reason for failure of modern
> ferro-concrete
> structures. Concrete will suck up whatever moisture is around, either from
> the air or the soil and is always damp inside, hence the steel rusting out
> unless protected by heavy galvanisation and sacrificial electrodes.
>
> Even in the worst environments, a couple of 8 foot copper rods embeded in
> concrete should give a DC or low frequency AC resistance/impedance of less
> than 200 ohms. Of course you could always use a dipole and balun. :-)
>
> Mike G0ULI
>

So then, what is the reason that they drive a separate ground rod in when they install a commercial tower whose legs are in concrete?

Howard W3CQH

3166. Re: Segmentation question, + Eznec

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 01:45:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1398dicblnl5t9e@corp.supernews.com>
Source record: 38776

Jim - NN7K wrote:
> Recently got W4RNL's collection of .EZ
> models. and many were written for more advanced
> versions than my Basic EZ (limited to 500
> Segments) And tho, when you reduce those segments
> to the limits of 500, And seem to work fine,have 2 DUMB query's about
> them .
>
> 1), when looking at MOST models, they end in a
> ODD number of segments, say I reduce those segs
> from 19 to 16, for a given wire,,does this make all that much
> difference in the calculations?, and

No, but you need an odd number of segments if you want to put a source, load, etc. at the middle of a wire.

> 2) as I have gone from ODD number's to an EVEN numbers, is THIS
> anything to worry about? Even with the Driven Element (which, as I see
> it, would place the feedpoint (you would expect 50 % off the ends,IF you
> use Even # segments, what happens
> when the feed is, say 9 (or 4-1/2) segments, at 50 % feed point ?

Sorry, I don't understand the question.

> . .

Roy Lewallen, W7EL

3167. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 01:54:42 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <f368f$46943866$944e306e$3971@STARBAND.NET>
Source record: 38777
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2B8EBE6.6EB5C%dbowey@comcast.net...
> On 7/10/07 3:26 AM, in article 46935ee4$0$30624$4c368faf@roadrunner.com,
> "Jimmie D" <GFENDER@carolina.rr.com> wrote:
>
>>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:4693037c$0$31221$4c368faf@roadrunner.com...
>>>
>>> "Dana" <raff242@yahoo.com> wrote in message
>>> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>>>
>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>>>> Do you understand that a DSB signal *is* AM?
>>>>>
>>>>> So all the AM broadcasters are wasting money by
>>>>> generating a carrier?
>>>>
>>>> How did you jump to that conclusion.
>>>
>>> Is "DSBSC" DSB?
>
> I see Jimmie talked all around your question.

Actually Jimmie gave a plausable reason to your statement/question that AM
broadcasters are wasting money by generating a carrier.
>
> I'll answer it AGAIN, though I'm still sure your only a troll.....
>
> DSB says nothing about the carrier; DSBSC is still DSB.

You still have to have a carrier to modulate.
>
> You can have DSBSC (Suppressed Carrier), DSBRC (Reduced Carrier), and DSB
> with Full Carrier. You can look up the abbreviation for the latter if you
> need it.

And you still need to modulate a carrier. So your statement/question that AM
broadcasters are wasting money by generating a carrier was illogical in the
context of this thread.
>
> Broadcast medium wave radio, slang term "AM Radio," is DSB with full

> Carrier.

So then you agree that the Broadcasters are not wasting money by generating
a carrier.
>
>>>
>>
>> There have been attempts to remove the carrier but receivers could not be
>> manufatured at a reasonable price that would demodulate the signal with
>> the
>> fidelity of an AM BCB signal. Probably could be done today but what would
>> you l do with all those AM rx that suddenly dont work when the transition
>> is
>> made.
>>
>>
>

3168. Re: Segmentation question, + Eznec

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 02:00:10 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <KQWki.38361$Um6.19096@newssvr12.news.prodigy.net>
Source record: 38778

Thanks , Roy, and let me try to rephrase #2, with
my poor anylitical mind. IF you feed a dipole ,
dead center, on a wire that has an ODD length of
segments, how does that compair to a dipole of
EVEN segments (mathamatically)?
In other words we are describeing a DIPOLE
(balanced feed), with 6 segments (3+, and 3- at
the feedpoint), with a dipole with 7 Wires (
3-1/2 , vs - 3, 1/2 segments, at the same feed
point, or am i tilting at windmills?

Guess the best bet is to make sure Segments ALL
odd numbers!
Jim

>> 2) as I have gone from ODD number's to an EVEN numbers, is THIS
>> anything to worry about? Even with the Driven Element (which, as I
>> see it, would place the feedpoint (you would expect 50 % off the
>> ends,IF you use Even # segments, what happens
>> when the feed is, say 9 (or 4-1/2) segments, at 50 % feed point ?
>
> Sorry, I don't understand the question.
>
> > . .
>
> Roy Lewallen, W7EL

3169. Re: Segmentation question, + Eznec

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 02:04:00 UTC
From: Jim - NN7K <NN7K@NOWAY.NET>
Message-ID: <IUWki.1807$m%.727@newssvr17.news.prodigy.net>
Source record: 38779

Think see my error- thinking FULL wave on element,
NOT 1/2 Wave! maybe that where i confused ! Jim

Roy Lewallen wrote:
> Jim - NN7K wrote:
>> Recently got W4RNL's collection of .EZ
>> models. and many were written for more advanced
>> versions than my Basic EZ (limited to 500
>> Segments) And tho, when you reduce those segments
>> to the limits of 500, And seem to work fine,have 2 DUMB query's about
>> them .
>>
>> 1), when looking at MOST models, they end in a
>> ODD number of segments, say I reduce those segs
>> from 19 to 16, for a given wire,,does this make all that much
>> difference in the calculations?, and
>
> No, but you need an odd number of segments if you want to put a source,
> load, etc. at the middle of a wire.
>
>> 2) as I have gone from ODD number's to an EVEN numbers, is THIS
>> anything to worry about? Even with the Driven Element (which, as I
>> see it, would place the feedpoint (you would expect 50 % off the
>> ends,IF you use Even # segments, what happens
>> when the feed is, say 9 (or 4-1/2) segments, at 50 % feed point ?
>
> Sorry, I don't understand the question.
>
> > . .
>
> Roy Lewallen, W7EL

3170. Re: Segmentation question, + Eznec

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 03:00:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1398humti2vl913@corp.supernews.com>
Source record: 38780

Jim - NN7K wrote:
>
> Thanks , Roy, and let me try to rephrase #2, with my poor anylitical
> mind. IF you feed a dipole , dead center, on a wire that has an ODD
> length of segments, how does that compair to a dipole of EVEN segments
> (mathamatically)?
> In other words we are describeing a DIPOLE (balanced feed), with 6
> segments (3+, and 3- at the feedpoint), with a dipole with 7 Wires (
> 3-1/2 , vs - 3, 1/2 segments, at the same feed
> point, or am i tilting at windmills?
>
> Guess the best bet is to make sure Segments ALL odd numbers!
> Jim

EZNEC places a source or other object at the center of a segment, as close as it can to the position you specify. If a wire has an even number of segments and you specify the wire center (50% of the way from end 1), the object will be placed at the center of one of the segments adjacent to the center of wire, a position which is 1/2 segment from the center of the wire. If the wire has 10 segments, this will result in the object being placed 5% of the wire length off center. If the wire has 100 segments, it'll be off center by 0.5%. This typically won't have much effect on the model results, except that you might see a bit of asymmetry in the pattern and some change in impedance compared to putting the object in the center of the wire.

The EZNEC manual discusses segmentation at some length.

Roy Lewallen, W7EL

3171. Re: AM electromagnetic waves: 20 KHz modulationfrequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 03:40:32 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2B99F40.6EDB0%dbowey@comcast.net>
Source record: 38781
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/10/07 6:54 PM, in article f368f$46943866$944e306e$3971@STARBAND.NET,
"Dana" <raff242@yahoo.com> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2B8EBE6.6EB5C%dbowey@comcast.net...
>> On 7/10/07 3:26 AM, in article 46935ee4$0$30624$4c368faf@roadrunner.com,
>> "Jimmie D" <GFENDER@carolina.rr.com> wrote:
>>
>>>
>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>> news:4693037c$0$31221$4c368faf@roadrunner.com...
>>>>
>>>> "Dana" <raff242@yahoo.com> wrote in message
>>>> news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
>>>>>
>>>>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>>>> news:469064fd$0$16540$4c368faf@roadrunner.com...
>>>>>>>>> Do you understand that a DSB signal *is* AM?
>>>>>>
>>>>>> So all the AM broadcasters are wasting money by
>>>>>> generating a carrier?
>>>>>
>>>>> How did you jump to that conclusion.
>>>>
>>>> Is "DSBSC" DSB?
>>
>> I see Jimmie talked all around your question.
>
> Actually Jimmie gave a plausable reason to your statement/question that AM
> broadcasters are wasting money by generating a carrier.

Actually, he talked about the topic without answering the question asked by
the OP.

>>
>> I'll answer it AGAIN, though I'm still sure your only a troll.....
>>
>> DSB says nothing about the carrier; DSBSC is still DSB.
>
> You still have to have a carrier to modulate.
```

Obviously a reference carrier is required..... So what's your point? "DSB"
tells us NOTHING about the carrier; is it suppressed, reduced, or full in
the transmitted signal?

Maybe you should read an entire post before replying.

>>
>> You can have DSBSC (Suppressed Carrier), DSBRC (Reduced Carrier), and DSB
>> with Full Carrier. You can look up the abbreviation for the latter if you
>> need it.
>
> And you still need to modulate a carrier. So your statement/question that AM
> broadcasters are wasting money by generating a carrier was illogical in the
> context of this thread.

I did not ever say AM broadcasters are wasting money by generating a
carrier. Get your story straight.

You need a reference carrier for generating sidebands, but you do not "need"
to transmit the carrier unless it's required by a specific service.

>>
>> Broadcast medium wave radio, slang term "AM Radio," is DSB with full
>> Carrier.
>
> So then you agree that the Broadcasters are not wasting money by generating
> a carrier.

Read the sentence just above your above sentence. A transmitted, full
carrier is required for the broadcast service. Other services don't require
it.
>>
>>>>
>>>
>>> There have been attempts to remove the carrier but receivers could not be
>>> manufatured at a reasonable price that would demodulate the signal with
>>> the
>>> fidelity of an AM BCB signal. Probably could be done today but what would
>>> you l do with all those AM rx that suddenly dont work when the transition
>>> is
>>> made.
>>>
>>>
>>
>
>

3172. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 03:44:14 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <imYki.1884$YH3.394@trnddc08>
Source record: 38682

Yeah, I noticed the same thing with the motorola triton, another antique....
maybe the newer ones aren't so quirky?
W

"Dave Platt" <dplatt@radagast.org> wrote in message
news:fe7dm4-c7n.ln1@radagast.org...
> >Well, with the remote autotuner you will have less RF in the shack...
>>But even then I would hang ground radials off the tuner case to keep
>>it at lower voltage potentials...
>
> Definitely! One of the characteristics of the SGC autotuners is that
> they seem to *require* a really good RF ground. Their tuning
> circuitry "wants" to work into a ground connection which has a lower
> impedance than the wire. SGC's manual makes this point repeatedly,
> and identifies "grounding problems" (poor bonding, high inductance,
> etc.) as the commonest cause of "Hey, this thing won't tune" problems
> with their autotuners.
>
> My own experience with a used, older-model SGC 230 (so old it's in a
> non-waterproof metal case) seems to back this up. When used with a
> relatively simple ground, the tuner has serious problems in achieving
> a match, and frequently won't ever find one.
>
> I tend to think that these arbitrary-wire tuners work best in their
> original environment - bolted to a really big, solid chunk of metal
> such as a ship body or a tank.
>
> Another "gotcha" - the tuner I have, at least, can become seriously
> "confused" if you try to use it with a radio that has aggressive "high
> SWR power reduction" circuitry to protect the finals. In such a radio
> (my Kenwood TS-2000 is one), the output power jumps around a lot as
> the autotuner tries different L-network match settings, and the tuner
> firmware seems to misinterpret these transmitter power changes and
> never actually finds a low-SWR match. The same tuner, and the same
> wire and grounding setup, will often match within a few seconds when
> power is applied from another transmitter which doesn't alter its
> output power so abruptly (e.g. a Ten-Tec Scout 555).
>
> I've given up trying to use my old SGC-230 - it's so quirky that I
> just can't depend on it to work acceptably in my environment, with my
> radio.
>
> Other vendors' autotuners may be less of a problem in this respect.
>

>>Since you are willing to spring for an SGC, etc. given your
>>description of your site I would think about an off center fed wire
>>antenna... Run your longwire through the trees... Roughly an 1/8 wave
>>< lowest band> back from one end of the antenna drop a vertical wire
>>to the ground and use the tuner to feed the end of the drop wire... A
>>ground stake and some radials and you are likely to be in business...
>
> I'd recommend following SGC's recommendations... which probably add up
> to "lots of heavy radials".
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

3173. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 03:44:42 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <KmYki.1885$YH3.1539@trnddc08>
Source record: 38683

Geez, thanks for all the help, please keep it rollin' !
w

"Denny" <k8do@mailblocks.com> wrote in message
news:1184094114.167004.291580@22g2000hsm.googlegroups.com...
> On Jul 10, 11:14 am, "Woody" <t...@hotmail.com> wrote:
>> Hi Denny, thanks again for the help... I guess I should expand a bit..
>> I'm
>> not just thinking of a manual tuner, but also an auto tuner, like used
>> Triton, SGC or Icom marine/military type,
>
> Well, with the remote autotuner you will have less RF in the shack...
> But even then I would hang ground radials off the tuner case to keep
> it at lower voltage potentials...
> Since you are willing to spring for an SGC, etc. given your
> description of your site I would think about an off center fed wire
> antenna... Run your longwire through the trees... Roughly an 1/8 wave
> < lowest band> back from one end of the antenna drop a vertical wire
> to the ground and use the tuner to feed the end of the drop wire... A
> ground stake and some radials and you are likely to be in business...
> You can fool with snipping a bit off the long end of the wire if one
> of the bands gives the tuner a hard time... This should play...
>
> Now, ALL the tuners you mentioned and I know of are single ended, i.e.
> are not truely balanced for balanced feed line and putting a "balun"
> on the end of the ladder line does not make it a balanced tuner...
>
> Now, I use open wire feed for the majority of my antennas, but I build
> my own balanced tuners and open wire...
>
> cheers ... denny
>

3174. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 05:00:15 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f71o50lvq1@usenet01.boi.hp.com>
Source record: 38684
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

<jimp@specsol.spam.sux.com> wrote in message
news:kbgdm4-7gb.ln1@mail.specsol.com...
> Until the graviton is proven, the world is analog, at which point
> I will switch positions.

OK, so if the world is "analog" - it's an analog of
what, exactly?

Bob M.

3175. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 05:41:07 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-05BFA0.22410710072007@newsgroups.comcast.net>
Source record: 38685
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46931ec3$0$4718$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-97799B.10580608072007@newsgroups.comcast.net...
> > In article <46910fe5$0$8925$4c368faf@roadrunner.com>,
> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:
> >
> >> "isw" <isw@witzend.com> wrote in message
> >> news:isw-664E24.21491207072007@newsgroups.comcast.net...
> >> > In article <468fe7df$0$16560$4c368faf@roadrunner.com>,
> >> > "Ron Baker, Pluralitas!" <this@aint.me> wrote:

> > > Here it is again: the "beat" one hears when tuning a guitar or other
> > > instrument does *not* require any nonlinear process for its production.
> > > Period.
> >
> > You didn't know a spectrum analyzer is nonlinear.
> > You didn't/don't know that a bolometer is nonlinear.
> > You wouldn't and don't know nonlinearity even when you
> > hear it.

And you still didn't address the original point. Why not?

Isaac

3176. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 05:47:20 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-49311D.22472010072007@newsgroups.comcast.net>
Source record: 38686
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <4693086a$0$20578$4c368faf@roadrunner.com>,
"Ron Baker, Pluralitas!" <this@aint.me> wrote:

> "isw" <isw@witzend.com> wrote in message
> news:isw-35196C.11010408072007@newsgroups.comcast.net...
> > In article <1qu09392icr130gp0c25lcnftjm6ifg96t@4ax.com>,
> > Jeff Liebermann <jeffl@cruzio.com> wrote:
> >
> >> "Bob Myers" <nospamplease@address.invalid> hath wroth:
> >>
> >> >"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> >> >news:468fe7df$0$16560$4c368faf@roadrunner.com...
> >>
> >> >> No nonlinearity is necessary in order to hear
> >> >> a beat?
> >> >> Where does the beat come from?
> >>
> >> >An audible beat tone is produced by the constructive and destructive
> >> >interference between two sound waves in air. Look at a pictorial
> >> >representation (in the time domain) of the sum of sine waves,of similar
> >> >amplitudes, one at, say, 1000 Hz and the other at 1005, and you'll
> >> >see it.
> >> >
> >> >Bob M.
> >>
> >> I beg to differ. There's no mixing happening in the air. compression
> >> of air is very linear (Boyles Law or PV=constant).
> >
> > In general, that's true, but take a look at what happens in the throats
> > of high-powered horn loudspeakers. You can find info in e.g. "Acoustics"
> > by Beranek.
> >
> > Isaac
>
> Red herring.

It's important to know when a statement like: "There's no mixing
happening in the air. compression of air is very linear" is nearly
correct (because it's never precisely correct), and when it's really
pretty incorrect. You can call that a "red herring" if you like; others
might call it "knowing what you're talking about".

Isaac

3177. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 05:59:11 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-9BC127.22591010072007@newsgroups.comcast.net>
Source record: 38687
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46935ee4$0$30624$4c368faf@roadrunner.com>,
"Jimmie D" <GFENDER@carolina.rr.com> wrote:

> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:4693037c$0$31221$4c368faf@roadrunner.com...
> >
> > "Dana" <raff242@yahoo.com> wrote in message
> > news:80b7c$46906e83$944e306e$20475@STARBAND.NET...
> >>
> >> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> >> news:469064fd$0$16540$4c368faf@roadrunner.com...
> >>>> Do you understand that a DSB signal *is* AM?
> >>>
> >>> So all the AM broadcasters are wasting money by
> >>> generating a carrier?
> >>
> >> How did you jump to that conclusion.
> >
> > Is "DSBSC" DSB?
> >
>
> There have been attempts to remove the carrier but receivers could not be
> manufatured at a reasonable price that would demodulate the signal with the
> fidelity of an AM BCB signal. Probably could be done today but what would
> you l do with all those AM rx that suddenly dont work when the transition is
> made.

There's no advantage to DSB-SC that SSB-SC doesn't have and several that
SSB-SC alone has. Getting rid of one of the redundant sets of sidebands
halves the required bandwidth, for one. Also, if the two sideband sets
of DSB-SC experience differing phase alteration due to propagation
effects (not too uncommon), the signal can become unintelligible; that
effect is minimized with SSB-SC.

If all broadcasters used SSB-SC and precision frequency control (easy
and inexpensive these days) then SSB-SC receivers are pretty easy. But
that doesn't solve the problem of all those AM receivers...

Things seem to be moving in the direction of digital modulation and even
more complex receivers; whether that's a Good Thing or not, I'm not sure.

Isaac

3178. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 12:08:30 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <5nh993ldijsfnpnplndivuh2vjc8jlnm8t@4ax.com>
Source record: 38688

>>
>>
>Concrete never truly sets. The chemical reactions continue for centuries.
>Concrete structures put up 2000 years ago by the Romans are still perfectly
>useable today and under the surface remain chemically active. Many Roman
>structures such as the Colosseum and aquaducts would not have been possible
>without concrete. Some of the techniques developed then are still in use in
>building today such as making the higher levels of a structure using
>lighter, smaller aggregate.
>
>Embedding steel or copper rods in concrete will pretty much guarantee that
>the metalwork will remain in contact with moisture and conductive salts for
>as long as the structure holds together. The constant exposure to moisture
>and corrosive salts is the main reason for failure of modern ferro-concrete
>structures. Concrete will suck up whatever moisture is around, either from
>the air or the soil and is always damp inside, hence the steel rusting out
>unless protected by heavy galvanisation and sacrificial electrodes.
>
>Even in the worst environments, a couple of 8 foot copper rods embeded in
>concrete should give a DC or low frequency AC resistance/impedance of less
>than 200 ohms. Of course you could always use a dipole and balun. :-)
>
>Mike G0ULI
>
Then there is the matter of whether to extend the rebar into the soil
or totally encapsulate in a concrete base for a tower...

And the matter of applying a protective coating of paint to the rebar
to minimize corrosion...

I have a couple of clothes line poles that are in pretty good
condition above and below the ground line but rusted completely
through at the ground line!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3179. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 13:26:32 UTC
From: richardharrison@webtv.net
Message-ID: <1665-4694DA88-34@storefull-3255.bay.webtv.net>
Source record: 38689

Howard, W3CQH wrote:
"So then, what is the reason they drive a separate ground rod in when they install a commercial tower whose legs are in concrete?"

Working with electricity you soon learn you need a rubber mat or rubber soled shoes to protect against electric shock from the mains when you are on bare concrete. It is often damp directly on the earth. When poured as a slab, concrete is placed on plastic as a vapor barrier to keep wood flooring from warping.

A tower base after years is not completely set but still contains moisture and is still hardening.

Tower bases are bypassed by ground cables outside the concrete block so that the moisture inside does not turn to steam during a lightning strike and blow the concrete asunder.

Best regards, Richard Harrison, KB5WZI

3180. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 15:54:31 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <de2a93pdh0ncb5aib2dmq6mig8nbsuovm8@4ax.com>
Source record: 38690

On Wed, 11 Jul 2007 01:16:06 GMT, ricknj10@hotmail.com (Rick) wrote:

>
>>>Have you tried to repopulate your intestinal flora by using probotics such
>>>as Culturelle
>
>
>Reminds me of a typical morning QSO on 75 meters SSB !!!
>
>(Welcome back Walt. You're the best. I am so glad you are back on your
>feet.) Let's start talking antennas, yeah! and reflections, SWR, conjugate
>matching !! You know, like, "Hey, where does my power go once it is reflected
>back from my antenna, does it burn up my 807's ?" Or, "Hey Walt, I got this
>horrible 1.2 SWR. How much farther will I reach out if I get it to 1:1?"
>
>Rick K2XT
Thanks Rick, I appreciate your humor, it's well placed for an OM like me! I know exactly
where it's coming
from.

Walt

3181. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 16:02:28 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f72uus$1ftu$1@f04n12.cac.psu.edu>
Source record: 38691

Richard Clark wrote:

> Isn't amazing how these academic idylls of civil discourse (populated
> by gentlemany of infinite wisdom) crumble into viper's nests when you
> arrive? The term correlation comes to mind, but I don't know what
> word it would be in your vocabulary so as to make the concept
> meaningful to you.
>
> For others who haven't read that comic strip, Arthur has proven
> Einstein was wrong! Well, proven in the sense that Arthur proves
> anything. Which is to say "he said so." After all, there is nothing
> mentioned about anything specific from Einstein (special theory?
> general theory? the photon theory? the cosmological constant?). That
> is best left to our imagination as Arthur has dismissed it all with a
> wave of the hand, whiting out Einstein's name on the Nobel prize to
> pencil in Art.

http://www.space.com/adastra/adastra_moondust_060223.html

Is a nice little understandable and believable bit on moon dust.

Created in a massively electrically charged environment by a constant
rain of micreometeorites.

http://faculty.rmwc.edu/tmichalik/moon8.htm

http://rds.yahoo.com/_ylt=A9ibyGXe_pRG4wMB3hmjzbkF/SIG=12ee4u03t/EXP=1184256094/**http%3A/
/science.nasa.gov/headlines/y2006/28dec_truefake.htm

and with shapes that have both microspheres and

3182. Phase lines

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 16:44:27 UTC
From: bobr <bobr1919@hotmail.com>
Message-ID: <1184172267.935775.195280@q75g2000hsh.googlegroups.com>
Source record: 38692

My first post here so please be patient. I have constructed a 3 element 40 meter quad at 1/8 WL spacing and have the front two elements at equal length(7.18) and a rear parasitic reflector which I resonated at about 7.5. I am driving the front two elements with a reversed 3/8W/L, 135 degree phaseline. The question I have is concerning an accurate method for obtaining the correct phaseline length while using the mfj analyzer. I have been told that if the line is shorted at the end I will read the frequency at which the line is 3/4 WL at max impedance. If that is a correct assumption than can I look for the length that will read twice my target freq of 7.18 (14.36) ?.
I have it up and running and it appears to have substantial gain and good front to back reference a EDZ at 3 times the height. I realize the EDZ has gain in both directions but the Foreign Broadcast had become unbearable most nights so hence back to the quad.
Tnx,
Bob N4JTE

3183. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 17:00:47 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f732bv$1hpu$1@f04n12.cac.psu.edu>
Source record: 38693

Michael Coslo wrote:
> Richard Clark wrote:
>
>> Isn't amazing how these academic idylls of civil discourse (populated
>> by gentlemany of infinite wisdom) crumble into viper's nests when you
>> arrive? The term correlation comes to mind, but I don't know what
>> word it would be in your vocabulary so as to make the concept
>> meaningful to you.
>>
>> For others who haven't read that comic strip, Arthur has proven
>> Einstein was wrong! Well, proven in the sense that Arthur proves
>> anything. Which is to say "he said so." After all, there is nothing
>> mentioned about anything specific from Einstein (special theory?
>> general theory? the photon theory? the cosmological constant?). That
>> is best left to our imagination as Arthur has dismissed it all with a
>> wave of the hand, whiting out Einstein's name on the Nobel prize to
>> pencil in Art.
>
>
> http://www.space.com/adastra/adastra_moondust_060223.html
>
> Is a nice little understandable and believable bit on moon dust.
>
> Created in a massively electrically charged environment by a constant
> rain of micreometeorites.
>
> http://faculty.rmwc.edu/tmichalik/moon8.htm
>
> http://rds.yahoo.com/_ylt=A9......
>
>
> and with shapes that have both microspheres and

Ack! sorry - I pasted that too long url and accidentally sent the
message instead of undoing what I did. mea maxima culpa!

Point is, that the source and composition of the lunar dust is well
known. We can even duplicate it here on earth.

There isn't anything magic about dust that consists of a combination of
microspheres and hook ended fractured rocks. Put that in a highly
charged environment, and no strange and incomprehensible theories are
needed to explain why it sticks to things.

It's shape, size, and static......

And now for Art.

Art, the dust in not specifically something that is roaming around the universe in packs. The dust or lunar soil is composed of fractured and spheroidal minerals mixed in with meteoriodal material from the little buggers that hit the moon and formed those fragements.

The reason that there is a lot of that stuff on the moon as compared to the earth is because metoroids hit the moon with regularity, and once formed, tend to stay there. On earth only the larger meteoroids make it to the surface (yeah, I know a meteoroid is one that makes it to the surface) and once there, they become assimilated, and are hard to find.

Occam's razor isn't always correct, but in this case.....

- 73 de Mike KB3EIA -

3184. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 17:28:12 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f733vc$1gmq$1@f04n12.cac.psu.edu>
Source record: 38694

Richard Harrison wrote:
> Art wrote:
> "And?"
>
> My point is that Art is full of it when he says people in the space
> industry don`t have a clue about "Surface dust on the orbiting
> Universe".
>
> Art is likely to say that the experts` dust isn`t Art`s dust. Art`s dust
> would best be gone with the wind and Gaussian antennas.

All physical properties of Moon dust are easily accounted for by anyone
who took and passed High School science. No strange physics is needed.

- 73 de Mike KB3EIA -

3185. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 17:37:32 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f734glgvu1@nntp1.jpl.nasa.gov>
Source record: 38696

John Doe wrote:

>
> So then, what is the reason that they drive a separate ground rod in when
> they install a commercial tower whose legs are in concrete?
>
> Howard W3CQH
>
>

Tradition?
Maybe it's easier to just drive the rod and hook it up than to explain
the subtleties of grounding to the inspector?
The contractor owns stock in a ground rod manufacturing company?

3186. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 17:40:51 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f734n1$h7n$1@nntp1.jpl.nasa.gov>
Source record: 38697

John Ferrell wrote:
>>>
>>Concrete never truly sets. The chemical reactions continue for centuries.
>>Concrete structures put up 2000 years ago by the Romans are still perfectly
>>useable today and under the surface remain chemically active. Many Roman
>>structures such as the Colosseum and aquaducts would not have been possible
>>without concrete. Some of the techniques developed then are still in use in
>>building today such as making the higher levels of a structure using
>>lighter, smaller aggregate.
>>
>>Embedding steel or copper rods in concrete will pretty much guarantee that
>>the metalwork will remain in contact with moisture and conductive salts for
>>as long as the structure holds together. The constant exposure to moisture
>>and corrosive salts is the main reason for failure of modern ferro-concrete
>>structures. Concrete will suck up whatever moisture is around, either from
>>the air or the soil and is always damp inside, hence the steel rusting out
>>unless protected by heavy galvanisation and sacrificial electrodes.
>>
>>Even in the worst environments, a couple of 8 foot copper rods embeded in
>>concrete should give a DC or low frequency AC resistance/impedance of less
>>than 200 ohms. Of course you could always use a dipole and balun. :-)
>>
>>Mike G0ULI
>>
>
> Then there is the matter of whether to extend the rebar into the soil
> or totally encapsulate in a concrete base for a tower...
Never have the rebar extend into the soil..

The rebar should always be entirely contained within the concrete.

If it's not, it provides a path for water to creep in between the rebar
and concrete, leading to corrosion of the rebar, spalling, etc.

>

3187. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 18:02:25 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-04CFF8.10022211072007@netnews.worldnet.att.net>
Source record: 38695

In article <imYki.1884$YH3.394@trnddc08>, "Woody" <ts520@hotmail.com>
wrote:

> Yeah, I noticed the same thing with the motorola triton, another antique....
> maybe the newer ones aren't so quirky?
> W
>
Interesting you should notice that. The original Binary Switch Lump
Constant Autotuners were those designed for the Triton Series MF/HF
SSB Radio's, from Motorola, by Bill Schilb. When he left Motorola
and came west, to Northern Radio in Seattle, he brought that technology
with him and introduced it to the MF/HF Marine Market. First at Northern,
which never did anything with it, and then on to SEA, thru the
ex-Northern Engineering Team, that followed Dick Stephens, from
Northern, to SEA, as Northern was sinking into oblivian. The first
Marine Product with this technology, was the SEA-1601 Autotuner, Designed
by Bill Forgey, and Mark Johnson. A sucsession of improvments followed
culminating in the SEA-1612B Autotuner. This is the model that SGC
copied, for their original product, including the Firmware that still had
the SEA Copyright, compiled in the code. Most of the later Binary
Switched Autotuners are, either Copied, or Reverse Engineered,
adaptations of the SEA1612B System. All these tuners NEED a Low
Impedance RF Ground to work against, as well as a Longwire who's length
is SPECIFICALLY set up to put the 1/2 Wavelength Point in a non used
portion of the Spectrum. They will NOT tune within 2% of the Natural
1/2 Wavelenth point of the Longwire connected, where Antenna Impedances
near Infinity.

There has been considerable work done, over the years, on making this
type tuner, drive Balanced Antennas. Some have used a 4:1 Balun,
directly across the tuner Output, with limited sucess. Some have
decoupled the Tuner from it's Coaxial Feedline, Power, and Tuner
Indicator Lines, by running them thru a Bifilar Wound Torroid at
the Tuner end, and then putting the tuner in the Center of a Dipole
cut for the Lowest Desired Frequency of the System. This type has proved
a better system than the Balun, but I have used both at Limited Coast
Stations thruout Alaska, and most are still in operation today.
G & L Marine Radio in Seattle, once designed an SEA-1612B based Autotuner
that had two Tuner boards, one for each side of the Balanced Antenna,
that ran off a single MCPU and Detector System, and just latched
the same Data into both boards. I never actually heard how well Don Sr.
got it to work, but always thought that it was an interesting concept.

Bruce in alaska
--

```
add a <2> before @
```

3188. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 18:06:06 UTC
From: You <You@shadow.orgs>
Message-ID: <You-4D649C.10060511072007@netnews.worldnet.att.net>
Source record: 38698

In article <M9GdnW71T70krQnbnZ2dnUVZ_oqmnZ2d@comcast.com>,
"John Doe" <hgorden@adelphia.net> wrote:

> >
> So then, what is the reason that they drive a separate ground rod in when
> they install a commercial tower whose legs are in concrete?
>
> Howard W3CQH
>
>

There is a GIANT difference between RF Grounding and Lightning
Protection. Don't even think of confussing the two....

3189. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 18:23:50 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7377nimb1@nntp1.jpl.nasa.gov>
Source record: 38700

Most of the later Binary
> Switched Autotuners are, either Copied, or Reverse Engineered,
> adaptations of the SEA1612B System.
Copied or reverse engineered might be a bit harsh..

The idea of a automatically driven LC tuner has been around a while, with DC motors, servos, or steppers. Once you have the concept of a variable L or C that's "remote controlled" using a binary switched array is a pretty obvious thing to try. (e.g. I built a binary switched power inductor for ballasting a tesla coil to replace the more traditional sliding core inductor or variac with a cut core, and I doubt I was the first to think about it.)

I think the subtle details in SEA's, SGC's, LDG's, or MFJ's tuners would deal more with the means of detecting the mismatch and the actual tuning algorithm. From that standpoint, the SGC and LDG tuners (which are the two I'm most familiar with) are quite different. SGC uses a pi net, LDG uses L net with cap switched between in or out. SGC and LDG use different bridge and detector designs. I'm pretty sure, also, that the actual tuning sequence is different, just based on the sounds they make.

3190. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 18:35:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139a8n3fsd3cl3f@corp.supernews.com>
Source record: 38699

You wrote:
>
> There is a GIANT difference between RF Grounding and Lightning
> Protection. Don't even think of confussing the two....

And there's a third reason and set of requirements for grounding which is different from both of those -- AC safety ground. Its requirements are dictated by the NEC and local electrical codes, and it shouldn't be confused with either of the other two.

Roy Lewallen, W7EL

3191. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 19:19:53 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <t3ali.3392$Y_3.570@trnddc04>
Source record: 38701

Well.. a million thanks for that. Quite a cool history lesson as well. So now I'm looking for an SEA tuner... LOL...

Listen, that all makes perfect sense but just to clarify, a.) now I know why that triton did so poorly when tested. We calc'd 1/2 wavelength for the longwire, and b.) Again, for continuity and clarity of this thread for future surfers..... what then, considering our discussed auto-tuners, would be the optimal length for a longwire that would be used for amateur/MARS, 3-30MHz?
Pick 1/2wavelength on say 2.8Mhz and just cut it? Or calc 1/2wavelength on the lowest and add 5% or some arbitrary odd number??
Which plan will offer the least chance of dropping a 1/2wl further up the band on a desired frequency?
thanks,
Woody

"Bruce in Alaska" <bruceg@btpost.net> wrote in message
news:bruceg-04CFF8.10022211072007@netnews.worldnet.att.net...
> In article <imYki.1884$YH3.394@trnddc08>, "Woody" <ts520@hotmail.com>
> wrote:
>
>> Yeah, I noticed the same thing with the motorola triton, another
>> antique....
>> maybe the newer ones aren't so quirky?
>> W
>>
> Interesting you should notice that. The original Binary Switch Lump
> Constant Autotuners were those designed for the Triton Series MF/HF
> SSB Radio's, from Motorola, by Bill Schilb. When he left Motorola
> and came west, to Northern Radio in Seattle, he brought that technology
> with him and introduced it to the MF/HF Marine Market. First at Northern,
> which never did anything with it, and then on to SEA, thru the
> ex-Northern Engineering Team, that followed Dick Stephens, from
> Northern, to SEA, as Northern was sinking into oblivian. The first
> Marine Product with this technology, was the SEA-1601 Autotuner, Designed
> by Bill Forgey, and Mark Johnson. A sucsession of improvments followed
> culminating in the SEA-1612B Autotuner. This is the model that SGC
> copied, for their original product, including the Firmware that still had
> the SEA Copyright, compiled in the code. Most of the later Binary
> Switched Autotuners are, either Copied, or Reverse Engineered,
> adaptations of the SEA1612B System. All these tuners NEED a Low
> Impedance RF Ground to work against, as well as a Longwire who's length
> is SPECIFICALLY set up to put the 1/2 Wavelength Point in a non used
> portion of the Spectrum. They will NOT tune within 2% of the Natural
> 1/2 Wavelenth point of the Longwire connected, where Antenna Impedances

> near Infinity.
>
> There has been considerable work done, over the years, on making this
> type tuner, drive Balanced Antennas. Some have used a 4:1 Balun,
> directly across the tuner Output, with limited sucess. Some have
> decoupled the Tuner from it's Coaxial Feedline, Power, and Tuner
> Indicator Lines, by running them thru a Bifilar Wound Torroid at
> the Tuner end, and then putting the tuner in the Center of a Dipole
> cut for the Lowest Desired Frequency of the System. This type has proved
> a better system than the Balun, but I have used both at Limited Coast
> Stations thruout Alaska, and most are still in operation today.
> G & L Marine Radio in Seattle, once designed an SEA-1612B based Autotuner
> that had two Tuner boards, one for each side of the Balanced Antenna,
> that ran off a single MCPU and Detector System, and just latched
> the same Data into both boards. I never actually heard how well Don Sr.
> got it to work, but always thought that it was an interesting concept.
>
> Bruce in alaska
> --
> add a <2> before @

3192. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 20:29:45 UTC
From: dplatt@radagast.org
Message-ID: <p6rfm4-4hf.ln1@radagast.org>
Source record: 38702

In article <t3ali.3392$Y_3.570@trnddc04>, Woody <ts520@hotmail.com> wrote:

>Well.. a million thanks for that. Quite a cool history lesson as well. So
>now I'm looking for an SEA tuner... LOL...
>
>Listen, that all makes perfect sense but just to clarify, a.) now I know why
>that triton did so poorly when tested. We calc'd 1/2 wavelength for the
>longwire, and b.) Again, for continuity and clarity of this thread for
>future surfers..... what then, considering our discussed auto-tuners, would
>be the optimal length for a longwire that would be used for amateur/MARS,
>3-30MHz?
>Pick 1/2wavelength on say 2.8Mhz and just cut it? Or calc 1/2wavelength on
>the lowest and add 5% or some arbitrary odd number??
>Which plan will offer the least chance of dropping a 1/2wl further up the
>band on a desired frequency?

I think you'll need to run a a simple calculation, based on the
frequencies you actually want to use.

What you'll want, is a wire whose length is not particularly close to
any multiple of 1/2 wavelength, on any frequency you want to use. A
wire which would match easily on 80 meters (e.g. 1/4 wavelength long)
would be a bad choice if you want to work on 40 meters as well, as
it'd be 1/2 wavelength long.

A simple program or spreadsheet ought to be able to do the necessary
calculations... try every wire length from 66 feet to 132 feet and see
if you can find a length which is a comfortable percentage away from
an even multiple of 1/2 wavelength on each frequency. Or,
alternatively, iterate through each frequency, calculate the
1/2-wavelength multiples, and "blacklist" every possible length which
is too close to these multiples.

For what it's worth, SGC sells a longwire antenna 60' in length, which
they say works well on both lower and higher HF bands. It might or
might not be a good choice for MARS frequencies.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3193. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 20:37:41 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <eJKdncRvXLc0ogjbnZ2dnUVZ8tqinZ2d@bt.com>
Source record: 38703

```
"John Doe" <hgorden@adelphia.net> wrote in message
news:M9GdnW71T70krQnbnZ2dnUVZ_oqmnZ2d@comcast.com...
>
> "Mike Kaliski" <michael.kaliski@tesco.net> wrote in message
> news:eMmdnTtbgvPptwnbRVnyjwA@bt.com...
> >
> > "Nick" <a@b.com> wrote in message
> > news:_ESki.21416$uR5.12138@newsfe7-gui.ntli.net...
> >>
> >> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> >> news:f70l9n$s05$2@nntp1.jpl.nasa.gov...
> >> > jimp@specsol.spam.sux.com wrote:
> >> >> John Doe <hgorden@adelphia.net> wrote:
> >> >>
> >> >>
> >> >>>Isn't concrete an insulator??
> >> >>
> >> >>
> >> >>>"The preferred ground in most jurisdictions is a concrete encased
> >> >>>grounding electrode (aka a Ufer Ground, after the inventor's name
Herb
> >> >>>Ufer).. "
> >> >>
> >> >>
> >> >>>What am I missing here?
> >> >>
> >> >>
> >> >> That while dry concrete is a pretty good insulator it is hard to
> >> >> find such just about anywhere other than Southern Arizona.
> >> >>
> >> > And even there, the concrete is probably damper and a better
conductor
> >> > than the surrounding soil. Ufer's original work was developing
> > grounding
> >> > techniques for ammo bunkers in desert areas, since the ground rods
> > didn't
> >> > work.
> >> >
> >>
> >>
> >> I, too, am amazed - I though concrete, whilst it would be damp on the
> >> outside underground bit, would be
> >> substantially dry after setting, and a good insulator, being
essentially
```

> >> sand.. I guess its porous or microporous..
> >>
> >> Nick
> >>
> >>
> > Concrete never truly sets. The chemical reactions continue for
centuries.
> > Concrete structures put up 2000 years ago by the Romans are still
> > perfectly
> > useable today and under the surface remain chemically active. Many Roman
> > structures such as the Colosseum and aquaducts would not have been
> > possible
> > without concrete. Some of the techniques developed then are still in use
> > in
> > building today such as making the higher levels of a structure using
> > lighter, smaller aggregate.
> >
> > Embedding steel or copper rods in concrete will pretty much guarantee
that
> > the metalwork will remain in contact with moisture and conductive salts
> > for
> > as long as the structure holds together. The constant exposure to
moisture
> > and corrosive salts is the main reason for failure of modern
> > ferro-concrete
> > structures. Concrete will suck up whatever moisture is around, either
from
> > the air or the soil and is always damp inside, hence the steel rusting
out
> > unless protected by heavy galvanisation and sacrificial electrodes.
> >
> > Even in the worst environments, a couple of 8 foot copper rods embeded
in
> > concrete should give a DC or low frequency AC resistance/impedance of
less
> > than 200 ohms. Of course you could always use a dipole and balun. :-)
> >
> > Mike G0ULI
> >
> So then, what is the reason that they drive a separate ground rod in when
> they install a commercial tower whose legs are in concrete?
>
> Howard W3CQH
>
>
Howard

It is necessary to provide a consistent earthing connection. The tower may
develop galvanic resistance at joints due to corrosion, or sections of the
tower may be insulated to prevent parasitic resonances at certain

frequencies, or any one of a hundred other 'faults'. With a single earthing point, it is easier to monitor any deterioration in the system and achieve specific design criteria with a known resistance which is unlikely to change a great deal.

Mike G0ULI

3194. Butternut ,9 bands antenna ,Model HF9V

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 22:08:16 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <75ydnXRSr9tKyQjbRVnyvQA@pipex.net>
Source record: 38704

A blind radio amateur living in my area got the above antenna installed
in his garden complete with an off the ground radial system.
I now try to set-up the system with an MJ 259B analyser ,but I am
getting nowhere ,because of the following :

There are 2 visual anomalies

1) The inductor between antenna and ground post e.g. across the
insulator (labelled 'Q' in the Pictorial ,page 14 of manual) is missing.

I know it is a coil of thick enameled wire with a diameter of approx 25
mm (1 inch) but do not know its inductance .
So in order to make one myself I would appreciate receiving info re the
dimensions incl number of turns ,alternatively the required inductance.

2)The antenna kit is normally supplied with a specific length of 75 Ohms
coaxial cable directly connected across the inductor (see above)

This length of 75 ohms coax is part of the matching system and is to be
connected to any length of 50 Ohms coax running to the transceiver.
In the Pictorial ,page 14 of the manual ,this length of 75 Ohms coax is
identified by 'R'.

However the actual installation shows 1 length of RG-11 (75 Oms) coax
all the way to the transceiver.
My obvious question : What is the required length of 75 Ohms coax ?

TIA for any relevant info

Frank GM0CSZ /KN6WH

(supporting member Radio Invalid and Blind Club, RAIBC, based in the UK)

3195. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 22:16:21 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996B5426D689nonenowhere@61.9.191.5>
Source record: 38705

Bruce in Alaska <bruceg@btpost.net> wrote in
news:bruceg-04CFF8.10022211072007@netnews.worldnet.att.net:
Bruce,

An interesting post overall, but ...

> System. All these tuners NEED a Low Impedance RF Ground to work
> against, as well as a Longwire who's length is SPECIFICALLY set up to
> put the 1/2 Wavelength Point in a non used portion of the Spectrum.
> They will NOT tune within 2% of the Natural 1/2 Wavelenth point of the
> Longwire connected, where Antenna Impedances near Infinity.

The "rules" above are offered without definition or explanation, so they
don't really raise the art.

Manufacturer's "rules" and explanations are often inconsistent. For
example, some state a minimum length that can be tuned on say 3.6MHz, and
it is often around 3m, yet they rabbit on about avoiding half wave
resonances in the wire to avoid high voltage at the feed point. The feed
point voltage on a 3m whip at 3.6MHz is likely to be much higher than a 10m
whip at its first parallel resonance.

Owen

3196. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 22:31:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996B56C0A2648nonenowhere@61.9.191.5>
Source record: 38706

dplatt@radagast.org (Dave Platt) wrote in
news:p6rfm4-4hf.ln1@radagast.org:

...

> I think you'll need to run a a simple calculation, based on the
> frequencies you actually want to use.
>
> What you'll want, is a wire whose length is not particularly close to
> any multiple of 1/2 wavelength, on any frequency you want to use. A
> wire which would match easily on 80 meters (e.g. 1/4 wavelength long)
> would be a bad choice if you want to work on 40 meters as well, as
> it'd be 1/2 wavelength long.
>
> A simple program or spreadsheet ought to be able to do the necessary
> calculations... try every wire length from 66 feet to 132 feet and see
> if you can find a length which is a comfortable percentage away from
> an even multiple of 1/2 wavelength on each frequency. Or,

You probably mean't any integral multiple of a half wave.

> alternatively, iterate through each frequency, calculate the
> 1/2-wavelength multiples, and "blacklist" every possible length which
> is too close to these multiples.

I have done just that, and searched for "sweet" wire lengths that aren't within say 5% of band edge for all HF bands. It sounds like a solution to the problem doesn't it. (5% implies that you have a pretty determinate scenario, which is a big assumption. IIRC 10%+ will not give a practical result on the higher bands.)

Problem is that it probably unecessarily constrains the solution.

The input impedance and the feed point voltage of an end fed wire at its higher parallel resonances falls, so that whilst you might want to avoid the first such resonance, the impedance (and feed point voltage) at the third or higher resonance might well be low enough to not worry about it.

To demonstrate that life isn't simple, the antenna efficiency (Rr/Rtot at the feedpoint) improves closer to those parallel resonances that everyone wants to avoid.

Owen

3197. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 23:01:23 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f73ng3$rv7$1@nntp1.jpl.nasa.gov>
Source record: 38708

Dave Platt wrote:
> In article <t3ali.3392$Y_3.570@trnddc04>, Woody <ts520@hotmail.com> wrote:
>
>
>>Well.. a million thanks for that. Quite a cool history lesson as well. So
>>now I'm looking for an SEA tuner... LOL...
>>
>>Listen, that all makes perfect sense but just to clarify, a.) now I know why
>>that triton did so poorly when tested. We calc'd 1/2 wavelength for the
>>longwire, and b.) Again, for continuity and clarity of this thread for
>>future surfers..... what then, considering our discussed auto-tuners, would
>>be the optimal length for a longwire that would be used for amateur/MARS,
>>3-30MHz?
>>Pick 1/2wavelength on say 2.8Mhz and just cut it? Or calc 1/2wavelength on
>>the lowest and add 5% or some arbitrary odd number??
>>Which plan will offer the least chance of dropping a 1/2wl further up the
>>band on a desired frequency?
>
>
> I think you'll need to run a a simple calculation, based on the
> frequencies you actually want to use.
>
> What you'll want, is a wire whose length is not particularly close to
> any multiple of 1/2 wavelength, on any frequency you want to use. A
> wire which would match easily on 80 meters (e.g. 1/4 wavelength long)
> would be a bad choice if you want to work on 40 meters as well, as
> it'd be 1/2 wavelength long.
>
> A simple program or spreadsheet ought to be able to do the necessary
> calculations... try every wire length from 66 feet to 132 feet and see
> if you can find a length which is a comfortable percentage away from
> an even multiple of 1/2 wavelength on each frequency. Or,
> alternatively, iterate through each frequency, calculate the
> 1/2-wavelength multiples, and "blacklist" every possible length which
> is too close to these multiples.
>
> For what it's worth, SGC sells a longwire antenna 60' in length, which
> they say works well on both lower and higher HF bands. It might or
> might not be a good choice for MARS frequencies.
>

The other strategy is to use two wires of appropriately different
lengths connected together at the feedpoint. (the SGC whips do this, for
instance).. Space the wires some distance apart (a few inches would

do).. What this does is put multiple bumps in the impedance curve and eliminates the pathological cases where you have very high Z when the (one) wire is a half wavelength or multiple thereof. At those frequencies where one wire *is* a half wavelength, and presents a high Z, the other one is likely NOT a multiple of a half wavelength, and so, will present a reasonable impedance. Sure, they interact (as folks making multiband dipoles find when trying to cut and trim), but all that really does is shift the resonances around.

An interesting question would be what is the optimum ratio of lengths.. probably something like 1:1.618 or 1:2.7183

3198. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 23:06:34 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f73npr$s57$1@nntp1.jpl.nasa.gov>
Source record: 38709

Owen Duffy wrote:
> Bruce in Alaska <bruceg@btpost.net> wrote in
> news:bruceg-04CFF8.10022211072007@netnews.worldnet.att.net:
> Bruce,
>
> An interesting post overall, but ...
>
>
>>System. All these tuners NEED a Low Impedance RF Ground to work
>>against, as well as a Longwire who's length is SPECIFICALLY set up to
>>put the 1/2 Wavelength Point in a non used portion of the Spectrum.
>>They will NOT tune within 2% of the Natural 1/2 Wavelenth point of the
>>Longwire connected, where Antenna Impedances near Infinity.
>
>
> The "rules" above are offered without definition or explanation, so they
> don't really raise the art.
>
> Manufacturer's "rules" and explanations are often inconsistent. For
> example, some state a minimum length that can be tuned on say 3.6MHz, and
> it is often around 3m, yet they rabbit on about avoiding half wave
> resonances in the wire to avoid high voltage at the feed point. The feed
> point voltage on a 3m whip at 3.6MHz is likely to be much higher than a 10m
> whip at its first parallel resonance.

there's a goodly amount of empiricism in these rules of thumb from the
mfr, too.

If you start to analyze it, there's all sorts of issues that crop up in
the analysis: the heating and/or breakdown of the Ls and Cs inside the
box, for instance (and, because it's a binary sequence with components
with 20% tolerance, the voltages (for L) or currents (for C) don't
divide evenly... the big Cs take more of the current than the small ones).

And then, there's the whole thermal management issue, and "real ratings"
of the component vs catalog vs derating. The tesla coil folks regularly
run low ESR extended foil polypropylene capacitors (typical 0.15 uF at
2kV) at 2 or 3 times rated voltage at a few hundred kHz, as long as the
rms current is within bounds. But they benefit from a fair amount of
destructive testing and failure analysis by a coiling hobbyist with
access to the appropriate gear.

>
> Owen

3199. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 23:16:52 UTC
From: dplatt@radagast.org
Message-ID: <405gm4-hp5.ln1@radagast.org>
Source record: 38710

In article <Xns996B56C0A2648nonenowhere@61.9.191.5>,
Owen Duffy <none@no.where> wrote:

>> A simple program or spreadsheet ought to be able to do the necessary
>> calculations... try every wire length from 66 feet to 132 feet and see
>> if you can find a length which is a comfortable percentage away from
>> an even multiple of 1/2 wavelength on each frequency. Or,
>
>You probably mean't any integral multiple of a half wave.

You're right... integral multiple of a half-wavelength, or even
multiples of a quarter-wavelength are two alternative ways for stating
the lengths to be avoided (high feedpoint Z).

>> alternatively, iterate through each frequency, calculate the
>> 1/2-wavelength multiples, and "blacklist" every possible length which
>> is too close to these multiples.
>
>I have done just that, and searched for "sweet" wire lengths that aren't
>within say 5% of band edge for all HF bands. It sounds like a solution to
>the problem doesn't it. (5% implies that you have a pretty determinate
>scenario, which is a big assumption. IIRC 10%+ will not give a practical
>result on the higher bands.)
>
>Problem is that it probably unecessarily constrains the solution.

Entirely possible!

>The input impedance and the feed point voltage of an end fed wire at its
>higher parallel resonances falls, so that whilst you might want to avoid
>the first such resonance, the impedance (and feed point voltage) at the
>third or higher resonance might well be low enough to not worry about it.

And, even if it was a bit high, you might not need to be more than a
couple of percent away from it to get it down to a length that might
work.

Odds are that some amount of experimentation is going to be required,
at any given installation, to find a wire length which tunes up well
with these ATUs. The orientation of the wire (vertical, inverted-L,
etc.), height about ground, presence of trees and metallic objects,
and (perhaps most importantly) the details of the ATU's grounding
system, are likely to change the impedances around enough to make the
"textbook" answers less than completely effective.

--
Dave Platt <dplatt@radagast.org> AE6EO

Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3200. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-11 23:45:17 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <hYdli.29709$BT3.8034@trnddc06>
Source record: 38707

Hi Owen. 5% was just a number picked out at random by me for clarification
of my question.
So you wouldn't want to share your 'sweet' findings, would you??
thanks!
W

"Owen Duffy" <none@no.where> wrote in message
news:Xns996B56C0A2648nonenowhere@61.9.191.5...
>
>>

>
> I have done just that, and searched for "sweet" wire lengths that aren't
> within say 5% of band edge for all HF bands. It sounds like a solution to
> the problem doesn't it. (5% implies that you have a pretty determinate
> scenario, which is a big assumption. IIRC 10%+ will not give a practical
> result on the higher bands.)
> > Owen

3201. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 00:16:36 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.12.00.16.36.83692@from.qrz.com>
Source record: 38711

On Wed, 11 Jul 2007 11:35:11 -0700, Roy Lewallen wrote:

> And there's a third reason and set of requirements for grounding which
> is different from both of those -- AC safety ground. Its requirements
> are dictated by the NEC and local electrical codes, and it shouldn't be
> confused with either of the other two.

Is there such a thing as a ground that is good for both AC safety ground
and lightning protection ... or, both of those plus RF ground?

3202. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 01:02:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139avd8m7asfea0@corp.supernews.com>
Source record: 38712

Rick (W-A-one-R-K-T) wrote:
> On Wed, 11 Jul 2007 11:35:11 -0700, Roy Lewallen wrote:
>
>
>> And there's a third reason and set of requirements for grounding which
>> is different from both of those -- AC safety ground. Its requirements
>> are dictated by the NEC and local electrical codes, and it shouldn't be
>> confused with either of the other two.
>
> Is there such a thing as a ground that is good for both AC safety ground
> and lightning protection ... or, both of those plus RF ground?

Sure. One way to do it is to make a proper AC safety ground, a good
lightning ground, and an effective RF ground, then bond them all
together (provided it's permitted by code).

Roy Lewallen, W7EL

3203. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 05:03:29 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <4695b657$0$79139$e4fe514c@news.xs4all.nl>
Source record: 38713
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote:
> Hein ten Horn wrote:
>>
>> We hear the average of two frequencies if both frequencies
>> are indistinguishably close, say with a difference of some few
>> hertz. For example, the combination of a 220 Hz signal and
>> a 224 Hz signal with the same amplitude will be perceived as
>> a 4 Hz beat of a 222 Hz tone.
>
> I have also read this accounting, but from what I've been able to determine
> it lacks mathematical and phenomenological support. Here's why. As two
> audio frequencies are moved closer and closer together, there is no point
> where an average of the two frequencies can be perceived. There is however
> a point where no difference in the two frequencies is perceived. Obviously
> if we cannot discern the difference between 220Hz and 224Hz (as an example),
> we are not going to be able to discern half their difference either. I
> suspect the notion may have originated from a trigonometric identity which
> has what could be interpreted as an average term in it.
>
> sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
>
> A plot of the function reveals that cos(.5(a-b)) describes the envelope.
> The period of the 'enveloped' waveform (or the arcane, beat modulated
> waveform) then can be seen to vary continuously and repetitiously over
> time - from 1/a at one limit to 1/b at the other. At a particular instant in
> time the period does in fact equal the average of the two. But this is true
> only for an instant every 1/(a-b) seconds.

The math is perfectly describing what is happening in the
course of time at an arbitrary location in the air or in the
medium inside the cochlea. Concerning the varying
amplitude it does a good job.
But does someone (here) actually know how our hearing
system interprets both indistinguishable(!) frequencies (or
even a within a small range rapidly varying frequency) and
how the resulting 'signal' is translated into what we call the
perception? Evidently the math given above doesn't
reckon with any hearing mechanism at all. Hence it cannot
rule out perceiving an average frequency.

For the rest I don't get your point on a varying period.
From a mathematical point of view the function

sin(pi * (f_2 + f_1) * t)

has a constant frequency of (f_2 + f_1)/2
and a constant period of 2/(f_2 + f_1).
This frequency is indeed the arithmetical average and
it is not affected by a multiplication of the function by
a relatively slow varying amplitude.

> An interesting related experiment can be performed by setting a sweep
> generator to sweep over a narrow range of frequencies. The range can be
> adjusted as well as the sweep time. One can then study what sorts of
> effects are discernible.
>
> I have found that it is very difficult to fool the ear in some of the ways
> that have been suggested. It does not appear, for example, that the claim
> for 'perceiving the average' is valid for two arbitrarily close frequencies
> any more than it is for any two other frequencies. But I would appreciate
> learning of any contradictory research that you might be able to cite.

Apart from the mathematical support, I saw the average
frequency mentioned in several books on physics, unfortunately
without further enclosed proof (as far as I remember).
However, getting some empirical evidence should be a
rather easy piece of work.

gr, Hein

3204. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 05:17:10 UTC
From: NotMe <me@privacy.net>
Message-ID: <fPili.437$cW7.338@newsfe06.lga>
Source record: 38714
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:4695b657$0$79139$e4fe514c@news.xs4all.nl...
| Jim Kelley wrote:
| > Hein ten Horn wrote:
| >>
| >> We hear the average of two frequencies if both frequencies
| >> are indistinguishably close, say with a difference of some few
| >> hertz. For example, the combination of a 220 Hz signal and
| >> a 224 Hz signal with the same amplitude will be perceived as
| >> a 4 Hz beat of a 222 Hz tone.
| >
| > I have also read this accounting, but from what I've been able to
determine
| > it lacks mathematical and phenomenological support. Here's why. As two
| > audio frequencies are moved closer and closer together, there is no
point
| > where an average of the two frequencies can be perceived. There is
however
| > a point where no difference in the two frequencies is perceived.
Obviously
| > if we cannot discern the difference between 220Hz and 224Hz (as an
example),
| > we are not going to be able to discern half their difference either. I
| > suspect the notion may have originated from a trigonometric identity
which
| > has what could be interpreted as an average term in it.
| >
| > sin(a) + sin(b) = 2sin(.5(a+b))cos(.5(a-b))
| >
| > A plot of the function reveals that cos(.5(a-b)) describes the envelope.
| > The period of the 'enveloped' waveform (or the arcane, beat modulated
| > waveform) then can be seen to vary continuously and repetitiously over
| > time - from 1/a at one limit to 1/b at the other. At a particular
instant in
| > time the period does in fact equal the average of the two. But this is
true
| > only for an instant every 1/(a-b) seconds.
|
| The math is perfectly describing what is happening in the
| course of time at an arbitrary location in the air or in the
| medium inside the cochlea. Concerning the varying
| amplitude it does a good job.

| But does someone (here) actually know how our hearing
| system interprets both indistinguishable(!) frequencies (or
| even a within a small range rapidly varying frequency) and
| how the resulting 'signal' is translated into what we call the
| perception? Evidently the math given above doesn't
| reckon with any hearing mechanism at all. Hence it cannot
| rule out perceiving an average frequency.
|
| For the rest I don't get your point on a varying period.
| From a mathematical point of view the function
|
| sin(pi * (f_2 + f_1) * t)
|
| has a constant frequency of (f_2 + f_1)/2
| and a constant period of 2/(f_2 + f_1).
| This frequency is indeed the arithmetical average and
| it is not affected by a multiplication of the function by
| a relatively slow varying amplitude.
|
| > An interesting related experiment can be performed by setting a sweep
| > generator to sweep over a narrow range of frequencies. The range can be
| > adjusted as well as the sweep time. One can then study what sorts of
| > effects are discernible.
| >
| > I have found that it is very difficult to fool the ear in some of the
ways
| > that have been suggested. It does not appear, for example, that the
claim
| > for 'perceiving the average' is valid for two arbitrarily close
frequencies
| > any more than it is for any two other frequencies. But I would
appreciate
| > learning of any contradictory research that you might be able to cite.
|
| Apart from the mathematical support, I saw the average
| frequency mentioned in several books on physics, unfortunately
| without further enclosed proof (as far as I remember).
| However, getting some empirical evidence should be a
| rather easy piece of work.
|
| gr, Hein

Actually the human ear can detect a beat note down to a few cycles.

3205. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 05:30:52 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996B9DD2291B2nonenowhere@61.9.191.5>
Source record: 38715

"Woody" <ts520@hotmail.com> wrote in news:hYdli.29709$BT3.8034@trnddc06:

> Hi Owen. 5% was just a number picked out at random by me for
> clarification of my question.
> So you wouldn't want to share your 'sweet' findings, would you??
> thanks!

W,

I have had a quick look for the spreadsheet and Perl scripts, but haven't found them. I am sure I have them, but haven't filed them in an ordered way apparently, I think that technically is lost... or galloping senility.

The reason I didn't publish them as is at the time is is that they are an incomplete picture.

Have a look at the article at http://www.vk1od.net/InvertedL/InvertedL.htm which describes an InvertedL at approximately one of those "sweet" lengths (~26m). In fact, the length was juggled to avoid excessive feedpoint voltage on all bands.

Another of the "sweet" lengths is half that at 13m, and the voltage plot is rougly scaled proportionately in frequency.

You will see from Fig 1 that the voltage peaks at higher frequency parallel resonances are less an issue than the first and second resonances (you can't see from the graphs, but ~10kV and 3kV respectively).

Of course, none of this discussion addresses the pattern issues at the higher frequencies.

As far as the earth system goes, it impacts efficiency of the system. It is my view that the earth only needs to be good enough that its loss is an acceptably low portion of the transmitter power. The shorter the radiator in wavelengths, the lower its Rr and therefore the lower the earth resistance for comparable efficiency. If you look at Fig 4 of the article, you will see that Rr is 100 ohms or greater above 5MHz, so the loss of an earth system resistance of say 30 ohms is near insignificant, but at 80m where the length is relatively short, you need a better earth for good efficiency.

Don't agonise over it too much, and treat the Rules of Thumb as ROT until you understand the underlying assumptions and caveats.

Owen

> W
>
>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns996B56C0A2648nonenowhere@61.9.191.5...
>>
>>>
>
>>
>> I have done just that, and searched for "sweet" wire lengths that
>> aren't within say 5% of band edge for all HF bands. It sounds like a
>> solution to the problem doesn't it. (5% implies that you have a
>> pretty determinate scenario, which is a big assumption. IIRC 10%+
>> will not give a practical result on the higher bands.)
>> > Owen
>
>

3206. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 05:34:57 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996B9E834E73Enonenowhere@61.9.191.5>
Source record: 38716

Roy Lewallen <w7el@eznec.com> wrote in
news:139avd8m7asfea0@corp.supernews.com:

> Rick (W-A-one-R-K-T) wrote:
>> On Wed, 11 Jul 2007 11:35:11 -0700, Roy Lewallen wrote:
>>
>>
>>> And there's a third reason and set of requirements for grounding
>>> which is different from both of those -- AC safety ground. Its
>>> requirements are dictated by the NEC and local electrical codes, and
>>> it shouldn't be confused with either of the other two.
>>
>> Is there such a thing as a ground that is good for both AC safety
>> ground and lightning protection ... or, both of those plus RF ground?
>
> Sure. One way to do it is to make a proper AC safety ground, a good
> lightning ground, and an effective RF ground, then bond them all
> together (provided it's permitted by code).

Roy,

Isn't equipotential bonding part of making three independent earth
systems work compatibly with each other, to be a single system that is
effective for each of the purposes?

Owen
>
> Roy Lewallen, W7EL
>

3207. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 05:52:17 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <e9fb93p6qscidg8vopuidqjgoiv1thg4hl@4ax.com>
Source record: 38717
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"NotMe" <me@privacy.net> hath wroth:

(Please learn to trim quotations)

>Actually the human ear can detect a beat note down to a few cycles.

No, you cannot. Figure on 20Hz to 20KHz for human hearing:
<http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>

What happens when you zero beat something is that your brain is
filling in the missing frequencies. As you tune across the frequency,
and the beat note goes down in frequency, most people overshoot to the
other side, and then compensate by splitting the different. As you
approach zero beat, your perception of the sound drops. If the lack
of hearing below 20Hz doesn't make it disappear, the frequency rolloff
in the audio amplifier stages will probably also drop off at about
20-300Hz depending on whether it's a hi-fi or communications radio. I
have a home made DC coupled hi-fi and can see the speaker moving in
and out slowly at very low frequencies. I don't hear a thing.

However, you don't have to hear it to detect infrasonic sounds.
<http://en.wikipedia.org/wiki/Infrasound>
Your inner ear, which is responsible for your sense of balance, can do
that for you. You don't actually hear the tone, but your body
certainly responds to it. Depending on frequency and level, tones
below about 20Hz will bring on confusion, nausia, disorientation, and
all manner of sensory anomalies. It's been used for effects in music,
sound tracks, and military weapon systems. I've experienced the
effects personally and can assure you that it was not pleasant.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3208. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 10:08:47 UTC
From: Harry <oeieio_NOSPAM_@hotmail.com>
Message-ID: <f74ujg$g6c$1@news.al.sw.ericsson.se>
Source record: 38718

> It is believed that in prehistoric times,
> an ice comet collided with the
> earth with so much force at a
> spot near the Yucatan Peninsula,
> that a chunk was dislodged and hurled
> into orbit. This collected and compacted
> becoming the earth`s moon.

I think you will find that the Earth had two moons, and the one in a decaying orbit hit the Earth - creating the (now burried) crater, as well as leavin us with a somewhat thinner crust. The bit of green cheeze out there, over our heads, is as old as the "inner Earth", but like the Earth, it is steadily growing as more space debris arrives.

If a comet had struck the Earth, then just the sheer momentum would have destroyed it, if it had been big enough to hurl something out of the Earths gravity. Even the Manson comet was not that big, and look at the size of that crater ;-)

But back to space dust - Fred Hoyle (a well-know scientist from Yorkshire, England) pointed out that we all have noses with the holes underneath so that our air-intake is sheltered from the debris and diseases that are falling from space. Fred also invented the term "Big Bang", although he meant it sarcastically, in true Yorkshire fashion. (Eeeeeeee bah gum! The's nowt as odd as fowk!)

3209. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 11:12:15 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996BD7B2B70E3nonenowhere@61.9.191.5>
Source record: 38719

"Woody" <ts520@hotmail.com> wrote in news:hYdli.29709$BT3.8034@trnddc06:

> Hi Owen. 5% was just a number picked out at random by me for
> clarification of my question.
> So you wouldn't want to share your 'sweet' findings, would you??
> thanks!

I had a dig around through a few thousand spreadsheets... and found it.

9.05m, 12.6m, 18.3m, 26.4m, 33.3m, 44.9m.

If you want to cover 60m, leave the 26.4 out of the list.

Did someone mention 60' (18.3m), it is in the list, but it is more
critical than 26.4 or 12.6.

As noted in my earlier post, if you want to be 10% or more away from n
half waves on all bands, there is no solution.

These calcs don't consider proximity of objects that may shift the
tuning.

My advice still stands that the higher order parallel resonances aren't
such an issue, so this method unnecessarily constrains the solution..

Owen

3210. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 11:38:22 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184240302.631657.42090@o61g2000hsh.googlegroups.com>
Source record: 38720

Yes, the history of the autotuners is fascinating...
The discussion of integral half waves, parallel resonance impedences, ground impedences, etc., is meat and potatos for antenna freaks like me...

BTW, in the older ARRL handbooks is a table of guy wire lengths (for towers) that avoid resonances in the ham bands... Those lengths would make an excellent guide for the length of a random wire antenna... It might also be in the new editions, but I haven't looked at one in recent years.. Anyway, that table will give you a good starting point...

B U T , what I want you to do is to simply either cobble up an L match, or pick up a tuner (any tuner, automatic or not), run some wire <any length> through those trees, and get on the air!
If the tuner has problems with any particular band, change the length of the wire by 4 to 12 feet until it tunes OK...
Once you have a working antenna you can spend time and energy gilding the lily with just the 'perfect' length and configuration...

Don't waste time over analyzing - pick a tuner, throw up some wire and ground radials, and operate...
A local ham who lives in a trailor park is closing in on 300 countries confirmed and his only antenna for all this is a single multiband vertical, 21 feet tall, disguised as a flag pole...

Just do it...

cheers ... denny

3211. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 11:50:28 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184241028.491147.82240@n2g2000hse.googlegroups.com>
Source record: 38721

If you guys want to read hard science without any mathematical
equations, read ATOM by Larry Krause...
This is as close as you can get to understanding cosmology without
having to take a PhD in physics at the university... If you read this
<and take the time to think and understand what he is sayiing> I
'garontee' you will see the world in a whole new way...

denny - an old farm boy who never wondered about the ability of cow
shit to stick to your shoes... and "Two quarks for Muster Mark"

3212. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 12:13:40 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184242420.022782.36680@r34g2000hsd.googlegroups.com>
Source record: 38722

Hey Walt, I got this
> >horrible 1.2 SWR. How much farther will I reach out if I get it to 1:1?"

1:1, hail boy, you don't have a clue... I'z got my tenna tuned up so
the SWR is 1:0.9 - now that is one beyootiful antenna and it can hear
flea fart in antartica...
It's so efficient it pulls out more power out of the amplifier than I
feed to it... Why, sometimes I have to pull the 220 plug on the amp
just to keep it from stalling the generator down at the electric
company's power plant... The best part is my electric meter runs
backwards when I use the amp... Why, after last years CQWW the power
company had to send me a check... I think Mrs. Edison was upset over
havin to pay me becuz that check was so tear stained the teller at the
bank had to wring it out afore she could cash it...
Why the Friendly Candy Company is so amazed at my technical expertiz
that Riley, himself, sent me a letter asking me to come to Gettysburg
and splain my tenna to them... I think I'm goin to get an award as he
said sumpin about certificate action and delusions of grandeur ,
whatever that is - I think it is some French award like the Trump
L'oeil, that they give out over there... Long as I don't have to eat
any of them snails, ugh...

Anyway Walt, iffn you need some help with your new book give me a
shout cuz I got some antenna designs that'll knock ur socks off.,..

denny / k8do

3213. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 12:20:29 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184242829.988808.142800@o61g2000hsh.googlegroups.com>
Source record: 38723
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
>
> So, I should start investing in all the analog am/fm/tv/etc. stations
> which appear doomed ...

Never bet against new technology...

denny / k8do
```

3214. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 15:52:24 UTC
From: John Larkin <jjlarkin@highNOTlandTHIStechnologyPART.com>
Message-ID: <2djc939tjn76kft20et1ssqipopb8uvcr1@4ax.com>
Source record: 38724
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 06 Jul 2007 01:25:02 GMT, jimp@specsol.spam.sux.com wrote:

>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>
><snip>
>
>> Agreed, static magnetic fields tend to decay rapidly as you move away
>> from them. However, alternating magnetic fields continue to propogate
>> by generating alternating electric fields of the same frequency. These
>> alternating electric fields, in turn, generate alternating magnetic
>> fields. The cycle keeps repeating.
>
>Nonsense as stated.

No, it's just a qualitative restatement of Maxwell's theorems.
Changing e-field makes H-field, changing H-field makes e-field, and
they toodle off into the sunset at the speed of light.

John

3215. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 17:27:32 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.12.17.28.11.148983@example.net>
Source record: 38725
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:

> "NotMe" <me@privacy.net> hath wroth:
>
> (Please learn to trim quotations)
>
>>Actually the human ear can detect a beat note down to a few cycles.
>
> No, you cannot. Figure on 20Hz to 20KHz for human hearing:
> <http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>
>
> What happens when you zero beat something is that your brain is filling in
> the missing frequencies. As you tune across the frequency, and the beat
> note goes down in frequency, most people overshoot to the other side, and
> then compensate by splitting the different.

No, you've got it all wrong. The beat note happens because, when the
signals are close to 180 degrees out of phase, they cancel out such that
there is, in fact, no sound. This is what your ear detects. Now, if
you're zero-beating, say, 400 Hz against 401 Hz, I don't know if the
801 Hz component is audible or if it's even really there, but
mathematically, it kinda has to, doesn't it?

Thanks,
Rich

3216. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 17:29:50 UTC
From: Rich the Philosophizer <rtp@example.com>
Message-ID: <pan.2007.07.12.17.30.28.940871@example.com>
Source record: 38726
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

```
On Thu, 12 Jul 2007 08:52:24 -0700, John Larkin wrote:
> On Fri, 06 Jul 2007 01:25:02 GMT, jimp@specsol.spam.sux.com wrote:
>>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>>
>><snip>
>>
>>> Agreed, static magnetic fields tend to decay rapidly as you move away
>>> from them. However, alternating magnetic fields continue to propogate
>>> by generating alternating electric fields of the same frequency. These
>>> alternating electric fields, in turn, generate alternating magnetic
>>> fields. The cycle keeps repeating.
>>
>>Nonsense as stated.
>
> No, it's just a qualitative restatement of Maxwell's theorems. Changing
> e-field makes H-field, changing H-field makes e-field, and they toodle off
> into the sunset at the speed of light.

Exactly. The Yin calls forth the Yang, and in their cosmic dance, they
create Manifestation. ;-)

Cheers!
Rich
--
For more information, please feel free to visit http://www.godchannel.com
```

3217. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 18:04:17 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jcpc935lbi2n1ds3srl03b08so76bm8q2i@4ax.com>
Source record: 38727
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Rich Grise <rich@example.net> hath wroth:

>On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
>
>> "NotMe" <me@privacy.net> hath wroth:
>>
>> (Please learn to trim quotations)
>>
>>>Actually the human ear can detect a beat note down to a few cycles.
>>
>> No, you cannot. Figure on 20Hz to 20KHz for human hearing:
>> <http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>
>>
>> What happens when you zero beat something is that your brain is filling in
>> the missing frequencies. As you tune across the frequency, and the beat
>> note goes down in frequency, most people overshoot to the other side, and
>> then compensate by splitting the different.

>No, you've got it all wrong.

Sorry, I'm perfect and never make misteaks.

>The beat note happens because, when the
>signals are close to 180 degrees out of phase, they cancel out such that
>there is, in fact, no sound. This is what your ear detects. Now, if
>you're zero-beating, say, 400 Hz against 401 Hz, I don't know if the
>801 Hz component is audible or if it's even really there, but
>mathematically, it kinda has to, doesn't it?

Ok, I'll bite. I think you'll find that if you actually do that with
a non-distorting audio mixer[1], and look at an oscilloscope, you'll
see the 1Hz envelope, but the 400 and 401 Hz tones will still be
there. Same on a spectrum analyzer, where the two carriers (400/401)
are still there. If they're there, you'll hear them. The tones may
be going up and down once per second (1Hz), but you'll still hear
tones in between. No way are they going to disappear with a 1Hz
separation. However, if they're exactly on the same frequency, and
exactly 180 degrees otto phase, they will cancel.

The zero beat example I offered is more a psychology problem than
acoustics or hearing. Our ears and brain expect the sweep through
zero beat to be continuous, that we fill in the missing frequencies.
It's really apparent in ham radio, where tuning across carriers is a
common event. I've watched how people do it, and noticed that they

always overshoot and come back to the perceived center. If you ask them to nail the frequency to within 10Hz without overshooting, they usually have a difficult time.

[1] no compression, limiting, fuzz box, reverb, equalizer, etc.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3218. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 18:06:13 UTC
From: dplatt@radagast.org
Message-ID: <l57im4-1s8.ln1@radagast.org>
Source record: 38728

In article <f74ujg$g6c$1@news.al.sw.ericsson.se>,
Harry <oeieio_NOSPAM_@hotmail.com> wrote:

>> It is believed that in prehistoric times,
>> an ice comet collided with the
>> earth with so much force at a
>> spot near the Yucatan Peninsula,
>> that a chunk was dislodged and hurled
>> into orbit. This collected and compacted
>> becoming the earth`s moon.
>
>I think you will find that the Earth had two moons, and the one in a
>decaying orbit hit the Earth - creating the (now burried) crater, as well as
>leavin us with a somewhat thinner crust. The bit of green cheeze out there,
>over our heads, is as old as the "inner Earth", but like the Earth, it is
>steadily growing as more space debris arrives.

As I understand it, the current "mainstream" thinking is that there
were numerous collision events, of greatly different magnitudes, and
very far apart in time.

It's now believed that quite early in the lifetime of the solar
system, when the planets were accreting out of a large dust-ring
around the young Sun, a planetoid of roughly the size of Mars collided
with the proto-Earth, striking a glancing blow. This impact shattered
the smaller body and did really serious damage to the larger (probably
re-melting much of it) and threw a lot of material back up into orbit
around the (now-larger) Earth. Much of this material eventually fell
back to the surface, some escaped entirely, and most of the rest
eventually formed the moon. This event occurred quite a few billions
of years ago.

The impact at what is now Chicxulub in the Yucatan was a lot more
recent (65 million years ago) and involved a much smaller body
(perhaps 10 miles across). Current mainstream thinking is that this
impact was probably the coup de grace for most of the dinosaurs... it
was one of the largest impacts in the history of Earth, but
there are geologic records of earlier impacts that left larger
craters (the Vredefort and Sudbury structures).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3219. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 18:48:51 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-C22641.10484612072007@netnews.worldnet.att.net>
Source record: 38730

In article <t3ali.3392$Y_3.570@trnddc04>, "Woody" <ts520@hotmail.com>
wrote:

> Well.. a million thanks for that. Quite a cool history lesson as well. So
> now I'm looking for an SEA tuner... LOL...
>
> Listen, that all makes perfect sense but just to clarify, a.) now I know why
> that triton did so poorly when tested. We calc'd 1/2 wavelength for the
> longwire, and b.) Again, for continuity and clarity of this thread for
> future surfers..... what then, considering our discussed auto-tuners, would
> be the optimal length for a longwire that would be used for amateur/MARS,
> 3-30MHz?
> Pick 1/2wavelength on say 2.8Mhz and just cut it? Or calc 1/2wavelength on
> the lowest and add 5% or some arbitrary odd number??
> Which plan will offer the least chance of dropping a 1/2wl further up the
> band on a desired frequency?
> thanks,
> Woody
>

What we did, is to try and have a Longwire with a 1/4 Wave Point near
the lowest Operating Frequency like for the 2006Khz Alaska Private
Fixed Frequency, then calculate the Natural 1/2 Wave Point for that
Wire, then adjust the 1/4 Wave Length, SHORTER, until the 1/2 Wave Point
DeadBand (2.5% or so) was in a part of the speectrum the Station wasn't
Licensed for, Marine and Alaska Private Fixed have specific Channels,
and Bands in the MF/HF Spectrum, and it isn't to hard to move the
DeadBand to a nonused portion of the Spectrum. For the HAMS, that want
a "Do everything, cover the whole Dc to Light Spectrum, with one
Longwire Tunter", the answer is "Design and Build your own Dam Tuner
with an integrate Longwire Switch and put up Multiple lengths of wire",
because there isn't a product out there, that I am aware, of that does
this, YET....

Bruce in alaska
--
add a <2> before @

3220. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 18:50:30 UTC
From: craigm <none@domain.invalid>
Message-ID: <iFuli.57$505.337065@news.sisna.com>
Source record: 38729
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

Rich Grise wrote:

> On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
>
>> "NotMe" <me@privacy.net> hath wroth:
>>
>> (Please learn to trim quotations)
>>
>>>Actually the human ear can detect a beat note down to a few cycles.
>>
>> No, you cannot. Figure on 20Hz to 20KHz for human hearing:
>> <http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>
>>
>> What happens when you zero beat something is that your brain is filling
>> in
>> the missing frequencies. As you tune across the frequency, and the beat
>> note goes down in frequency, most people overshoot to the other side, and
>> then compensate by splitting the different.
>
> No, you've got it all wrong. The beat note happens because, when the
> signals are close to 180 degrees out of phase, they cancel out such that
> there is, in fact, no sound. This is what your ear detects. Now, if
> you're zero-beating, say, 400 Hz against 401 Hz, I don't know if the
> 801 Hz component is audible or if it's even really there, but
> mathematically, it kinda has to, doesn't it?
>
> Thanks,
> Rich

No, It doesn't have to be there (the 801 Hz frequency). If your method of 'beating' two signals together is by adding them, then there is no 801 Hz tone, only the 400 and 401 Hz tones.

With two function generators and a spectrum analyzer you can see this.

With a scope, you can see that the zero crossings in the summation occur at a 400.5 Hz rate.

This is exactly what the trig identity earlier in the thread indicates.

If your method of beating is via multiplication, then there will be 0, 400, 401 and 801 Hz signals present (assuming the mixer is not balanced).

When you are discussing 'beating' two signals together you need to indicate whether you are adding or multiplying the signals. The results are different.

If you are multiplying two signals to find a zero beat with your ear, that is difficult as you will be trying to hear tones less than 20 Hz.

If you are adding two signals to find a zero beat, that is easy because you are listening to a tone that is at the average frequency. In the above example, at 400.5 Hz.

3221. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 19:25:56 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f75v85$s6k$1@news.service.uci.edu>
Source record: 38731
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna

Hein ten Horn wrote:

> The math is perfectly describing what is happening in the
> course of time at an arbitrary location in the air or in the
> medium inside the cochlea. Concerning the varying
> amplitude it does a good job.
> But does someone (here) actually know how our hearing
> system interprets both indistinguishable(!) frequencies (or
> even a within a small range rapidly varying frequency) and
> how the resulting 'signal' is translated into what we call the
> perception?

> Evidently the math given above doesn't
> reckon with any hearing mechanism at all. Hence it cannot
> rule out perceiving an average frequency.

The mathematics doesn't provide the possibility except, as I have noted, for brief instants of time. There exists no "wave of average frequency" in the frequency spectrum of the sum of two waves. A Fourier analysis of the function doesn't reveal one. The ear doesn't "produce" one. And I can tell you from personal and professional experience that it does not hear one. (A triad chord would be truly awful to experience if it did.)

> For the rest I don't get your point on a varying period.
> From a mathematical point of view the function
>
> sin(pi * (f_2 + f_1) * t)
>
> has a constant frequency of (f_2 + f_1)/2
> and a constant period of 2/(f_2 + f_1).
> This frequency is indeed the arithmetical average and
> it is not affected by a multiplication of the function by
> a relatively slow varying amplitude.

Yes. But when multiplied by a sinusoidal function of a different frequency (as is the actual equation), the amplitude is affected in a way which varies in both magnitude and sign with time, and which affects both the peak spacing and the zero crossings differently from one cycle to the next as a function of relative phase. If one defines the period of a waveform as the length of one cycle of a waveform, then this length of time varies in the way I have previously described. Please consider using Mathematica or your favorite

plotting program to examine this for yourself.

> Apart from the mathematical support, I saw the average
> frequency mentioned in several books on physics, unfortunately
> without further enclosed proof (as far as I remember).

Apart from the mathematical support, that is also what I have found. However, I believe this usage has been disappearing in recent years as re-evaluation replaces reiteration as a means for producing text books. All I can say is that it appears the claim may have been made by someone without sufficient experience in the particular field. I can find no support, anecdotal, phenomenological, psychoacoustical, or mathematical for the contention (repeated by rote from what I can tell) that the ear hears the average when the two frequencies are arbitrarily 'close'.

I've never heard it, and I've been playing musical instruments for 47 years, doing audio electronics for almost 30, and physics for the last 20. The notion appears to me to be speculation based upon little more than a perfunctory analysis of the underlying mathematics.

It might be more reasonable to claim that what is heard is a slight, slow warble in frequency, back and forth, from one pitch to the other accompanyied by a corresponding change in volume. But when the beat frequency is low, the two pitches are so close together that the difference between them is not discernable.

> However, getting some empirical evidence should be a
> rather easy piece of work.

Easier to say than do, certainly, but an interesting and enjoyable endeavor nevertheless. :-)

jk

3222. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 20:42:55 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184272975.004068.222860@d55g2000hsg.googlegroups.com>
Source record: 38632

While the geologic record for Chicxulub is well documented the commonly known "fact" that this caused the dinosaurs to die out is debatable since their demise was spread over millions years covering both pre and post Chicxulub impact; not just over a few weeks or months, or even a few hundred years..
The seabed record does show Chicxulub caused a drop in temperatures for some time period and significant species losses.. There have been a number of other massives die offs seen in the fossil records that are not well explained and not all can be tied to an impact...

The other issues you point out, such as the genesis of the earth's moon coming by impact from an extra solar body is the currently accepted theory of mainstream cosmologists, less a maverick or two...

denny

3223. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 21:23:23 UTC
From: dplatt@radagast.org
Message-ID: <bniim4-ou4.ln1@radagast.org>
Source record: 38633

In article <1184272975.004068.222860@d55g2000hsg.googlegroups.com>,
Denny <k8do@mailblocks.com> wrote:

>While the geologic record for Chicxulub is well documented the
>commonly known "fact" that this caused the dinosaurs to die out is
>debatable since their demise was spread over millions years covering
>both pre and post Chicxulub impact; not just over a few weeks or
>months, or even a few hundred years..

Oh, I agree... that's why I used the phrase "coup de grace" and "most
of the dinosaurs". There's good evidence that there was a lot of
ecological stress from other causes (e.g. volcanism, change in ocean
circulation patterns, etc.) which had been reducing the diversity and
population of many Dinosauria for quite some time before the Chicxulub
impact. And, of course, mainstream scientists now believe that one
branch of the Dinosauria survived right up until present times.

>The seabed record does show Chicxulub caused a drop in temperatures
>for some time period and significant species losses..

I've seen one report which indicates that the area in which this
asteroid hit consisted of rock which was unusually rich in sulphur,
thus leading to a more severe sulphate-particle "nuclear winter"
effect than what might have occurred if the impact had been elsewhere.

One way or the other, it was probably a rather rotten time to be on
this particular planet.

> There have been
>a number of other massives die offs seen in the fossil records that
>are not well explained and not all can be tied to an impact...

Agreed. Life, and death, are both rather complex matters :-)

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3224. Re: W2DU home from hospital

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 22:32:24 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <0_xli.76$Fp7.52@newsfe12.lga>
Source record: 38634

"Denny" <k8do@mailblocks.com> wrote in message
news:1184242420.022782.36680@r34g2000hsd.googlegroups.com...
> Hey Walt, I got this
>> >horrible 1.2 SWR. How much farther will I reach out if I get it to
>> >1:1?"
>
> 1:1, hail boy, you don't have a clue... I'z got my tenna tuned up so
> the SWR is 1:0.9 - now that is one beyootiful antenna and it can hear
> flea fart in antartica...

Now you are takin'! You just destroyed life time work of that jeanius from XG planet with his Goosian soup morfing into super tenna if you don get my drift.
You must have a real comptutor to come up with shtuff like zat.
With Razors I was able to hear seals yawning in anktarktika, but flea fart?
Man, I take my head off, gotta go back to drowning bord!

Yo, Walt, keep laughting and getting better and better!!!

Yuri da BUm

3225. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 22:42:52 UTC
From: craigm <none@domain.invalid>
Message-ID: <33yli.62$i64.241767@news.sisna.com>
Source record: 38635
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna

Jim Kelley wrote:

> Hein ten Horn wrote:
>
>> The math is perfectly describing what is happening in the
>> course of time at an arbitrary location in the air or in the
>> medium inside the cochlea. Concerning the varying
>> amplitude it does a good job.
>> But does someone (here) actually know how our hearing
>> system interprets both indistinguishable(!) frequencies (or
>> even a within a small range rapidly varying frequency) and
>> how the resulting 'signal' is translated into what we call the
>> perception?
>
>> Evidently the math given above doesn't
>> reckon with any hearing mechanism at all. Hence it cannot
>> rule out perceiving an average frequency.
>
> The mathematics doesn't provide the possibility except, as I have
> noted, for brief instants of time. There exists no "wave of average
> frequency" in the frequency spectrum of the sum of two waves. A
> Fourier analysis of the function doesn't reveal one. The ear doesn't
> "produce" one. And I can tell you from personal and professional
> experience that it does not hear one. (A triad chord would be truly
> awful to experience if it did.)
>
>> For the rest I don't get your point on a varying period.
>> From a mathematical point of view the function
>>
>> sin(pi * (f_2 + f_1) * t)
>>
>> has a constant frequency of (f_2 + f_1)/2
>> and a constant period of 2/(f_2 + f_1).
>> This frequency is indeed the arithmetical average and
>> it is not affected by a multiplication of the function by
>> a relatively slow varying amplitude.
>
> Yes. But when multiplied by a sinusoidal function of a different
> frequency (as is the actual equation), the amplitude is affected in a
> way which varies in both magnitude and sign with time, and which
> affects both the peak spacing and the zero crossings differently from
> one cycle to the next as a function of relative phase.

How can the zero crossings be affected? Zero multiplied by any other value
is still 0. All zero crossings in sin(pi * (f_2 + f_1) * t) occur at the
expected time. Multiplication by a cos term does not change a single one.
(It will add a few additional ones where the cos term evaluates to 0.)
There are no phase effects here.

> If one defines
> the period of a waveform as the length of one cycle of a waveform,
> then this length of time varies in the way I have previously
> described. Please consider using Mathematica or your favorite
> plotting program to examine this for yourself.

Defining the period as time between zero crossings leads to the frequency
not changing as you describe.

>
>> Apart from the mathematical support, I saw the average
>> frequency mentioned in several books on physics, unfortunately
>> without further enclosed proof (as far as I remember).
>
> Apart from the mathematical support, that is also what I have found.
> However, I believe this usage has been disappearing in recent years as
> re-evaluation replaces reiteration as a means for producing text
> books. All I can say is that it appears the claim may have been made
> by someone without sufficient experience in the particular field. I
> can find no support, anecdotal, phenomenological, psychoacoustical, or
> mathematical for the contention (repeated by rote from what I can
> tell) that the ear hears the average when the two frequencies are
> arbitrarily 'close'.
>
> I've never heard it, and I've been playing musical instruments for 47
> years, doing audio electronics for almost 30, and physics for the last
> 20. The notion appears to me to be speculation based upon little more
> than a perfunctory analysis of the underlying mathematics.
>
> It might be more reasonable to claim that what is heard is a slight,
> slow warble in frequency, back and forth, from one pitch to the other
> accompanyied by a corresponding change in volume. But when the beat
> frequency is low, the two pitches are so close together that the
> difference between them is not discernable.
>
>> However, getting some empirical evidence should be a
>> rather easy piece of work.
>
> Easier to say than do, certainly, but an interesting and enjoyable
> endeavor nevertheless. :-)
>
> jk

3226. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-12 23:21:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kddd93hso18c8vlq926a340anq2hji0u2h@4ax.com>
Source record: 38636

On Mon, 09 Jul 2007 04:38:39 -0700, art <aunwin@insightbb.com> wrote:

>> As an aside, what has this got to do with the focus (eg. antennas) of
>> this forum? Did the moderators kick you out of eHam?
>>
>Every thing!
>They are static particles that rest on diamagnetic materials
> used for antennas. These particular lunar particle coverings was
>predicted more than a hundred years ago by the masters which
>is before radio was even thought of . I would have thought
> that the subject of antennas would fit right in here!

Well Arthur,

Some several silent days have passed on this subject that is going
nowhere - it seems to mimic your forced retirement at eHam (or are
both due to the wholesale lack of interest?).

However, in keeping some semblance of a technical discussion on
antennas (I have to review just which group this is), then some
technical enquiry is in order (which I admit has a slim prospect of
any coherent answer).

So, does the
a.) absence
b.) presence
of lunar particle coverings on my antenna
c.) improve DX
d.) exclude DX
5.) does not matter

To repeat a message that hinged on the outcome of the Battle of the
Coral Sea:
"The World Wonders."

73's
Richard Clark, KB7QHC

3227. But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 00:18:34 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.13.00.18.32.645242@from.qrz.com>
Source record: 38637

OK, per the thread on "Question on grounding rods", I'm supposed to use 8-foot grounding rods rather than twice as many 4-foot rods. I can see that.

But, we're built on a ledge, one big wide rock that stretches from the seacoast to the Vermont state line (that's why they call New Hampshire the "Granite State"). I can get three feet depth at best before running into solid rock. An electrician friend of mine says I can drive the ground rod in at a 45-degree angle, but that would still run an 8-foot ground rod to a depth of more than 5.5 feet below the surface.

Can't be done.

So, what do I do next?

3228. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 00:35:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hktim4-lq1.ln1@mail.specsol.com>
Source record: 38638

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote:

> OK, per the thread on "Question on grounding rods", I'm supposed to use
> 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> that.

> But, we're built on a ledge, one big wide rock that stretches from the
> seacoast to the Vermont state line (that's why they call New Hampshire the
> "Granite State"). I can get three feet depth at best before running into
> solid rock. An electrician friend of mine says I can drive the ground rod
> in at a 45-degree angle, but that would still run an 8-foot ground rod to
> a depth of more than 5.5 feet below the surface.

> Can't be done.

> So, what do I do next?

Go long.

--
Jim Pennino

Remove .spam.sux to reply.

3229. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 00:55:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o9jd93lcl20qovrob8cvq0i0ska2j7cgh9@4ax.com>
Source record: 38639

On Thu, 12 Jul 2007 20:18:34 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>So, what do I do next?

Ask your neighbor where they got dispensation.

73's
Richard Clark, KB7QHC

3230. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 01:06:20 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Fpidnb-gmvWCTQvbRVnyhgA@bt.com>
Source record: 38640

"Owen Duffy" <none@no.where> wrote in message
news:Xns996B9E834E73Enonenowhere@61.9.191.5...
> Roy Lewallen <w7el@eznec.com> wrote in
> news:139avd8m7asfea0@corp.supernews.com:
>
> > Rick (W-A-one-R-K-T) wrote:
> >> On Wed, 11 Jul 2007 11:35:11 -0700, Roy Lewallen wrote:
> >>
> >>
> >>> And there's a third reason and set of requirements for grounding
> >>> which is different from both of those -- AC safety ground. Its
> >>> requirements are dictated by the NEC and local electrical codes, and
> >>> it shouldn't be confused with either of the other two.
> >>
> >> Is there such a thing as a ground that is good for both AC safety
> >> ground and lightning protection ... or, both of those plus RF ground?
> >
> > Sure. One way to do it is to make a proper AC safety ground, a good
> > lightning ground, and an effective RF ground, then bond them all
> > together (provided it's permitted by code).
>
> Roy,
>
> Isn't equipotential bonding part of making three independent earth
> systems work compatibly with each other, to be a single system that is
> effective for each of the purposes?
>
> Owen
> >
> > Roy Lewallen, W7EL
> >
>
Owen

Equipotential bonding is the process whereby all exposed conductive parts are connected together so that they are all at the same (usually earth) potential. Cross connecting three independent earthing systems could well be used to ensure that a system as a whole was properly grounded for power, lightning and RF. However, you have to bear in mind that for some power purposes, a high ohmic value is required in the earth circuit to prevent lethal current flowing in event of a fault. Under these circumstances it would be wrong to cross connect all the earths together. It is important to study the design criteria for the power circuits and protection devices before making any changes to an existing installation.

Mike G0ULI

3231. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 01:26:20 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <A_adnbk0UOhTSQvbnZ2dnUVZ8s6gnZ2d@bt.com>
Source record: 38641

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.13.00.18.32.645242@from.qrz.com...
>
> OK, per the thread on "Question on grounding rods", I'm supposed to use
> 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> that.
>
> But, we're built on a ledge, one big wide rock that stretches from the
> seacoast to the Vermont state line (that's why they call New Hampshire the
> "Granite State"). I can get three feet depth at best before running into
> solid rock. An electrician friend of mine says I can drive the ground rod
> in at a 45-degree angle, but that would still run an 8-foot ground rod to
> a depth of more than 5.5 feet below the surface.
>
> Can't be done.
>
> So, what do I do next?
>
Rick

Check out some new builds in the area and see what earthing arrangements are being put in there. The new properties will obviously have to conform with the latest regulations. If the builders have to use a specially long drill rig, you might be able to bribe them to come and drill you a few new holes. Failing that, its welding a long tube onto whatever you have that will drill through granite and then spending a couple of days drilling downwards. Radio hams are supposed to be renowned for their ingenuity and determination when faced with tricky situations. Build an echosounder or ground resistivity meter and scour the plot looking for a crack you can drive rods down through? The possibilities for experimentation are endless.

Mike G0ULI

3232. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 01:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <n02jm4-hoc.ln1@mail.specsol.com>
Source record: 38642

Mike Kaliski <michael.kaliski@tesco.net> wrote:

> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> news:pan.2007.07.13.00.18.32.645242@from.qrz.com...
> >
> > OK, per the thread on "Question on grounding rods", I'm supposed to use
> > 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> > that.
> >
> > But, we're built on a ledge, one big wide rock that stretches from the
> > seacoast to the Vermont state line (that's why they call New Hampshire the
> > "Granite State"). I can get three feet depth at best before running into
> > solid rock. An electrician friend of mine says I can drive the ground rod
> > in at a 45-degree angle, but that would still run an 8-foot ground rod to
> > a depth of more than 5.5 feet below the surface.
> >
> > Can't be done.
> >
> > So, what do I do next?
> >
> Rick

> Check out some new builds in the area and see what earthing arrangements are
> being put in there. The new properties will obviously have to conform with
> the latest regulations. If the builders have to use a specially long drill
> rig, you might be able to bribe them to come and drill you a few new holes.
> Failing that, its welding a long tube onto whatever you have that will drill
> through granite and then spending a couple of days drilling downwards. Radio
> hams are supposed to be renowned for their ingenuity and determination when
> faced with tricky situations. Build an echosounder or ground resistivity
> meter and scour the plot looking for a crack you can drive rods down
> through? The possibilities for experimentation are endless.

What purpose would be served by putting a grounding rod in solid rock?

All codes/regs I've seen have alternatives for special situations like
this, such as buried plates or several horizontal, interconnected,
buried rods.

--
Jim Pennino

Remove .spam.sux to reply.

3233. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 02:14:39 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <k3nd93p0rd1fc9f1frgqrqjliqln70qaeo@4ax.com>
Source record: 38643

On Thu, 12 Jul 2007 20:18:34 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>
>OK, per the thread on "Question on grounding rods", I'm supposed to use
>8-foot grounding rods rather than twice as many 4-foot rods. I can see
>that.
>
>But, we're built on a ledge, one big wide rock that stretches from the
>seacoast to the Vermont state line (that's why they call New Hampshire the
>"Granite State"). I can get three feet depth at best before running into
>solid rock. An electrician friend of mine says I can drive the ground rod
>in at a 45-degree angle, but that would still run an 8-foot ground rod to
>a depth of more than 5.5 feet below the surface.
>
>Can't be done.
>
>So, what do I do next?

My house came with 4-foot rods driven at an angle. I wasn't sure why
until I tried driving an 8-foot rod straight down. It stopped at about
one foot, even using a special ground rod driver from Glen Martin. So
I put in a shorty rod, and attached a few buried wire radials, running
them across the yard. Ya do what's ya got to do...

If you try the Polyphaser web site, they have a pretty good technical
paper on putting in a series of short rods.

bob
k5qwg

3234. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 03:55:48 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <XbidnbE_T5ZHagvbnZ2dnUVZ8qijnZ2d@bt.com>
Source record: 38644

```
<jimp@specsol.spam.sux.com> wrote in message
news:n02jm4-hoc.ln1@mail.specsol.com...
> Mike Kaliski <michael.kaliski@tesco.net> wrote:
>
> > "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> > news:pan.2007.07.13.00.18.32.645242@from.qrz.com...
> > >
> > > OK, per the thread on "Question on grounding rods", I'm supposed to
use
> > > 8-foot grounding rods rather than twice as many 4-foot rods. I can
see
> > > that.
> > >
> > > But, we're built on a ledge, one big wide rock that stretches from the
> > > seacoast to the Vermont state line (that's why they call New Hampshire
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> > > "Granite State"). I can get three feet depth at best before running
into
> > > solid rock. An electrician friend of mine says I can drive the ground
rod
> > > in at a 45-degree angle, but that would still run an 8-foot ground rod
to
> > > a depth of more than 5.5 feet below the surface.
> > >
> > > Can't be done.
> > >
> > > So, what do I do next?
> > >
> > Rick
>
> Check out some new builds in the area and see what earthing arrangements
are
> being put in there. The new properties will obviously have to conform
with
> the latest regulations. If the builders have to use a specially long
drill
> rig, you might be able to bribe them to come and drill you a few new
holes.
> Failing that, its welding a long tube onto whatever you have that will
drill
> through granite and then spending a couple of days drilling downwards.
Radio
> hams are supposed to be renowned for their ingenuity and determination
when
```

> > faced with tricky situations. Build an echosounder or ground resistivity
> > meter and scour the plot looking for a crack you can drive rods down
> > through? The possibilities for experimentation are endless.
>
>
> What purpose would be served by putting a grounding rod in solid rock?
>
> All codes/regs I've seen have alternatives for special situations like
> this, such as buried plates or several horizontal, interconnected,
> buried rods.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Jim

Yes, you're absolutely right. I was just thinking about how to punch down through 8 feet of rock rather than the end purpose. Ground radials, plates or earth mats buried as well as possible in the soil make a lot more sense.

Mike G0ULI

3235. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 04:25:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <7bbjm4-pe8.ln1@mail.specsol.com>
Source record: 38645

Mike Kaliski <michael.kaliski@tesco.net> wrote:

> <jimp@specsol.spam.sux.com> wrote in message
> news:n02jm4-hoc.ln1@mail.specsol.com...
> > Mike Kaliski <michael.kaliski@tesco.net> wrote:
> >
> > > "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> > > news:pan.2007.07.13.00.18.32.645242@from.qrz.com...
> > > >
> > > > OK, per the thread on "Question on grounding rods", I'm supposed to
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> > > > 8-foot grounding rods rather than twice as many 4-foot rods. I can
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> > > > that.
> > > >
> > > > But, we're built on a ledge, one big wide rock that stretches from the
> > > > seacoast to the Vermont state line (that's why they call New Hampshire
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> > > > "Granite State"). I can get three feet depth at best before running
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> > > > solid rock. An electrician friend of mine says I can drive the ground
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> > > > in at a 45-degree angle, but that would still run an 8-foot ground rod
> to
> > > > a depth of more than 5.5 feet below the surface.
> > > >
> > > > Can't be done.
> > > >
> > > > So, what do I do next?
> > > >
> > > Rick
> > >
> > > Check out some new builds in the area and see what earthing arrangements
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> > > being put in there. The new properties will obviously have to conform
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> > > the latest regulations. If the builders have to use a specially long
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> > > rig, you might be able to bribe them to come and drill you a few new
> holes.
> > > Failing that, its welding a long tube onto whatever you have that will
> drill
> > > through granite and then spending a couple of days drilling downwards.
> Radio

> > > hams are supposed to be renowned for their ingenuity and determination
> when
> > > faced with tricky situations. Build an echosounder or ground resistivity
> > > meter and scour the plot looking for a crack you can drive rods down
> > > through? The possibilities for experimentation are endless.
> >
> >
> > What purpose would be served by putting a grounding rod in solid rock?
> >
> > All codes/regs I've seen have alternatives for special situations like
> > this, such as buried plates or several horizontal, interconnected,
> > buried rods.
> >
> > --
> > Jim Pennino
> >
> > Remove .spam.sux to reply.

> Jim

> Yes, you're absolutely right. I was just thinking about how to punch down
> through 8 feet of rock rather than the end purpose. Ground radials, plates
> or earth mats buried as well as possible in the soil make a lot more sense.

> Mike G0ULI

There are other conciderations as well such as is this an electrical
ground to meet some code, a lightning protection ground to keep your
insurance in force, or an RF ground to make your antenna work?

--
Jim Pennino

Remove .spam.sux to reply.

3236. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 04:52:18 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996C97483234Bnonenowhere@61.9.191.5>
Source record: 38646

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in
news:Fpidnb-gmvWCTQvbRVnyhgA@bt.com:

> Owen
>
> Equipotential bonding is the process whereby all exposed conductive
> parts are connected together so that they are all at the same (usually
> earth) potential. Cross connecting three independent earthing systems

The problem is that in the event of a lightning strike, nothing is at earth
potential!

Owen

3237. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 10:24:19 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <xYydnZMAN85lzwrbnZ2dnUVZ8tChnZ2d@pipex.net>
Source record: 38647

Rick (W-A-one-R-K-T) wrote:
> OK, per the thread on "Question on grounding rods", I'm supposed to use
> 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> that.
>
> But, we're built on a ledge, one big wide rock that stretches from the
> seacoast to the Vermont state line (that's why they call New Hampshire the
> "Granite State"). I can get three feet depth at best before running into
> solid rock. An electrician friend of mine says I can drive the ground rod
> in at a 45-degree angle, but that would still run an 8-foot ground rod to
> a depth of more than 5.5 feet below the surface.
>
> Can't be done.
>
> So, what do I do next?
>
==========

Don't know your private land situation , but instead of the
'prescribed' 8ft rods you can obtain an excellent rf earthing system by
covering an area with 'galvanised chicken wire mesh 'pegging the mesh to
1 or more short rods or stainless steel pins as used for the BBQ

If you have a grass lawn in your garden cover an area ,the larger the
better, with the above mesh. Within a few weeks ,if not earlier ,the
grass will make the mesh invisible and you will be able to apply a
lawnmower over the mesh to cut the grass.

Ensure the mesh is well connected to a rod via a jubilee clip which also
connected to the shortest possible length of insulated ,thick wire to
the shack. The jubilee clip with mesh and wire connected should be
protected against corrosion by means of self-amalgamating tape

The wire mesh is also a good alternative to multiple radials when using
a vertical antenna

I remember the situation with a Butternut vertical antenna which
initially only had 1 ground spike ,but when surrounded by wire mesh
,signal reports improved by 1 to 2 S-points.

Frank GM0CSZ / KN6WH

3238. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 10:37:38 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <cele93hjjmo90q6e26qlru9hpnb4nvst0b@4ax.com>
Source record: 38648

Buncha papers...

http://www.polyphaser.com/technical_notes.aspx

3239. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 11:02:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <9ZIli.6499$nQ4.5117@trndny01>
Source record: 38649

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.13.00.18.32.645242@from.qrz.com...
>
> OK, per the thread on "Question on grounding rods", I'm supposed to use
> 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> that.
>
> But, we're built on a ledge, one big wide rock that stretches from the
> seacoast to the Vermont state line (that's why they call New Hampshire the
> "Granite State"). I can get three feet depth at best before running into
> solid rock. An electrician friend of mine says I can drive the ground rod
> in at a 45-degree angle, but that would still run an 8-foot ground rod to
> a depth of more than 5.5 feet below the surface.
>
> Can't be done.
>
> So, what do I do next?
>

ok, the answer is:

first, you get your electrician friend to install or update your grounding
to meet the building code. that, by definition, takes care of electrical
safety grounding.

Second, you ask him this: "if i install an antenna (tell him tv antenna on
a tower), how do i ground the tower, and how do i connect it to the existing
ground". do what he says right outside your shack and consider that your
lightning/rf ground improvement, this is where you connect your single point
(equipotential as some people like the big term) ground for the shack
entrance.

NOTE: VERY IMPORTANT! any ground you do for lighting protection for
antennas or for rf MUST be connected PROPERLY to your house power ground...
this is not done through the 3rd prong on your power cords. nor is it done
through a cold water pipe, nor a piece of 14ga wire wrapped around the
ground rod.

Third, if you put up a vertical or some other antenna requiring a ground
screen to reduce losses that must also be connected the same way to your
power ground. the shield of the coax is NOT sufficient.

3240. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 11:03:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <%ZIli.18778$qu5.11682@trndny02>
Source record: 38650

```
"Owen Duffy" <none@no.where> wrote in message
news:Xns996C97483234Bnonenowhere@61.9.191.5...
> "Mike Kaliski" <michael.kaliski@tesco.net> wrote in
> news:Fpidnb-gmvWCTQvbRVnyhgA@bt.com:
>
>> Owen
>>
>> Equipotential bonding is the process whereby all exposed conductive
>> parts are connected together so that they are all at the same (usually
>> earth) potential. Cross connecting three independent earthing systems
>
> The problem is that in the event of a lightning strike, nothing is at
> earth
> potential!
>
> Owen

and a corrolary of this: there is no such thing as an 'rf ground'.
```

3241. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 11:49:35 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <46976788$0$331$e4fe514c@news.xs4all.nl>
Source record: 38652
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:
>
> < quote >
> We hear the average of two frequencies if both frequencies
> are indistinguishably close, say with a difference of some few
> hertz. For example, the combination of a 220 Hz signal and
> a 224 Hz signal with the same amplitude will be perceived as
> a 4 Hz beat of a 222 Hz tone.
> < unquote >
> (..)

> From the example: there's no 222 Hz tone in the air.

That one I'd like to take back.
Obviously the superposition didn't cross my mind.
The matter is actually vibrating at the frequency
of 222 Hz. Not at 220 Hz or 224 Hz.

gr, Hein

3242. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 11:50:07 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <46976788$1$331$e4fe514c@news.xs4all.nl>
Source record: 38651
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:
> David L. Wilson wrote:
>> Hein ten Horn wrote:
>>> ...
>>> So take another example: 25000 Hz and 25006 Hz.
>>> Again, constructive and destructive interference produce 6 Hz
>>> amplitude variations in the air.
>>> But, as we can't hear ultrasonic frequencies, we will not produce
>>> a 25003 Hz perception in our brain. So there's nothing to hear,
>>> no tone and consequently, no beat.
>>
>> If one looks at an oscilloscope of the audio converted to voltage, one
>> still can see the 6Hz variations on the 25003 Hz and still refers to those
>> as tone and beat. These exist in mathematically formulation of the
>> resulting waveforms

Right.

>> not just as something in the brain.

In this particular example nothing is heard
because 25003 Hz is an ultrasonic frequency.

> What is the mathematical formulation?

sin(2 * pi * f_1 * t) + sin(2 * pi * f_2 * t)
or
2 * cos(pi * (f_1 - f_2) * t) * sin(pi * (f_1 + f_2) * t)

So every cubic micrometre of the air (or another medium)
is vibrating in accordance with
2 * cos(2 * pi * 3 * t) * sin(2 * pi * 25003 * t),
thus having a beat frequency of 2*3 = 6 Hz
and a vibration frequency of 25003 Hz
(let alone phase differences of neighbouring
vibrating elements).

gr, Hein

3243. RG-142 or RG-303 Stranded?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 13:48:29 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <bg0f939no846mebvnnf962toa8o1lhcs8e@4ax.com>
Source record: 38653

Does anyone know if it is possible to obtain ether RG-142 or RG-303
coax with a stranded center conductor? If so, do you know of a source?

Thanks,
Danny, KYMHE

3244. Re: RG-142 or RG-303 Stranded?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 13:51:24 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <pq0f93hifsq15obrhb3hdagjljsnii6egv@4ax.com>
Source record: 38654

NUTS! Make that call sign K6MHE

On Fri, 13 Jul 2007 06:48:29 -0700, Danny Richardson
<n_group@k6mhe.com> wrote:

>Does anyone know if it is possible to obtain ether RG-142 or RG-303
>coax with a stranded center conductor? If so, do you know of a source?
>
>Thanks,
>Danny, KYMHE

3245. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 13:57:01 UTC
From: ricknj10@hotmail.com
Message-ID: <469782c5.8444156@news.optonline.net>
Source record: 38655

Hey Guys,
Being such technical experts as we all are, the concept of "quoted text" in newsgroup articles is far less complicated than any technical subject related to antennas or grounding.
Simply, it means when replying to a newsgroup article, the quoted text is the text from the previous articles that you leave in your posting when you send it.
Being that most of us read several of the articles in the thread at the same time we really do not need all of the previous article to see what you are talking about. In fact only a few lines would show us what portion of the text you are commenting on if even that.

When you quote the entire article, we have to hunt through it to see where you are placing your comments or scroll all the way to the bottom to see where your few lines of info lie.

I just received a 78 line article where the poster added 3 lines of his own data.....

If you find this subject difficult to understand, all I am saying is when you reply to a posting, just highlight all or most of the previous material and hit the delete key. Not really difficult.

Thanks,

Rick K2XT

3246. Re: RG-142 or RG-303 Stranded?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 15:16:29 UTC
From: Jay in the Mojave <jay123a@qnet.com>
Message-ID: <139f5qddvlo7pe9@corp.supernews.com>
Source record: 38656

Danny Richardson wrote:
> Does anyone know if it is possible to obtain ether RG-142 or RG-303
> coax with a stranded center conductor? If so, do you know of a source?
>
> Thanks,
> Danny, KYMHE
>

Hello Danny:

Look at RG400 its the same as RG142B, but has a stranded center wire.

But is a little harder to solder some pins or sockets on it. The RG142B uses a spring steel center conductor that is silver plated. The RG142B will not break or come apart. I have used surplus RG142B on my 2 meter and 440 antennas for years with the door slamming on it all the time.

Jay in the Mojave

3247. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 15:32:27 UTC
From: shawn.cormican@gmail.com
Message-ID: <1184340747.603018.231190@o61g2000hsh.googlegroups.com>
Source record: 38657
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 11:11 am, Jeff Liebermann <je...@cruzio.com> wrote:
> John Smith I <assemblywiz...@gmail.com> hath wroth:
>
> >RHF wrote:
> > > ...
> > >> Because "Radium" Touched Them With A Thirst
> > >> For Knowledge And A Quest For Answers.
> > >> ...
> > >I don't know, according to any instructor I have ever had respect for:
> > >"There are NO stupid questions, only stupid people who are afraid to ask
> > >questions."
>
> I beg to differ. My favorite mentor/instructor/employer had a
> different philosophy regarding questions and answers. His line was
> something like "If you don't understand the problem, no solution is
> possible". His method was to concentrate on understanding the
> problem, refining the corresponding questions, and only then
> concentrating on finding the answer. I would spend much more time
> thinking about "what problem am I trying to solve" instead of
> blundering prematurely toward some potentially irrelevant solution.
>
> My problem with the original question is that it fails to associate
> itself with anything recognizable as a real problem to solve or a
> theory to expound. In my never humble opinion, if there was a
> question under all that rubbish, it was quite well hidden and severely
> muddled. He also introduced a substantial number of "facts" that
> varied from irrelevant to incoherent to just plain wrong. The problem
> for us in not in finding the answer, but in decoding the question.
>
> There may not be any stupid questions, but there seem to be a
> substantial number of marginal people asking questions. I answer some
> techy questions in alt.internet.wireless. What I see, all too often,
> are people that seem to think that no effort on their part is
> necessary to obtain an answer. They exert no effort to read the FAQ,
> no effort to supply what problem they are trying to solve, and no
> effort to supply what they have to work with. In this case, Mr Radium
> has either exerted no effort to compose his question in a form that
> can be answered, or if there was such an effort, it has failed
> miserably. He couldn't even find a suitable collection of newsgroups
> for his question.
>
> There may not be any stupid questions, but there certainly are

> questions not worth the time attempting to answer. If Mr Radium had
> left the question at the subject line:
> "AM electromagnetic waves: 20 KHz modulation frequency on
> an astronomically-low carrier frequency"
> the question would have been easy to answer, as several people have
> done. However, those that answered and I all did the same thing. We
> extracted from the word salad question what we thought was something
> resembling a coherent question, and ignored the rest of the rubbish.
> In other words, we did the necessary simplification and problem
> reduction, and discarded the bulk of the incoherent residue. There
> may not be any stupid questions, but if you bury it under a sufficient
> number of words, it may closely resemble a stupid question.
>
> >Depends ... I guess.
> >JS
>
> Well, let's see:
> <http://groups.google.com/groups?as_q=%22guess%28tm%29%22&as_uauthors=...>
> 533 guesses, out of about 16,000 postings, which I guess(tm) isn't all
> that bad.
>
> --
> Jeff Liebermann je...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

thankyou, for the wonderfully varied responses.

here's my question?

as one who simply asks the questions!

can fm waves (any kind) PIGGY BACK ON AM WAVES?

THE IMPLICATIONS ARE FAR REACHING!!!!!!!!!

REMEBER AS OUR GREAT ANCESTORS SO ELOCENTLY PUT IT (PARAPHRASED)

WHEN CONSIDERING THE LIGHT BULB

" I FOUND 2000 NEW WAYS OF THINKING"

BUT THIS GREAT MAN DIDNT FINNISH UNTIL THE GOAL WAS REACHED

ADMIRABLE QUALITIES.

personally speaking, I have no formal or imformal education that can
match the depths of this scientific quorum.

I do have a vision

I hope to find new ways every day of connecting so i can get to the
beaches where the waves and the people think outside the box of normal

surfing and envision a whole new world metaphoricaly speaking.

Im a beach boys fan!!!!!!!!

3248. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 15:32:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ku5f939ovmdmo0ob2u5bnov5g0u7fgsd2h@4ax.com>
Source record: 38658

On Fri, 13 Jul 2007 11:03:23 GMT, "Dave" <noone@nowhere.com> wrote:

>> The problem is that in the event of a lightning strike, nothing is at
>> earth
>> potential!

>and a corrolary of this: there is no such thing as an 'rf ground'.

Two of the oddest statements (barring Gaussian arrays) that have ever
come down the pike.

1. WHAT problem?
2. no such THING?

1. Where are you standing where there is no earth potential in
relation to lightning's potential? Ground may elevate locally in
potential due to current and resistance at the strike point, but if
you are standing there (sans obvious catastrophic effects); your
potential rises in like manner and the sense of ground is preserved.
This is the entire point of a grounding system of equipotential
connections.

2. RF ground is deliberately constructed by the same motivations, at
a higher frequency. Given that lightning's RF pulse consists of a
prominant 1 ï¿½S event, its RF content is very similar to one of
thousands of AM systems that have grounds designed to exhibit a very
low loss. Excluding the catastrophic event, RF ground systems are
designed for other frequencies conforming to the identical
motivations.

73's
Richard Clark, KB7QHC

3249. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 15:45:51 UTC
From: richardharrison@webtv.net
Message-ID: <21675-46979E2F-477@storefull-3252.bay.webtv.net>
Source record: 38659

Dave wrote:
"and a corrolary of this (----in the event of a lightning strike,
nothing is at earth potential):
there is no such thing as an "rf ground"."

I`ve worked at a number of broadcast stations, none of which suffered an iota of lightning damage, though often removed from the air automatically for an instant by a lightning instigated overload. I`m convinced the (120) radials around each tower in their antenna arrays diverted lightning strikes to earth and the strike energy never entered the transmitter building.

Brown, Lewis, and Epstein showed that earth radials can lower the resistance of the RF ground connection to the vanishing point (lower than the earth`s resistance in many cases, think parallel paths). Resistance is low for lower frequencies and DC too. Skin effect goes down with frequency and resonance in radials is eliminated by ground loss.

Best regards, Richard Harrison, KB5WZI

3250. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 16:53:21 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <9raf93p2j3ooigb93narfkm3otlp5rvjjl@4ax.com>
Source record: 38660
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

shawn.cormican@gmail.com hath wroth:

>thankyou, for the wonderfully varied responses.

Please learn to operate a text editor and kindly trim the surplus
quotes from your ranting. I can't stand to read my own stuff twice.

>can fm waves (any kind) PIGGY BACK ON AM WAVES?

Sure. It's called QAM (quadrature amplitude muddlation). The
quadrature part is actually PM (phase modulation), which is a form of
FM (freak modulation). The amplitude also varies at the same time.
Look for the constellation diagrams. Which one is a pig on which back
is an open question.

>personally speaking, I have no formal or imformal education that can
>match the depths of this scientific quorum.

Yeah, it shows.

>I do have a vision

Your vision is not 20-20. I suggest corrective glasses.

>I hope to find new ways every day of connecting so i can get to the
>beaches where the waves and the people think outside the box of normal
>surfing and envision a whole new world metaphoricaly speaking.

Never mind thinking outside the box. Work on thinking in the first
place. Once you master that, you can worry whether it works better
inside or outside a box.

I guess it's true. Too much RF, or too much beach sun, causes
insanity.
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3251. Re: RG-142 or RG-303 Stranded?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 17:05:28 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <e5cf93h4662uscckrj0dgemsbcdht0bv7@4ax.com>
Source record: 38661

On Fri, 13 Jul 2007 08:16:29 -0700, Jay in the Mojave
<jay123a@qnet.com> wrote:

>
>Hello Danny:
>
>Look at RG400 its the same as RG142B, but has a stranded center wire.
>
>But is a little harder to solder some pins or sockets on it. The RG142B
>uses a spring steel center conductor that is silver plated. The RG142B
>will not break or come apart. I have used surplus RG142B on my 2 meter
>and 440 antennas for years with the door slamming on it all the time.
>
>Jay in the Mojave

That's it!

Thanks Jay

73,
Danny, K6MHE

3252. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 17:20:37 UTC
From: Dave <noone@nowhere.com>
Message-ID: <FvOli.14$yx4.10@trndny08>
Source record: 38662

"Rick" <ricknj10@hotmail.com> wrote in message
news:469782c5.8444156@news.optonline.net...
> Hey Guys,
> Being such technical experts as we all are, the concept of "quoted text"
> in
> newsgroup articles is far less complicated than any technical subject
> related
> to antennas or grounding.
> Simply, it means when replying to a newsgroup article, the quoted text is
> the
> text from the previous articles that you leave in your posting when you
> send
> it.
> Being that most of us read several of the articles in the thread at the
> same
> time we really do not need all of the previous article to see what you are
> talking about. In fact only a few lines would show us what portion of the
> text you are commenting on if even that.
>
> When you quote the entire article, we have to hunt through it to see where
> you
> are placing your comments or scroll all the way to the bottom to see where
> your few lines of info lie.
>
> I just received a 78 line article where the poster added 3 lines of his
> own
> data.....
>
> If you find this subject difficult to understand, all I am saying is when
> you
> reply to a posting, just highlight all or most of the previous material
> and
> hit the delete key. Not really difficult.
>
> Thanks,
>
> Rick K2XT

and when you completely change the topic (in this case from ledge to a news
group scolding) you should change the message topic, like the previous
poster did.

3253. Re: Question on grounding rods

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 17:24:12 UTC
From: Dave <noone@nowhere.com>
Message-ID: <0zOli.344$225.312@trndny03>
Source record: 38663

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:21675-46979E2F-477@storefull-3252.bay.webtv.net...
> Dave wrote:
> "and a corrolary of this (----in the event of a lightning strike,
> nothing is at earth potential):
> there is no such thing as an "rf ground"."
>
> I`ve worked at a number of broadcast stations, none of which suffered an
> iota of lightning damage, though often removed from the air
> automatically for an instant by a lightning instigated overload. I`m
> convinced the (120) radials around each tower in their antenna arrays
> diverted lightning strikes to earth and the strike energy never entered
> the transmitter building.
>
> Brown, Lewis, and Epstein showed that earth radials can lower the
> resistance of the RF ground connection to the vanishing point (lower
> than the earth`s resistance in many cases, think parallel paths).
> Resistance is low for lower frequencies and DC too. Skin effect goes
> down with frequency and resonance in radials is eliminated by ground
> loss.
>
> Best regards, Richard Harrison, KB5WZI
>
when everything is properly bonded together the voltage of all the pieces
stays the same... everything may be 10's or 100's of kv above the infinitely
distant ground, but if they are all within a few volts of each other then
you'll never know it. where people get into trouble is they don't provide
for equalizing the local 'ground' voltage with the connections to the
outside world... i.e. you have to have a method to equalize those 10's of
kv's between ground and the power and phone lines coming into your house.
if you don't provide a low impedance path then your equipment will make one
for you, usually by releasing the blue smoke.

3254. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 18:22:35 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f78ftbpln1@nntp1.jpl.nasa.gov>
Source record: 38664

Rick (W-A-one-R-K-T) wrote:
> OK, per the thread on "Question on grounding rods", I'm supposed to use
> 8-foot grounding rods rather than twice as many 4-foot rods. I can see
> that.
>
> But, we're built on a ledge, one big wide rock that stretches from the
> seacoast to the Vermont state line (that's why they call New Hampshire the
> "Granite State"). I can get three feet depth at best before running into
> solid rock. An electrician friend of mine says I can drive the ground rod
> in at a 45-degree angle, but that would still run an 8-foot ground rod to
> a depth of more than 5.5 feet below the surface.
>
> Can't be done.
>
> So, what do I do next?
>
I assume you're subject to the National Electrical Code in some version
or another?

What do you do? You use a Concrete Encased Grounding Electrode

Dig trench, lay wire, fill with concrete, done.

(The NEC also allows you to dig trench, lay your 8 foot rod sideways in
the trench, and then backfill.. but the CEGE is a better ground)

3255. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 19:00:38 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f78i4r$5tr$1@news.service.uci.edu>
Source record: 38665
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:

> Hein ten Horn wrote:
>
>>< quote >
>>We hear the average of two frequencies if both frequencies
>>are indistinguishably close, say with a difference of some few
>>hertz. For example, the combination of a 220 Hz signal and
>>a 224 Hz signal with the same amplitude will be perceived as
>>a 4 Hz beat of a 222 Hz tone.
>>< unquote >
>>(..)
>
>
>>From the example: there's no 222 Hz tone in the air.
>
>
> That one I'd like to take back.
> Obviously the superposition didn't cross my mind.
> The matter is actually vibrating at the frequency
> of 222 Hz. Not at 220 Hz or 224 Hz.
>
> gr, Hein

You were correct before. It might be correct to say that matter is
vibrating at an average, or effective frequency of 222 Hz. But the
only sine waves present in the air are vibrating at 220 Hz and 224 Hz.
Obviously. It's a very simple matter to verify this by experiment.
You really ought to perform it (as I just did) before posting
further on the subject.

jk

3256. Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 19:16:45 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.13.19.16.44.187104@from.qrz.com>
Source record: 38666

In the 2007 ARRL Handbook page 3.6, there is a discussion of building a ground ring around the base of the tower, connected to three ground rods each connected to each leg of the tower.

In the narrative it says "Space rods at least 6 feet apart" but then in the caption for the accompanying drawing it says Locate ground rods on the ring as close as possible to their respective tower legs".

On a Rohn 25G, the rods can't be "as close as possible" to their respective tower legs and still be anywhere near 6 feet apart.

So, which is it ... close to their respective tower legs, or 6 feet apart?

What is the reason for the 6-foot separation, anyway? The rods all go into the ground. Why would it make a difference if they're closer together than 6 feet?

3257. Re: AM Radio Receiver based on Spin Exchange Relaxation Free mechanism

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 20:03:44 UTC
From: John Larkin <jjlarkin@highNOTlandTHIStechnologyPART.com>
Message-ID: <73mf93tre96jmga01llu8h9qgir4f8v1lj@4ax.com>
Source record: 38667
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 05 Jul 2007 18:07:22 -0700, Radium <glucegen1@gmail.com>
wrote:

>On Jul 5, 3:19 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>> "Radium" <gluceg...@gmail.com> wrote in message
>>
>> news:1183607055.886963.207560@o11g2000prd.googlegroups.com...> Hi:
>>
>> > Can the Spin Exchange Relaxation Free Magnetometer be used to receiver
>> > distant AM radio signals in which the carrier frequency is 150 KHz?
>> > What if the carrier frequency is 44.1 KHz [for the same reason CDs use
>> > a 44.1 KHz sample rate]? 40 KHz?
>>
>> > Thanks a bunch,
>>
>> > Radium
>>
>> Radium,
>>
>> The simplest answer is no. The reason is that you specify 'distant'. The
>> strength of a magnetic field decays rapidly with distance and for most
>> practical purposes, 800 metres would be a maximum typical detection range
>> for man made magnetic fields as opposed to natural fields like the earth's
>> magnetic field.

A radio signal has an H-field component that doesn't decay like a
near-field magnetic effect. That's why AM radios use loop or rod
antennas that pick off the magnetic component of the em wave.

>
>Radio waves are made up of electric and magnetic fields.

Yes.

>
>Couldn't the Spin Exchange Relaxation Free Magnetometer receive the
>magnetic portions of AM radio waves at the carrier frequencies I
>described? If not, why?

This might be made to work, but gaseous resonances like this are
usually very low bandwidth detectors, often sub-Hz, so sensitivity at
tens of KHz would be pitiful.

RF Reception in this frequency range is dominated by atmospheric noise, so a super-sensitive detector doesn't help. A simple tuned loop antenna and a decent front-end amp, a jfet maybe, is as good as you can do.

John

3258. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 20:45:15 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <4697e482$0$326$e4fe514c@news.xs4all.nl>
Source record: 38668
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

craigm wrote:
> Jim Kelley wrote:
>> David L. Wilson wrote:
>>> Jim Kelley wrote:
>>>>
>>>> At a particular instant in time the period does in fact equal the average
>>>> of the two. But this is true only for an instant every 1/(a-b) seconds.
>>>
>>> How do you come up with anything but a period of of the average of the
>>> two for the enveloped waveform?
>>
>> The error here is in assuming that the sin and cos terms in the
>> equivalent expression are representative of individual waves. They
>> are not. The resultant wave can only be accurately described as the
>> sum of the constituent waves sin(a) and sin(b), or as the function
>> 2sin(.5(a+b))cos(.5(a-b)). That function, plotted against time
>> appears exactly as I have described. I have simply reported what is
>> readily observable.
>
> I would submit you plotted it wrong and/or misinterpreted the results.

Jim, if you'd like me to send you an Excel sheet about this,
please let me know.

gr, Hein

I've sent this post already once. For some strange reason it didn't
come up in rec.radio.shortwave (craigm?).
I only read rec.radio.shortwave these days.
(repost to: sci.electronics.basics, rec.radio.shortwave,
rec.radio.amateur.antenna, alt.cellular.cingular,
alt.internet.wireless)

3259. Need assembly instruction for Diamond CP6 vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 21:00:59 UTC
From: Knut Quabs <quabs@gmx.org>
Message-ID: <4697E80B.50300@gmx.org>
Source record: 38669

Hi all,
I got my hands on a Diamond CP6 vertical, but it's all in bits and
pieces ;-) I need a copy of the assembly instructions.

Anyone knows where to find it, is there a pdf on the net somewhere?

3260. Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 22:10:05 UTC
From: ricknj10@hotmail.com
Message-ID: <4697f742.38265250@news.optonline.net>
Source record: 38670

On Fri, 13 Jul 2007 17:20:37 GMT, "Dave" <noone@nowhere.com> wrote:

>
>"Rick" <ricknj10@hotmail.com> wrote in message
>news:469782c5.8444156@news.optonline.net...
>> Hey Guys,
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>> When you quote the entire article, we have to hunt through it to see where
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>> If you find this subject difficult to understand, all I am saying is when
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>> hit the delete key. Not really difficult.
>>
>> Thanks,
>>
>> Rick K2XT
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>poster did.

Oh you're right. I got it now. But you didn't.
Actually I didn't change the topic. I posted it in the newsgroup where the offenders were, so they might see it.
I'm not trying to start a fight, just improve things a little.

Rick

3261. Re: Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 22:15:20 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <yludnTwMWrsNZArbnZ2dnUVZ8tmhnZ2d@bt.com>
Source record: 38671

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.13.19.16.44.187104@from.qrz.com...
>
> In the 2007 ARRL Handbook page 3.6, there is a discussion of building a
> ground ring around the base of the tower, connected to three ground rods
> each connected to each leg of the tower.
>
> In the narrative it says "Space rods at least 6 feet apart" but then in
> the caption for the accompanying drawing it says Locate ground rods on the
> ring as close as possible to their respective tower legs".
>
> On a Rohn 25G, the rods can't be "as close as possible" to their
> respective tower legs and still be anywhere near 6 feet apart.
>
> So, which is it ... close to their respective tower legs, or 6 feet apart?
>
> What is the reason for the 6-foot separation, anyway? The rods all go
> into the ground. Why would it make a difference if they're closer
> together than 6 feet?
>
Rick

General guidance is to space the rods a minimum of their length from each other. So 8 foot rods should be at least 8 feet apart for optimum results. Its all to do with voltage gradients through the ground when a fault current is flowing through the electrode. Wider spacing tends to reduce the steepness of the voltage gradient and is considered to reduce the risks to people or animals in the vicinity of the earth electrode in event of a fault or lightning strike. Ground voltage gradients of only 50 volts can be lethal to cattle or other quadrupeds.

Placing electrodes close in to tower legs will reduce the path for current to flow if the Rohn 25G tower is struck by lightning and represents a compromise between optimum earthing practice and discharging excess voltage on the tower by the most direct path possible. Precautions are normally taken to keep people and animals away from the immediate vicinity of the base of an antenna tower, so this method of earthing would tend to reduce the hazards associated with this particular design of antenna tower. The requirements for other types of antenna tower installation can be very different depending on the width of the base of the tower, number of support legs and method of anchoring into the ground.

Mike G0ULI

3262. Re: But we're built on a ledge! (was "Question on grounding rods")

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 22:17:21 UTC
From: "X-rated Vermonter"
Message-ID: <04uf939nutu7hp76tje3gf5ja247gotmeh@4ax.com>
Source record: 38672

On Thu, 12 Jul 2007 20:18:34 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>
>OK, per the thread on "Question on grounding rods", I'm supposed to use
>8-foot grounding rods rather than twice as many 4-foot rods. I can see
>that.
>
>But, we're built on a ledge, one big wide rock that stretches from the
>seacoast to the Vermont state line (that's why they call New Hampshire the
>"Granite State"). I can get three feet depth at best before running into
>solid rock. An electrician friend of mine says I can drive the ground rod
>in at a 45-degree angle, but that would still run an 8-foot ground rod to
>a depth of more than 5.5 feet below the surface.
>
>Can't be done.
>
>So, what do I do next?

At 2300 feet up a big hunk of granite in southern VT, we have only
about 1 foot of surface soil, below which it is all low grade granite.
The house was constructed with a Ufer grounding system. Out at the
tower, we installed a system of radial wires from the tower base to
get whatever ground we could.

All of the antennas here are balanced, and we get out quite well on
all bands. The antennas think they are a thousand feet up, and I
have good directionality even out of the 40 meter beam when the crank
up is fully retracted. Raising the tower is only needed for getting
the above the surrounding trees.

One of the things that I observe as a result of living/operating from
a high ground resistance location is that it seems that we seldom get
nearby lightning ground strokes. They seem to hit down in the valley
where the soil is more conductive.

3263. Re: Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 22:46:23 UTC
From: ricknj10@hotmail.com
Message-ID: <46980060.40599000@news.optonline.net>
Source record: 38673

>Mike G0ULI

Excellent posting Mike.
Very impressive, very well thought out and so well written.
Thank you very much.

Rick K2XT

3264. Re: Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 23:08:49 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f790m2$5k0$1@nntp1.jpl.nasa.gov>
Source record: 38675

Rick (W-A-one-R-K-T) wrote:
> In the 2007 ARRL Handbook page 3.6, there is a discussion of building a
> ground ring around the base of the tower, connected to three ground rods
> each connected to each leg of the tower.
>
> In the narrative it says "Space rods at least 6 feet apart" but then in
> the caption for the accompanying drawing it says Locate ground rods on the
> ring as close as possible to their respective tower legs".
>
> On a Rohn 25G, the rods can't be "as close as possible" to their
> respective tower legs and still be anywhere near 6 feet apart.
>
> So, which is it ... close to their respective tower legs, or 6 feet apart?
probably the 6 feet apart, but it doesn't make a heck of a lot of
difference..
one approach gives you a lower ground resistance
the other approach gives you shorter wires from tower to ground rod,
which has less inductance.

And, if your tower is going to be sitting on a big block of concrete and
rebar, and you put a suitable copper wire in the concrete, that is
probably a better ground than any set of rods, because the surface area
is huge. (unlike a rod, where you've got all of 1/2 a square foot or so
surface area)

>
> What is the reason for the 6-foot separation, anyway? The rods all go
> into the ground. Why would it make a difference if they're closer
> together than 6 feet?
>

Consider if you drove two rods two inches apart.. it would have the
ground resistance of one rod (or very close to it). If you separate the
rods by their length (or thereabouts), the effect is to almost halve the
ground resistance. Separataing by much more than a rod length doesn't
change things much.

Think of a rod as not just a rod, but a sort of squashed hemisphere.

if you want equations for all sorts of configurations:
http://home.earthlink.net/~jimlux/hv/grounds.htm

mostly taken from IEEE Std 142

3265. Re: Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 23:11:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f790r1$5k0$2@nntp1.jpl.nasa.gov>
Source record: 38676

Mike Kaliski wrote:
> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
> news:pan.2007.07.13.19.16.44.187104@from.qrz.com...
>
>>In the 2007 ARRL Handbook page 3.6, there is a discussion of building a
>>ground ring around the base of the tower, connected to three ground rods
>>each connected to each leg of the tower.
>>
>>In the narrative it says "Space rods at least 6 feet apart" but then in
>>the caption for the accompanying drawing it says Locate ground rods on the
>>ring as close as possible to their respective tower legs".
>>
>>On a Rohn 25G, the rods can't be "as close as possible" to their
>>respective tower legs and still be anywhere near 6 feet apart.
>>
>>So, which is it ... close to their respective tower legs, or 6 feet apart?
>>
>>What is the reason for the 6-foot separation, anyway? The rods all go
>>into the ground. Why would it make a difference if they're closer
>>together than 6 feet?
>>
>
> Rick
>
> General guidance is to space the rods a minimum of their length from each
> other. So 8 foot rods should be at least 8 feet apart for optimum results.
> Its all to do with voltage gradients through the ground when a fault current
> is flowing through the electrode. Wider spacing tends to reduce the
> steepness of the voltage gradient and is considered to reduce the risks to
> people or animals in the vicinity of the earth electrode in event of a fault
> or lightning strike. Ground voltage gradients of only 50 volts can be lethal
> to cattle or other quadrupeds.

Also to reduce the grounding resistance. Close rods don't reduce the
resistance as much as farther rods. This is probably a more common
reason for multiple rods, rather than reducing step potential. Places
with step potential hazards (e.g. electrical substations) tend to use
ground grids, since, as long as you're buying all that heavy copper
cable to connect the rods (not to mention the above ground
infrastructure), you might as well just bury it.

3266. Re: Question on ground rods at base of tower

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-13 23:38:26 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996D62116900nonenowhere@61.9.191.5>
Source record: 38674

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.13.19.16.44.187104@from.qrz.com:

>
> In the 2007 ARRL Handbook page 3.6, there is a discussion of building
> a ground ring around the base of the tower, connected to three ground
> rods each connected to each leg of the tower.
>
> In the narrative it says "Space rods at least 6 feet apart" but then
> in the caption for the accompanying drawing it says Locate ground rods
> on the ring as close as possible to their respective tower legs".
>
> On a Rohn 25G, the rods can't be "as close as possible" to their
> respective tower legs and still be anywhere near 6 feet apart.
>
> So, which is it ... close to their respective tower legs, or 6 feet
> apart?
>
> What is the reason for the 6-foot separation, anyway? The rods all go
> into the ground. Why would it make a difference if they're closer
> together than 6 feet?

The electrodes are placed in a quite resistive medium.

Increasing the diameter of an electrode does reduce the resistance of the earth connection but by very little. Fig 1 at http://www.vk1od.net/post/earthing.htm shows the effect of different diameters on electrode resistance.

If you place a second electrode right next to an existing one, you will obtain almost no reduction in resistance to earth, it is not a lot different to increasing the diameter of the electrode. At increased spacing, the improvement is better and at large spacing aproaches halving the resistance of the single electrode, but offset to some extent by the inductance and resistance of the connecting conductor.

In homogenous ground (and that is some assumption), it turns out that increasing the spacing of driven vertical electrods beyond their own length is of quickly diminishing benefit, so a common ROT is to drive electrodes in a matrix of cell size about the length of the rods.

Someone else raised the issue of step voltage (the voltage between your feet when you walk on ground carrying a large current). That is usually mitigated by a (amongst other things) a conductive earth mat layed on the surface and bonded to the electrode system. Nevertheless, it is not a good idea for two people to carry a length of pipe (or a beam) over

ground subject to fault currents or likely lightning discharge.

So back to your specific question, if you place the three electrodes close to each other (as a consequency of placing them at the tower legs), the earth resistance is higher than it should be with greater spacing. If you space them too far, the added inductance of the conductor connecting them offsets to some extent the reduction in electrode resistance. I haven't read the article to which you refer, but I wouldn't waste time driving an electrode less than 2.4m, and I would not bother driving a 2.4m electrode electrode within 2.4m of another.

Electrodes are real cheap, and excluding rock, you can drive them with an electric hammer and an adapter in minutes. You are trying to shed discharge current to earth, so don't be shy about it.

Owen

3267. Re: Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 00:07:13 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <RsUli.36517$G23.26053@newsreading01.news.tds.net>
Source record: 38677

I am glad that you did not also lecture us on the additional elements of posting style
http://en.wikipedia.org/wiki/Top-posting#Top-posting

"Rick" <ricknj10@hotmail.com> wrote in message
news:4697f742.38265250@news.optonline.net...
[snip]
>
> Oh you're right. I got it now. But you didn't.
> Actually I didn't change the topic. I posted it in the newsgroup where
> the
> offenders were, so they might see it.
> I'm not trying to start a fight, just improve things a little.
>
> Rick
>

3268. Re: Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 00:12:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <fyUli.30$yx4.22@trndny08>
Source record: 38678

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:RsUli.36517$G23.26053@newsreading01.news.tds.net...
>I am glad that you did not also lecture us on the additional elements of
>posting style
> http://en.wikipedia.org/wiki/Top-posting#Top-posting
>
> "Rick" <ricknj10@hotmail.com> wrote in message
> news:4697f742.38265250@news.optonline.net...
> [snip]
>>
>> Oh you're right. I got it now. But you didn't.
>> Actually I didn't change the topic. I posted it in the newsgroup where
>> the

i prefer middle posting.

>> offenders were, so they might see it.
>> I'm not trying to start a fight, just improve things a little.
>>
>> Rick
>>
>
>

3269. Re: Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 00:58:18 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <KcVli.36519$G23.28258@newsreading01.news.tds.net>
Source record: 38679

I much prefer your example of posting an opinion as opposed to giving us a sermon.

"Dave" <noone@nowhere.com> wrote in message news:fyUli.30$yx4.22@trndny08...
>
> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
> news:RsUli.36517$G23.26053@newsreading01.news.tds.net...
>>I am glad that you did not also lecture us on the additional elements of
>>posting style
>> http://en.wikipedia.org/wiki/Top-posting#Top-posting
>>
>> "Rick" <ricknj10@hotmail.com> wrote in message
>> news:4697f742.38265250@news.optonline.net...
>> [snip]
>>>
>>> Oh you're right. I got it now. But you didn't.
>>> Actually I didn't change the topic. I posted it in the newsgroup where
>>> the
>
> i prefer middle posting.
>
>>> offenders were, so they might see it.
>>> I'm not trying to start a fight, just improve things a little.
>>>
>>> Rick
>>>
>>
>>
>
>

3270. How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 01:16:32 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.01.16.31.890353@from.qrz.com>
Source record: 38680

Thanks to all for all the information you have provided, including the latest thread on "ground rods at base of tower". The explanations received were very well thought out and comprehensive, and make all the sense in the world when one stops to think for a minute... :-)

Now the fun begins.

I went down to the electrical supply house and bought 3 8-ft ground rods and started driving one in at about a 45 degree angle under the window of the shack.

As expected, I am having one hell of a time getting it into the ground.

Every little while I stop and put a pencil mark on the rod down near the ground, and beat the end of the rod 10 or 15 more times, then look to see if the pencil mark has moved. So far it is moving but not much... but at least it's moving so presumably I haven't hit immovable rock yet.

Someone said something about an electric hammer and that I could drive the rod into the ground in "minutes". If I go to try to rent one of those, what should I be looking for?

Also, when I bought the ground rods the guy at the electrical shop showed me something called a Sluggo-Ox (www.sluggo-ox.com), touted as "the ultimate ground rod driving tool". It's not much more than a heavy block of tempered steel with a hole in one end that you place over the rod, and a LARGE head on the other end that you hit with your hammer. It claims to makes it easier to actually hit the end of the rod (which I am doing only about 60 percent of the time when I swing the sledgehammer). It also costs $120 (!!), at least that's what this place charges for it. I'm almost ready to go get one if it will help. Well, maybe not quite "almost" ready... ;-)

Anything else that will make the job a little easier? I gave up for the day after about an hour and a half (it started raining so I figured that was as good an excuse as I needed...)... figured on starting in again on Sunday (tomorrow is booked...).

3271. Re: Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 01:29:32 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.01.29.29.157914@from.qrz.com>
Source record: 38681

On Fri, 13 Jul 2007 22:10:05 +0000, Rick wrote:

> Oh you're right. I got it now. But you didn't.
> Actually I didn't change the topic. I posted it in the newsgroup where
> the offenders were, so they might see it. I'm not trying to start a
> fight, just improve things a little.

Good evening, Rick.

Well, I (and presumably others) would have been a lot happier if you hadn't done it by "hijacking" the "we're on a ledge" thread.

When you do a followup (reply) to a topic and just change the topic, it messes up threaded newsreaders big time, so that now every time a new article comes in on the "Quoted text" thread, I get a notification that something came in on my "we're built on a ledge" thread when it's really a completely different topic entirely.

In the future please, PLEASE start a new thread rather than replying to an old one if you're going to change the topic.

Thanks...

3272. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 02:04:34 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996D7AD807630nonenowhere@61.9.191.5>
Source record: 38582

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.14.01.16.31.890353@from.qrz.com:

>
> Someone said something about an electric hammer and that I could drive
> the rod into the ground in "minutes". If I go to try to rent one of
> those, what should I be looking for?

I made the adapter for mine from a regular bull point which was cut off, annealed and drilled with a blind 15.1 mm hole, then re-tempered. The sytem drives rods is as quick as you can climb down the ladder. I have driven 24' electrodes (3 x 8' with couplers) using this system.

No doubt they can be purchased, but you may be able to rent the hammer and driver. If you cannot rent a driver specific to earth electrods, you may be able to get a driver for star pickets (or whatever you call them) and make a small adapter to keep the electrode centred in the adapter.

See how you think after you have hit your hand a couple of times!

You will see articles on the net describing drilling a hole with a hose and a peice of pipe. I have reservations about this, because it is no longer a drive electrode. I have not seen this method used by commercial applications and I suspect that if one was contracted to drive electrodes, this would not be an acceptable method.

Owen

3273. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 02:21:58 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <arWli.6921$rR.5390@newsread2.news.pas.earthlink.net>
Source record: 38583

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.14.01.16.31.890353@from.qrz.com...
>
> Thanks to all for all the information you have provided, including the
> latest thread on "ground rods at base of tower". The explanations
> received were very well thought out and comprehensive, and make all the
> sense in the world when one stops to think for a minute... :-)
>
> Now the fun begins.
>
> I went down to the electrical supply house and bought 3 8-ft ground rods
> and started driving one in at about a 45 degree angle under the window of
> the shack.
>
> As expected, I am having one hell of a time getting it into the ground.
>
> Every little while I stop and put a pencil mark on the rod down near the
> ground, and beat the end of the rod 10 or 15 more times, then look to see
> if the pencil mark has moved. So far it is moving but not much... but at
> least it's moving so presumably I haven't hit immovable rock yet.
>

If it is regular ground and not rocks it is easy to put ground rods in with just your hands and a gallon or two of water, maybe less.

Dig out a hole about 4 or 5 inches in diameter and about that deep. Fill it with water. Put the ground rod in the center of that hole and push it down. Then pull it back slightly. Doing this several times you should be able to get to get it down several inches with each cycle. Keep doing this without stopping. If you get to about 3 or 4 feet put the rod all the way out and fill the hole with water . Put the rod back in the same hole and keep pushing and pulling it a few inches at a time. You may want to wear gloves. I usually put a pair of Vice Grip pliers on the rod to act as a handle to get a beter grip.

Using this method I sunk two ground rods in the ground in about 15 minuits or less for each.

3274. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 02:43:43 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <JMmdncBfyccJpQXbnZ2dnUVZ_qm3nZ2d@giganews.com>
Source record: 38584

Rick wrote:
>
> Someone said something about an electric hammer and that I could drive
> the rod into the ground in "minutes". If I go to try to rent one of those,
> what should I be looking for?

Rental yards call them "demolition hammers"... available in various forms (electric, pneumatic, etc) and sizes (45#, 60#, 90#, etc).

> Also, when I bought the ground rods the guy at the electrical shop showed
> me something called a Sluggo-Ox (www.sluggo-ox.com), touted as "the
> ultimate ground rod driving tool". It's not much more than a heavy block
> of tempered steel with a hole in one end that you place over the rod, and
> a LARGE head on the other end that you hit with your hammer. It claims to
> makes it easier to actually hit the end of the rod (which I am doing only
> about 60 percent of the time when I swing the sledgehammer). It also
> costs $120 (!!), at least that's what this place charges for it. I'm
> almost ready to go get one if it will help. Well, maybe not quite "almost"
> ready... ;-)

Perhaps your local rental yard has something like this for rent -- the general term would be "slide-hammer".

> Anything else that will make the job a little easier? I gave up for the
> day after about an hour and a half (it started raining so I figured that
> was as good an excuse as I needed...)... figured on starting in again on
> Sunday (tomorrow is booked...).

Saturating the ground may help a little (or a lot). I've used the garden hose left on a trickle with the end of the hose against the ground rod.

Bryan WA7PRC

3275. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 03:21:01 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <xiXli.406$gC5.191@trnddc04>
Source record: 38585

Hey, I'm just learning and absorbing so anything new is a place for me to
start. Thanks again!
woody

"Owen Duffy" <none@no.where> wrote in message
news:Xns996BD7B2B70E3nonenowhere@61.9.191.5...
> "Woody" <ts520@hotmail.com> wrote in news:hYdli.29709$BT3.8034@trnddc06:
>
>> Hi Owen. 5% was just a number picked out at random by me for
>> clarification of my question.
>> So you wouldn't want to share your 'sweet' findings, would you??
>> thanks!
>
> I had a dig around through a few thousand spreadsheets... and found it.
>
> 9.05m, 12.6m, 18.3m, 26.4m, 33.3m, 44.9m.
>
> If you want to cover 60m, leave the 26.4 out of the list.
>
> Did someone mention 60' (18.3m), it is in the list, but it is more
> critical than 26.4 or 12.6.
>
> As noted in my earlier post, if you want to be 10% or more away from n
> half waves on all bands, there is no solution.
>
> These calcs don't consider proximity of objects that may shift the
> tuning.
>
> My advice still stands that the higher order parallel resonances aren't
> such an issue, so this method unnecessarily constrains the solution..
>
> Owen

3276. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 03:22:28 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <UjXli.407$gC5.312@trnddc04>
Source record: 38586

Yep, amen to that! LOL...
woody

"Denny" <k8do@mailblocks.com> wrote in message
news:1184240302.631657.42090@o61g2000hsh.googlegroups.com...
> Yes, the history of the autotuners is fascinating...
> The discussion of integral half waves, parallel resonance impedences,
> ground impedences, etc., is meat and potatos for antenna freaks like
> me...
>
> BTW, in the older ARRL handbooks is a table of guy wire lengths (for
> towers) that avoid resonances in the ham bands... Those lengths would
> make an excellent guide for the length of a random wire antenna... It
> might also be in the new editions, but I haven't looked at one in
> recent years.. Anyway, that table will give you a good starting
> point...
>
> B U T , what I want you to do is to simply either cobble up an L
> match, or pick up a tuner (any tuner, automatic or not), run some wire
> <any length> through those trees, and get on the air!
> If the tuner has problems with any particular band, change the length
> of the wire by 4 to 12 feet until it tunes OK...
> Once you have a working antenna you can spend time and energy gilding
> the lily with just the 'perfect' length and configuration...
>
> Don't waste time over analyzing - pick a tuner, throw up some wire
> and ground radials, and operate...
> A local ham who lives in a trailor park is closing in on 300 countries
> confirmed and his only antenna for all this is a single multiband
> vertical, 21 feet tall, disguised as a flag pole...
>
> Just do it...
>
> cheers ... denny
>

3277. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 03:23:40 UTC
From: Woody <ts520@hotmail.com>
Message-ID: <0IXli.408$gC5.33@trnddc04>
Source record: 38587

LOL, and then there's that....

also a great idea!
thanks much!
Woody

"Bruce in Alaska" <bruceg@btpost.net> wrote in message
news:bruceg-C22641.10484612072007@netnews.worldnet.att.net...
> In article <t3ali.3392$Y_3.570@trnddc04>, "Woody" <ts520@hotmail.com>
> wrote:
>
>> Well.. a million thanks for that. Quite a cool history lesson as well. So
>> now I'm looking for an SEA tuner... LOL...
>>
>> Listen, that all makes perfect sense but just to clarify, a.) now I know
>> why
>> that triton did so poorly when tested. We calc'd 1/2 wavelength for the
>> longwire, and b.) Again, for continuity and clarity of this thread for
>> future surfers..... what then, considering our discussed auto-tuners,
>> would
>> be the optimal length for a longwire that would be used for amateur/MARS,
>> 3-30MHz?
>> Pick 1/2wavelength on say 2.8Mhz and just cut it? Or calc 1/2wavelength
>> on
>> the lowest and add 5% or some arbitrary odd number??
>> Which plan will offer the least chance of dropping a 1/2wl further up the
>> band on a desired frequency?
>> thanks,
>> Woody
>>
>
> What we did, is to try and have a Longwire with a 1/4 Wave Point near
> the lowest Operating Frequency like for the 2006Khz Alaska Private
> Fixed Frequency, then calculate the Natural 1/2 Wave Point for that
> Wire, then adjust the 1/4 Wave Length, SHORTER, until the 1/2 Wave Point
> DeadBand (2.5% or so) was in a part of the speectrum the Station wasn't
> Licensed for, Marine and Alaska Private Fixed have specific Channels,
> and Bands in the MF/HF Spectrum, and it isn't to hard to move the
> DeadBand to a nonused portion of the Spectrum. For the HAMS, that want
> a "Do everything, cover the whole Dc to Light Spectrum, with one
> Longwire Tunter", the answer is "Design and Build your own Dam Tuner
> with an integrate Longwire Switch and put up Multiple lengths of wire",
> because there isn't a product out there, that I am aware, of that does
> this, YET....
>

> Bruce in alaska
> --
> add a <2> before @

3278. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 03:36:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s0hg9355m1r744vjkfmv7imaqv4meggiht@4ax.com>
Source record: 38588

On Fri, 13 Jul 2007 16:56:57 -0700, Bill <k4wge@arrl.net> wrote:

>On Jul 9, 2:16 am, Richard Clark <kb7...@comcast.net> wrote:
>> Anything more convoluted is unlikely to
>> give you more performance.
>
>Should you check with your legal counsel before you make that
>statement?

Talk about convolution. Plug your legal counsel in and see if DX pegs
the S-Meter.

73's
Richard Clark, KB7QHC

3279. Re: Need assembly instruction for Diamond CP6 vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 03:41:03 UTC
From: Knut Quabs <quabs@gmx.org>
Message-ID: <469845CF.9010508@gmx.org>
Source record: 38589

helmsman schrieb:

> e-mail Diamond Antenna's
Do you mean Diamond Antennas?

3280. Please don't trivialize [was Re: Do magnetars emit audible LW AM radio waves that can be heard on receivers?]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 04:23:59 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184387039.122470.226910@e9g2000prf.googlegroups.com>
Source record: 38591
Cross-posted to: rec.audio.tech,rec.radio.amateur.antenna,sci.physics,sci.physics.electromag,rec.radio.amateur.space

On Jul 13, 4:55 pm, j...@specsol.spam.sux.com wrote in
http://groups.google.com/group/sci.astro.amateur/msg/4672c2fa9e3e8f5e?hl=en&
:

> In rec.radio.amateur.space Radium <gluceg...@gmail.com> wrote:

> > Okay. But what if this is a supercooled AM radio receiver on a
> > spaceship orbiting Earth? If I am on a space station like MIR and this
> > station has a supercooled AM radio 44.1 KHz frequency receiver, will I
> > hear anything specific of magnetars?

> Generally, super cooled electronic components stop working.

Isn't a super cooled receiver less vulnerable to thermal noise than a
receiver of a higher temperature? This is why SETI super-cools their
radio receivers. So that the heat will not generate electric currents
that would drown-out the intended signals in hiss.

> > 44.1 KHz is the carrier-frequency this hypothetical receiver receives.

> A super stupid frequency to pick. Generally for listening for natural
> phenomena, you want a wide as possible bandwidth given the noise
> floor.

But humans only hear from 20 to 20,000 Hz. So why use a higher
frequency?

>From what you think, what is the best frequency for listening to
magnetars and other natural phenomena?

> > I place the frequency of this hypothetical AM radio carrier wave at
> > 44.1 KHz for the same reason CDs use a sample rate of 44.1 KHz -- it
> > is the minimum required to prevent aliasing.

> An AM receiver isn't digitizing anything, sample rates don't apply,
> and aliasing doesn't apply.

Isn't it true that the carrier-frequency must be at least 2x the
highest intended frequency of the modulator signal?

I am not talking about sample rates. I am talking about carrier
frequency. From the answers to my previous questions regarding carrier
frequencies, I thought it was established that you mathematically
can't have a modulator frequency more than 0.5x the carrier-frequency.
What happened?

Since humans hear up to 20 KHz it is mathematically-required that the carrier frequency be at least 40 KHz or 2 x 20 KHz. Due to physical factors it would be most practical to use a carrier frequency slightly higher than 2x the maximum intended modulator frequency -- hence 44.1 KHz.

3281. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 04:24:30 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46984f9d$0$8004$4c368faf@roadrunner.com>
Source record: 38590
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Rich Grise" <rich@example.net> wrote in message
news:pan.2007.07.12.17.28.11.148983@example.net...
> On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
>
>> "NotMe" <me@privacy.net> hath wroth:
>>
>> (Please learn to trim quotations)
>>
>>>Actually the human ear can detect a beat note down to a few cycles.

If you are talking about the beat between two close
audio frequencies then one can easily hear a beat way
below 1 Hz.

>>
>> No, you cannot. Figure on 20Hz to 20KHz for human hearing:
>> <http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>
>>
>> What happens when you zero beat something is that your brain is filling
>> in
>> the missing frequencies. As you tune across the frequency, and the beat
>> note goes down in frequency, most people overshoot to the other side, and
>> then compensate by splitting the different.

If you are talking about beat frequency heard when
tuning to a carrier with a radio with a BFO or in SSB mode
then one can't hear any beat below 50 Hz or so.
The audio section of the receiver blocks anything
below about 50 Hz.

>
> No, you've got it all wrong. The beat note happens because, when the
> signals are close to 180 degrees out of phase, they cancel out such that
> there is, in fact, no sound. This is what your ear detects. Now, if
> you're zero-beating, say, 400 Hz against 401 Hz, I don't know if the
> 801 Hz component is audible or if it's even really there, but
> mathematically, it kinda has to, doesn't it?

Are you talking radios or guitars?
With a guitar you might beat 400 Hz against 401 Hz.
With a radio you'd more likely beat 455 kHz against
455.001 kHz.

>
> Thanks,
> Rich
>

3282. Linux and NEC codes?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 04:38:35 UTC
From: "Leland C. Scott" <kc8ldo@arrl.net>
Message-ID: <RtCdneDp4vjRzgXbnZ2dnUVZ_gmdnZ2d@comcast.com>
Source record: 38592

Anybody have a recommendation for an open source NEC based antenna program that runs on Linux? If there are any utilities that can display the antenna structure and field patterns that would be a bonus. Plus has anybody used the OpenOffice program "Calc", or some other utility, to automate the generation of the input card deck?

I know about the following site:

http://www.si-list.net/swindex.html

I just haven't had time to play with any of the Linux software. I was hoping somebody else already has done so.

--
Regards,
Leland C. Scott
KC8LDO

3283. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 04:45:39 UTC
From: NotMe <me@privacy.net>
Message-ID: <3yYli.1570$aJ6.871@newsfe12.lga>
Source record: 38593
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular

"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:46984f9d$0$8004$4c368faf@roadrunner.com...
|
| "Rich Grise" <rich@example.net> wrote in message
| news:pan.2007.07.12.17.28.11.148983@example.net...
| > On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
| >
| >> "NotMe" <me@privacy.net> hath wroth:
| >>
| >> (Please learn to trim quotations)
| >>
| >>>Actually the human ear can detect a beat note down to a few cycles.
|
| If you are talking about the beat between two close
| audio frequencies then one can easily hear a beat way
| below 1 Hz.

Based on studies done at Tulane Department of Neurology (mid 60's) the
detection is not in the ear but in the brain. The process can be taught and
refined though bio-feedback.

3284. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 05:06:22 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4698596c$0$4900$4c368faf@roadrunner.com>
Source record: 38594
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:46976788$1$331$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> David L. Wilson wrote:
>>> Hein ten Horn wrote:
>>>> ...
>>>> So take another example: 25000 Hz and 25006 Hz.
>>>> Again, constructive and destructive interference produce 6 Hz
>>>> amplitude variations in the air.
>>>> But, as we can't hear ultrasonic frequencies, we will not produce
>>>> a 25003 Hz perception in our brain. So there's nothing to hear,
>>>> no tone and consequently, no beat.
>>>
>>> If one looks at an oscilloscope of the audio converted to voltage, one
>>> still can see the 6Hz variations on the 25003 Hz and still refers to
>>> those
>>> as tone and beat. These exist in mathematically formulation of the
>>> resulting waveforms
>
> Right.
>
>>> not just as something in the brain.
>
> In this particular example nothing is heard
> because 25003 Hz is an ultrasonic frequency.
>
>
>> What is the mathematical formulation?
>
> sin(2 * pi * f_1 * t) + sin(2 * pi * f_2 * t)
> or
> 2 * cos(pi * (f_1 - f_2) * t) * sin(pi * (f_1 + f_2) * t)
>
> So every cubic micrometre of the air (or another medium)
> is vibrating in accordance with
> 2 * cos(2 * pi * 3 * t) * sin(2 * pi * 25003 * t),
> thus having a beat frequency of 2*3 = 6 Hz

How do you arrive at a "beat"?
Hint: Any such assessment is nonlinear.
(And kudos to you that you can do the math.)

Simplifying the math:
x = cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
(Where a = 2 * pi * f_1 * t and b = same but f_2.)
All three of the above are equivalent. There is no difference.
You get x if you add two sine waves or if you
multiply two (different) sine waves.
So which is it really? Hint: If all you have is x then
you can't tell how it was generated.

What you do with it afterwards can make a
difference.

> and a vibration frequency of 25003 Hz
> (let alone phase differences of neighbouring
> vibrating elements).
>
> gr, Hein
>
>

3285. Re: Please don't trivialize [was Re: Do magnetars emit audible LW AM radio waves that can be heard on receivers?]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 05:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <7h2mm4-36k.ln1@mail.specsol.com>
Source record: 38595
Cross-posted to: rec.audio.tech,rec.radio.amateur.antenna,sci.physics,sci.physics.electromag,rec.radio.amateur.space

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jul 13, 4:55 pm, j...@specsol.spam.sux.com wrote in
> http://groups.google.com/group/sci.astro.amateur/msg/4672c2fa9e3e8f5e?hl=en&
> :

> > In rec.radio.amateur.space Radium <gluceg...@gmail.com> wrote:

> > > Okay. But what if this is a supercooled AM radio receiver on a
> > > spaceship orbiting Earth? If I am on a space station like MIR and this
> > > station has a supercooled AM radio 44.1 KHz frequency receiver, will I
> > > hear anything specific of magnetars?

> > Generally, super cooled electronic components stop working.

> Isn't a super cooled receiver less vulnerable to thermal noise than a
> receiver of a higher temperature? This is why SETI super-cools their
> radio receivers. So that the heat will not generate electric currents
> that would drown-out the intended signals in hiss.

> > > 44.1 KHz is the carrier-frequency this hypothetical receiver receives.

> > A super stupid frequency to pick. Generally for listening for natural
> > phenomena, you want a wide as possible bandwidth given the noise
> > floor.

> But humans only hear from 20 to 20,000 Hz. So why use a higher
> frequency?

> >From what you think, what is the best frequency for listening to
> magnetars and other natural phenomena?

> > > I place the frequency of this hypothetical AM radio carrier wave at
> > > 44.1 KHz for the same reason CDs use a sample rate of 44.1 KHz -- it
> > > is the minimum required to prevent aliasing.

> > An AM receiver isn't digitizing anything, sample rates don't apply,
> > and aliasing doesn't apply.

> Isn't it true that the carrier-frequency must be at least 2x the
> highest intended frequency of the modulator signal?

> I am not talking about sample rates. I am talking about carrier
> frequency. From the answers to my previous questions regarding carrier
> frequencies, I thought it was established that you mathematically
> can't have a modulator frequency more than 0.5x the carrier-frequency.
> What happened?

> Since humans hear up to 20 KHz it is mathematically-required that the
> carrier frequency be at least 40 KHz or 2 x 20 KHz. Due to physical
> factors it would be most practical to use a carrier frequency slightly
> higher than 2x the maximum intended modulator frequency -- hence 44.1
> KHz.

If you had the slightest bit of education or common sense, you would
be asking a question that makes sense instead of going on forever
about the minutiae of what makes your questions idiotic.

Here's a question that makes sense:

Are there any sources of RF energy outside our solar system that
could possiblely be detected given an environment free of the
constraints of the ionsphere and man made noise?

If so, what frequecy or frequencies would they be seen at and what
would be the general characteristics of such a signal?

Also, the same question but operating from the Earth's surface.

And this is an astronomy/astro-physics question, not an electromagnetics
question.

Notice there is nothing in there about "supercooling", modulation
type, sampling rates, or any of the other nonsense in your question.

Babbling twit.

--
Jim Pennino

Remove .spam.sux to reply.

3286. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 06:14:28 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <veadnW0BnPgm9AXbnZ2dnUVZ_ournZ2d@giganews.com>
Source record: 38596
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:46984f9d$0$8004$4c368faf@roadrunner.com...
> |
> | "Rich Grise" <rich@example.net> wrote in message
> | news:pan.2007.07.12.17.28.11.148983@example.net...
> | > On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
> | >
> | >> "NotMe" <me@privacy.net> hath wroth:
> | >>
> | >> (Please learn to trim quotations)
> | >>
> | >>>Actually the human ear can detect a beat note down to a few cycles.
> |
> | If you are talking about the beat between two close
> | audio frequencies then one can easily hear a beat way
> | below 1 Hz.

But what you hear below ~20 Hz is not the beat note, but changes in sound
pressure (volume) as the mixing product goes in and out of phase. This
actually becomes easier to hear as you near zero beat.
```

3287. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 09:56:37 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <4698a055$0$320$e4fe514c@news.xs4all.nl>
Source record: 38598
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:
> Hein ten Horn wrote:
>> Ron Baker, Pluralitas! wrote:
>>> David L. Wilson wrote:
>>>> Hein ten Horn wrote:
>>>>>
>>>>> So take another example: 25000 Hz and 25006 Hz.
>>>>> Again, constructive and destructive interference produce 6 Hz
>>>>> amplitude variations in the air.
>>>>> But, as we can't hear ultrasonic frequencies, we will not produce
>>>>> a 25003 Hz perception in our brain. So there's nothing to hear,
>>>>> no tone and consequently, no beat.

>>> What is the mathematical formulation?
>>
>> sin(2 * pi * f_1 * t) + sin(2 * pi * f_2 * t)
>> or
>> 2 * cos(pi * (f_1 - f_2) * t) * sin(pi * (f_1 + f_2) * t)
>>
>> So every cubic micrometre of the air (or another medium)
>> is vibrating in accordance with
>> 2 * cos(2 * pi * 3 * t) * sin(2 * pi * 25003 * t),
>> thus having a beat frequency of 2*3 = 6 Hz
>
> How do you arrive at a "beat"?

Not by train, neither by UFO. ;)
Sorry. English, German and French are only 'second'
languages to me.
Are you after the occurrence of a beat?
Then: a beat appears at constructive interference, thus
when the cosine function becomes maximal (+1 or -1).
Or are you after the beat frequency (6 Hz)?
Then: the cosine function has two maxima per period
(one being positive, one negative) and with three
periodes a second it makes six beats/second.

> Hint: Any such assessment is nonlinear.
> (And kudos to you that you can do the math.)
>
> Simplifying the math:
> x = cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
> (Where a = 2 * pi * f_1 * t and b = same but f_2.)

> All three of the above are equivalent. There is no difference.
> You get x if you add two sine waves or if you
> multiply two (different) sine waves.

??
sin(a) + sin(b) <> sin(a) * sin(b)
In case you mistyped cosine:
sin(a) + sin(b) <> cos(a) * cos(b)

> So which is it really? Hint: If all you have is x then
> you can't tell how it was generated.
>
> What you do with it afterwards can make a
> difference.

Referring to the physical system, what's now your point?
That system contains elements vibrating at 25003 Hz.
There's no math in it. More on that in my posting to
JK at nearly the same sending time.

gr, Hein

3288. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 09:57:04 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <4698a055$1$320$e4fe514c@news.xs4all.nl>
Source record: 38597
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote:
> Hein ten Horn wrote:
>> Hein ten Horn wrote:
>>>
>>> < quote >
>>> We hear the average of two frequencies if both frequencies
>>> are indistinguishably close, say with a difference of some few
>>> hertz. For example, the combination of a 220 Hz signal and
>>> a 224 Hz signal with the same amplitude will be perceived as
>>> a 4 Hz beat of a 222 Hz tone.
>>> < unquote >
>>
>>>From the example: there's no 222 Hz tone in the air.
>>
>> That one I'd like to take back.
>> Obviously the superposition didn't cross my mind.
>> The matter is actually vibrating at the frequency
>> of 222 Hz. Not at 220 Hz or 224 Hz.
>
> You were correct before.

That's a misunderstanding.
A vibrating element here (such as a cubic micrometre
of matter) experiences different changing forces. Yet
the element cannot follow all of them at the same time.
As a matter of fact the resulting force (the resultant) is
fully determining the change of the velocity (vector) of
the element.
The resulting force on our element is changing at the
frequency of 222 Hz, so the matter is vibrating at the
one and only 222 Hz.

> It might be correct to say that matter is vibrating at an
> average, or effective frequency of 222 Hz.

No, it is correct. A particle cannot follow two different
harmonic oscillations (220 Hz and 224 Hz) at the same
time.

> But the only sine waves present in the air are vibrating
> at 220 Hz and 224 Hz.

If so, we have a very interesting question...
What is waving here? A vacuum?
But don't take the trouble to answer.
You'd better distinguish the behaviour of nature and the
way we try to understand and describe all things.
As long as both sound sources are vibrating there are
no sine waves (220 Hz, 224 Hz) present, yet we do
use them to find the frequency of 222 Hz (and the
displacement of a vibrating element at a particular
location in space on a particular point in time).

> Obviously. It's a very simple matter to verify this by experiment.

Indeed, it is. But watch out for misinterpretations of
the measuring results! For example, if a spectrum
analyzer, being fed with the 222 Hz signal, shows
that the signal can be composed from a 220 Hz and
a 224 Hz signal, then that won't mean the matter is
actually vibrating at those frequencies.

> You really ought to perform it (as I just did) before
> posting further on the subject.

I did happen to see interference of waterwaves
including some beautiful (changing) hyperbolic structures,
but no sign of any sine wave at all. So, with your kind
permission, here's my posting. ;-)

gr, Hein

3289. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 10:31:18 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <47nf93tl24g4r51dtth9p8d8c70t9v66bl@4ax.com>
Source record: 38599
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 05 Jul 2007 07:32:20 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 5, 10:01 am, John Fields <jfie...@austininstruments.com> wrote:

>> ---
>> The first example is amplitude modulation precisely _because_ of the
>> multiplication, while the second is merely the algebraic summation
>> of the instantaneous amplitudes of two waveforms.
>>
>> The circuit lists I posted earlier will, when run using LTSPICE,
>> show exactly what the signals will look like using an oscilloscope
>> and, using the "FFT" option on the "VIEW" menu, give you a pretty
>> good approximation of what they'll look like using a spectrum
>> analyzer.
>>
>> If you don't have LTSPICE it's available free at:
>>
>> http://www.linear.com/designtools/software/
>>
>> --
>> JF
>
>Since your modulator version has a DC offset applied to
>the 1e5 signal, some of the 1e6 signal is present in the
>output, so your spectrum has components at .9e6, 1e6 and
>1.1e6.

Yes, of course, and 1e5 as well. That offset will make sure that
the output of the modulator contains both of the original signals as
well as their sums and differences. That is, it'll be a classic
mixer.

>To generate the same signal with the summing version you
>need to add in some 1e6 along with the .9e6 and 1.1e6.

That wouldn't be the same signal since .9e6 and 1.1e6 wouldn't have
been created by heterodyning and wouldn't be sidebands at all.

>The results will be identical and the results of summing
>will be quite detectable using an envelope detector just
>as they would be from the modulator version.

The results would certainly _not_ be identical, since the 0.9e6 and
1.1e6 signals would bear no cause-and-effect relationship to the 1e6
and 1e5 signals, not having been spawned by them in a mixer.

Moreover, using an envelope detector would be pointless since there
would be no information in the .9e6 and 1.1e6 signals which would
relate to either the 1e6 or the 0.1e6 signals. Again, because no
mixing would have occurred in your scheme, only a vector addition.

>Alternatively, remove the bias from the .1e6 signal on
>the modulator version. The spectrum will have only
>components at .9e6 and 1.1e6. Of course, an envelope
>detector will not be able to recover this signal,
>whether generated by the modulator or summing.

Hogwash. ;)

If the envelope detector you're talking about is a rectifier
followed by a low-pass filter and neither f1 nor f2 were DC offset,
then if the sidebands were created in a modulator they'll largely
cancel, (except for the interesting fact that the diode rectifier
looks like a small capacitor when it's reverse biased) so you're
almost correct on that count.

However, If f1 and f2 were created by independent oscillators and
algebraically added in a linear system, the output of the envelope
detector would be the vector sum of f1 and f2 either above or below
zero volts, depending on how the diode was wired.

--
JF

3290. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 11:19:55 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <rmbBc7JbFLmGFA1x@ifwtech.co.uk>
Source record: 38600

Rick (W-A-one-R-K-T) wrote:
>
>I went down to the electrical supply house and bought 3 8-ft ground
>rods and started driving one in at about a 45 degree angle under the
>window of the shack.
>
>As expected, I am having one hell of a time getting it into the ground.
>
>Every little while I stop and put a pencil mark on the rod down near
>the ground, and beat the end of the rod 10 or 15 more times, then look
>to see if the pencil mark has moved. So far it is moving but not
>much... but at least it's moving so presumably I haven't hit immovable
>rock yet.
>
>Someone said something about an electric hammer and that I could drive
>the rod into the ground in "minutes". If I go to try to rent one of
>those, what should I be looking for?
>
There's a potential language gap here, but "electric hammers" fall into three broad groups. Working downward in size:

3. Electric hammers that are the size and weight of a small road drill - too big for this job.

2. Smaller "hammer drills" that are a two-handed heft but weigh less than 10 pounds (sometimes known as the "4 kilogram" class). These are combination rotary/hammer drills which can also be used for pure rotary drilling, pure impact hammering. The drill bits have a splined end that snaps into the chuck, and the whole system is usually known as "SDS Plus" (not the same as the "SDS Max" which is used in some of the larger drills).

1. One-handed SDS+ drills that look like a stretched version of an ordinary electric hand drill (sometimes known as the "2 kilogram" class).

And below those, I should add:

0. Ordinary electric drills with a hammer option - useless for this particular job.

As well as having the splined chuck, the SDS+ system is like a miniature air hammer that delivers a very sharp impact. Forget your old percussion electric drill - this is in a totally different league. In rotary hammer drilling, the drill bits go through hard masonry and stone like cheese! The 2kg size is the best option for general home improvement (you

quickly get tired of holding a 4kg drill) and it's truly wonderful to hold all that drilling power in one hand.

(Sorry, all of us SDS owners get carried away like this... but it genuinely *is* that good.)

SDS+ drills and accessories don't seem to be as common in the USA as they are in Europe, and maybe the "SDS" label isn't so prominent; but they are easy enough to find, once you're aware that they exist.

Any SDS+ drill with the "rotary stop" option will make a very effective hammer for earth rods. The dead weight of the drill makes very little difference - what does the driving is the sharpness of the hammer-blows. All SDS drills have that feature, so a 2kg-class drill will do fine.

You can buy/rent a special ground rod driving attachment. This is simply a hollow tube that drops loosely over the end of the ground rod, and on the other end a splined stub that snaps into the SDS+ chuck. However, a better and cheaper option is an SDS-to-0.5in square socket drive adaptor, because you can snap on a different sized socket to match the diameter of the rod.

In normal soil, a "2kg-class" drill on its hammer-only setting will sink a 4ft ground rod in minutes. But now we come to "ledge"...

The good news is that with the rotary-hammer action you can drill 3ft pilot holes into just about anything. A 10mm diameter makes a good pilot hole for a 3/8in rod, and SDS+ drill bits are readily available in lengths as long as 1.0m. The hammer action still works, even at such a long distance away from the drill chuck (though you need a shorter drill to get started). Having drilled your pilot hole, and cleared it very thoroughly of small pieces of rock and grit, you can then hammer in your rod. That means you can place a guaranteed 3ft of earthing rod wherever you want it.

The bad news is that, in hard rock, anything beyond the 3ft depth of your pilot hole may be completely impossible - you may just have to cut off the extra length and settle for what you've got.

The even worse news is that rods sunk into hard rock may be totally useless as earth electrodes.

For example, the hill that we live on looks like lush green pasture-land, but it's actually huge heap of glacial boulders of all sizes, with a very thin covering of soil. Any vertical rod is almost sure to hit something hard in the first few inches below the surface. It may be a small pebble, or it may be the hill itself. The first 3ft rod that I placed measured 600 ohms, which was a total waste of time. After two years of steady rainfall and bedding-in, the resistance had improved to... 500 ohms!

The earth connection that really works here (1.2 ohms) is the water pipe, which runs a long way horizontally through the very wettest level

of soil, just on top of the rock. It isn't strictly "to code" in this country either, but would I disconnect it? - not on my life!

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3291. micro--waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 11:27:07 UTC
From: ml <m@di.net>
Message-ID: <m-B7EC67.07270214072007@news.verizon.net>
Source record: 38601

i was sorta wondering what a 'wave' looks like in 3d

what got me thinking was i know my microwave oven's door has a screen
such that the holes are supposed to me smaller than the microwave itself
so it dosn't leave the area

but i wasn't sure how to think of the wave itself was it a narrow beam
sorta like a pencil that had the length =freq i am guessing not or if
ever it turned onto it's profile then it would go thru the screen
apature so do i assume it's length and width are always same? in x y z

or even out of a directional microwave emitter is it immediately like a
doughnut always sorta propagating

all the books i have always show waves like a pencil line and sorta
describe it 2d

3292. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 11:33:01 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <qf9h93du5q10e0d34nl147615fk88452sg@4ax.com>
Source record: 38602
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Fri, 06 Jul 2007 19:04:00 -0000, Jim Kelley <jwkelley@uci.edu>
wrote:

>On Jul 5, 9:38 pm, John Fields <jfie...@austininstruments.com> wrote:
>> On Thu, 05 Jul 2007 18:37:21 -0700, Jim Kelley <jwkel...@uci.edu>
>> wrote:
>>
>> >John Fields wrote:
>>
>> >> You missed my point, which was that in a mixer (which the ear is,
>> >> since its amplitude response is nonlinear) as the two carriers
>> >> approach each other the difference frequency will go to zero and the
>> >> sum frequency will go to the second harmonic of either carrier,
>> >> making it largely appear to vanish into the fundamental.
>>
>> >Hi John -
>>
>> >Given two sources of pure sinusoidal tones whose individual amplitudes
>> >are constant, is it your claim that you have heard the sum of the two
>> >frequencies?
>>
>> ---
>> I think so.
>
>So if you have for example, a 300 Hz signal and a 400 Hz signal, your
>claim is that you also hear a 700 Hz signal? You'd better check
>again. All you should hear is a 300 Hz signal and a 400 Hz signal.
>The beat frequency is too high to be audible.

Well, I'm just back from the Panama Canal Society's 75th reunion and
I haven't read through the rest of the thread, but it case someone
else hasn't already pointed it out to you, it seems you've missed
the point that a non-linear detector, (the human ear, for example)
when presented with two sinusoidal carriers, will pass the two
carrier frequencies through, as outputs, as well as two frequencies
(sidebands) which are the sum and difference of the carriers.

In your example, with 300Hz and 400Hz as the carriers, the sidebands
would be located at:

f3 = f1 + f2 = 300Hz + 400Hz = 700Hz

and

f4 = f2 - f1 = 400Hz - 300Hz = 100Hz

both of which are clearly within the range of frequencies to which
the human ear responds.

>(Note that if the beat
>frequency was a separate, difference signal as you suggest, at this
>frequency it would certainly be audible.)

Your use of the term "beat frequency" is confusing since it's
usually used to describe the products of heterodyning, not the
audible warble caused by the vector addition of signals close to
unison.

>> A year or so ago I did some casual experiments with pure tones being
>> fed simultaneously into individual loudspeakers to which I listened,
>> and I recall that I heard tones which were higher pitched than
>> either of the lower-frequency signals. Subjective, I know, but
>> still...
>
>Excessive cone excursion can produce significant 2nd harmonic
>distortion. But at normal volume levels your ear does not create
>sidebands, mixing products, or anything of the sort. It hears the
>same thing that is shown on both the oscilloscope and on the spectrum
>analyzer.

No, it doesn't.

Since the response of the ear is non-linear in amplitude it has no
choice _but_ to be a mixer and create sidebands.

What you see on an oscilloscope are the time-varying amplitude
variations caused by the linear vector summation of two signals
walking through each other in time, and what you see on a spectrum
analyzer is the two spectral lines caused by two signals adding, not
mixing. If you want to see what happens when the two signals hit
the ear, run them through a non-linear amp before they get to the
spectrum analyzer and you'll see at least the two original signals
plus their two sidebands.

>> Interestingly, this afternoon I did the zero-beat thing with 1kHz
>> being fed to one loudspeaker and a variable frequency oscillator
>> being fed to a separate loudspeaker, with me as the detector.
>
>My comments were based on my results in that experiment, common
>knowledge, and professional musical and audio experience.

Your "common knowledge" seems to not include the fact that a
non-linear detector _is_ a mixer.

>> I also connected each oscillator to one channel of a Tektronix
>> 2215A, inverted channel B, set the vertical amps to "ADD", and
>> adjusted the frequency of the VFO for near zero beat as shown on the
>> scope.
>>
>> Sure enough, I heard the beat even though it came from different
>> sources, but I couldn't quite get it down to DC even with the
>> scope's trace at 0V.
>
>Of course you heard beats. What you didn't hear is the sum of the
>frequencies. I've had the same setup on my bench for several months.
>It's also one of the experiments the students do in the first year
>physics labs. Someone had made the claim a while back that what we
>hear is the 'average' of the two frequencies. Didn't make any sense
>so I did the experiment. The results are as I have explained.

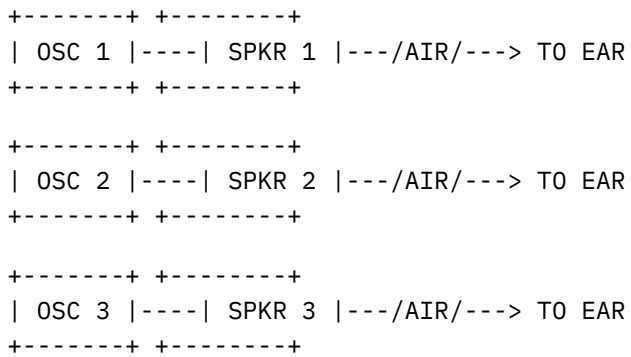
The "beat" heard wasn't an actual beat frequency, it was the warble
caused by the change in amplitude of the summed signals and isn't a
real, spectrally definable signal.

The reason you didn't hear the real difference frequency is because
it was below the range of audible frequencies and the reason you
didn't hear the sum frequency is because it was close enough to the
second harmonic of the output of either oscillator (with the
oscillators close to unison) that you couldn't discern it from the
fundamental(s).

There also seems to be a reticence, on your part, to believe that
the ear is, in fact, a mixer and, consequently, you hear what you
want to.

But...

In order to bring this fol-de-rol to an end,I propose an experiment
to determine whether the ear does or does not create sidebands:



1. Set OSC 1 and OSC 2 to two harmonically unrelated frequencies such that their frequencies and the sum and difference of their frequencies lie within the ear's audible range of frequencies.

2. Slowly tune OSC 3 so that its output crosses the sum and difference frequencies of OSC 1 and OSC 2.

If a warble is heard in the vicinity of either frequency, the ear is creating sidebands.

I'll do the experiment sometime today, if I get a chance, and post my results here. Since you're all set up you may want to do the same thing.

--
JF

3293. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 11:42:28 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <1jdh931qjsj1iuqqp2abt6bi718fk8jj7p@4ax.com>
Source record: 38603
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Fri, 13 Jul 2007 09:53:21 -0700, Jeff Liebermann
<jeffl@cruzio.com> wrote:

>shawn.cormican@gmail.com hath wroth:
>
>>thankyou, for the wonderfully varied responses.
>
>Please learn to operate a text editor and kindly trim the surplus
>quotes from your ranting. I can't stand to read my own stuff twice.

I can barely stomach it the _first_ time around! ;)

--
JF

3294. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 12:00:06 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <feeh93lrpr5pko1f2mnah90op1acahlal1@4ax.com>
Source record: 38604
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sat, 14 Jul 2007 15:14:28 +0900, "Brenda Ann"
<brendad@shinbiro.com> wrote:

>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:46984f9d$0$8004$4c368faf@roadrunner.com...
>> |
>> | "Rich Grise" <rich@example.net> wrote in message
>> | news:pan.2007.07.12.17.28.11.148983@example.net...
>> | > On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
>> | >
>> | >> "NotMe" <me@privacy.net> hath wroth:
>> | >>
>> | >> (Please learn to trim quotations)
>> | >>
>> | >>>Actually the human ear can detect a beat note down to a few cycles.
>> |
>> | If you are talking about the beat between two close
>> | audio frequencies then one can easily hear a beat way
>> | below 1 Hz.
>
>But what you hear below ~20 Hz is not the beat note, but changes in sound
>pressure (volume) as the mixing product goes in and out of phase. This
>actually becomes easier to hear as you near zero beat.

It's not a mixing product, it's a sum. Actually, the vector
addition of two signals varying in phase.

Other than that, Bingo!!!

--
JF

3295. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 14:52:32 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4698e2d0$0$24727$4c368faf@roadrunner.com>
Source record: 38605
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:4698a055$0$320$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> Hein ten Horn wrote:
>>> Ron Baker, Pluralitas! wrote:
>>>> David L. Wilson wrote:
>>>>> Hein ten Horn wrote:
>>>>>
>>>>> So take another example: 25000 Hz and 25006 Hz.
>>>>> Again, constructive and destructive interference produce 6 Hz
>>>>> amplitude variations in the air.
>>>>> But, as we can't hear ultrasonic frequencies, we will not produce
>>>>> a 25003 Hz perception in our brain. So there's nothing to hear,
>>>>> no tone and consequently, no beat.
>
>>>> What is the mathematical formulation?
>>>
>>> sin(2 * pi * f_1 * t) + sin(2 * pi * f_2 * t)
>>> or
>>> 2 * cos(pi * (f_1 - f_2) * t) * sin(pi * (f_1 + f_2) * t)
>>>
>>> So every cubic micrometre of the air (or another medium)
>>> is vibrating in accordance with
>>> 2 * cos(2 * pi * 3 * t) * sin(2 * pi * 25003 * t),
>>> thus having a beat frequency of 2*3 = 6 Hz
>>
>> How do you arrive at a "beat"?
>
> Not by train, neither by UFO. ;)
> Sorry. English, German and French are only 'second'
> languages to me.
> Are you after the occurrence of a beat?

Another way to phrase the question would have been:
Given a waveform x(t) representing the sound wave
in the air how do you decide whether there is a
beat in it?

> Then: a beat appears at constructive interference, thus
> when the cosine function becomes maximal (+1 or -1).
> Or are you after the beat frequency (6 Hz)?
> Then: the cosine function has two maxima per period
> (one being positive, one negative) and with three

> periodes a second it makes six beats/second.
>
>> Hint: Any such assessment is nonlinear.
>> (And kudos to you that you can do the math.)
>>
>> Simplifying the math:
>> x = cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>> (Where a = 2 * pi * f_1 * t and b = same but f_2.)
>> All three of the above are equivalent. There is no difference.
>> You get x if you add two sine waves or if you
>> multiply two (different) sine waves.
>
> ??
> sin(a) + sin(b) <> sin(a) * sin(b)
> In case you mistyped cosine:
> sin(a) + sin(b) <> cos(a) * cos(b)

It would have been more proper of me to say
"sinusoid" rather than "sine wave". I called
cos() a "sine wave". If you look at cos(2pi f1 t)
on an oscilloscope it looks the same as sin(2pi f t).
In that case there is essentially no difference.
Yes, there are cases where it makes a difference.
But at the beginning of an analysis it is rather
arbitrary and the math is less cluttered with
cos().

>
>> So which is it really? Hint: If all you have is x then
>> you can't tell how it was generated.
>>
>> What you do with it afterwards can make a
>> difference.
>
> Referring to the physical system, what's now your point?
> That system contains elements vibrating at 25003 Hz.
> There's no math in it.

Whoops. You'll need math to understand it.

> More on that in my posting to
> JK at nearly the same sending time.
>
> gr, Hein
>
>

3296. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 15:13:12 UTC
From: Bob <warthog9@pacbell.net>
Message-ID: <cK5mi.19067$Rw1.2227@newssvr25.news.prodigy.net>
Source record: 38606

Make a slide hammer from a 1 to 2ft length of 3/4" steel pipe with a
pipe cap on one end and a pipe flange on the other. Then stack several
weights from an exercise set on the pipe, slide the pipe over the ground
rod flange side down and pound away. You might want to put some metal
washers inside the pipe cap because you can blow through some cheaper
caps. A longer piece of pipe will give you a better blow to the rod but
will leave you with more sticking out of the soil when the pipe finally
hits ground level.
Bob

Rick (W-A-one-R-K-T) wrote:
> Thanks to all for all the information you have provided, including the
> latest thread on "ground rods at base of tower". The explanations
> received were very well thought out and comprehensive, and make all the
> sense in the world when one stops to think for a minute... :-)
>
> Now the fun begins.
>
> I went down to the electrical supply house and bought 3 8-ft ground rods
> and started driving one in at about a 45 degree angle under the window of
> the shack.
>
> As expected, I am having one hell of a time getting it into the ground.
>
> Every little while I stop and put a pencil mark on the rod down near the
> ground, and beat the end of the rod 10 or 15 more times, then look to see
> if the pencil mark has moved. So far it is moving but not much... but at
> least it's moving so presumably I haven't hit immovable rock yet.
>
> Someone said something about an electric hammer and that I could drive
> the rod into the ground in "minutes". If I go to try to rent one of those,
> what should I be looking for?
>
> Also, when I bought the ground rods the guy at the electrical shop showed
> me something called a Sluggo-Ox (www.sluggo-ox.com), touted as "the
> ultimate ground rod driving tool". It's not much more than a heavy block
> of tempered steel with a hole in one end that you place over the rod, and
> a LARGE head on the other end that you hit with your hammer. It claims to
> makes it easier to actually hit the end of the rod (which I am doing only
> about 60 percent of the time when I swing the sledgehammer). It also
> costs $120 (!!), at least that's what this place charges for it. I'm
> almost ready to go get one if it will help. Well, maybe not quite "almost"
> ready... ;-)
>

> Anything else that will make the job a little easier? I gave up for the
> day after about an hour and a half (it started raining so I figured that
> was as good an excuse as I needed...)... figured on starting in again on
> Sunday (tomorrow is booked...).
>
>

3297. Re: Linux and NEC codes?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 15:15:13 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <04SdnaW_WPUcdQXbnZ2dnUVZ_qXinZ2d@kans.com>
Source record: 38607

On Sat, 14 Jul 2007 00:38:35 -0400, Leland C. Scott wrote:

> Anybody have a recommendation for an open source NEC based antenna program
> that runs on Linux? If there are any utilities that can display the antenna
> structure and field patterns that would be a bonus. Plus has anybody used
> the OpenOffice program "Calc", or some other utility, to automate the
> generation of the input card deck?
>
> I know about the following site:
>
> http://www.si-list.net/swindex.html
>
> I just haven't had time to play with any of the Linux software. I was hoping
> somebody else already has done so.

Debian shows the following in its Stable repository:

http://packages.debian.org/stable/hamradio/nec
http://packages.debian.org/stable/science/necpp
http://packages.debian.org/stable/python/python-necpp
http://packages.debian.org/stable/hamradio/xnecview

The home page of XNECView appears to be here:

http://wwwhome.cs.utwente.nl/~ptdeboer/ham/xnecview/

I've not played with any of this, but may do so in the future.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds,
the pessimist fears this is true."

3298. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 15:30:43 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <04SdnaS_WPW-cQXbnZ2dnUVZ_qXinZ2d@kans.com>
Source record: 38608

On Sat, 14 Jul 2007 02:21:58 +0000, Ralph Mowery wrote:

> If it is regular ground and not rocks it is easy to put ground rods in with
> just your hands and a gallon or two of water, maybe less.
>
> Dig out a hole about 4 or 5 inches in diameter and about that deep. Fill
> it with water. Put the ground rod in the center of that hole and push it
> down. Then pull it back slightly. Doing this several times you should be
> able to get to get it down several inches with each cycle. Keep doing this
> without stopping. If you get to about 3 or 4 feet put the rod all the way
> out and fill the hole with water . Put the rod back in the same hole and
> keep pushing and pulling it a few inches at a time. You may want to wear
> gloves. I usually put a pair of Vice Grip pliers on the rod to act as a
> handle to get a beter grip.
>
> Using this method I sunk two ground rods in the ground in about 15 minuits
> or less for each.

I was shown this method about ten years ago (had one of those, "D'oh! Why didn't *I* think of that!" slapping forehead moments) and have put in several rods with the technique. The last foot or so may require using a sledge hammer, but that is a lot less swinging and the end of the rod is more stable so your hit to knuckle ratio increases dramatically!

Rocks? Well, you're pretty much screwed unless it's thin layer of shale and you're using a commercial driver. Even then, I've heard of stories of the rod making a U-turn and coming back up out of the ground!

A number of years ago a couple of us were grounding a site in the Kansas Flint Hills. As luck would have it, the limestone layer was almost exactly four feet below the surface and our Hilti driver just bounced on the end of the rod when the layer was reached. So, we wound up cutting the rods off, going out another eight feet on the runs and driving the other half in and bonding the whole works together. The site has been reliable as far as I know.

For a lighting ground there is no such thing as too good of a ground. Sometimes, though, there is only so much you can do and that will have to suffice.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds, the pessimist fears this is true."

3299. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 15:56:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <qerh9313nvuhh3ptoco9hmrrllbqsdbpoh@4ax.com>
Source record: 38609
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields <jfields@austininstruments.com> hath wroth:

>On Fri, 13 Jul 2007 09:53:21 -0700, Jeff Liebermann
><jeffl@cruzio.com> wrote:
>
>>shawn.cormican@gmail.com hath wroth:
>>
>>>thankyou, for the wonderfully varied responses.

>>Please learn to operate a text editor and kindly trim the surplus
>>quotes from your ranting. I can't stand to read my own stuff twice.

>I can barely stomach it the _first_ time around! ;)

My rants have been accused of being all manner of things. However,
this is the first time they've been accused of being indigestible. If
your stomach can't take it, and you feel the need to regurgitate an
apparently involuntary one line response, I can offer a suitable
therapeutic regime. If you read my writings, rants, stories, humor,
and poetry in much smaller portions, you will eventually find my stuff
more agreeable. Given sufficient time, you will develop a tolerance
for my stuff. Incidentally, my writings are rather dry and might
require a few grains of salt to be considered tasteful.

If only they would pay my time,
to write this stuff in verse and rhyme.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3300. Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 16:00:00 UTC
From: Bob John <AA8X@wowway.com>
Message-ID: <C9CdnU-lOMafbgXbnZ2dnUVZ_jydnZ2d@wideopenwest.com>
Source record: 38610

Is Tarheel pricing their products out of the market? I had consideration purchasing a little Tarheel II during our local Hamfest last weekend in Aurora, IL. The dealer informed me the price had once again gone up and they are now $289.99. Add to this amount the sales tax, auto-controller and mount and you are way over $600.00. This is more then I paid for my FT-100D, which I purchased new. At this point in time, the Hustler antenna is working fine and I don't have to worry about theft.

Bob, AA8X

3301. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 16:18:10 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4698f6e0$0$31255$4c368faf@roadrunner.com>
Source record: 38611
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:4698a055$1$320$e4fe514c@news.xs4all.nl...
> Jim Kelley wrote:
>> Hein ten Horn wrote:
>>> Hein ten Horn wrote:
>>>>
>>>> < quote >
>>>> We hear the average of two frequencies if both frequencies
>>>> are indistinguishably close, say with a difference of some few
>>>> hertz. For example, the combination of a 220 Hz signal and
>>>> a 224 Hz signal with the same amplitude will be perceived as
>>>> a 4 Hz beat of a 222 Hz tone.
>>>> < unquote >
>>>
>>>>From the example: there's no 222 Hz tone in the air.
>>>
>>> That one I'd like to take back.
>>> Obviously the superposition didn't cross my mind.
>>> The matter is actually vibrating at the frequency
>>> of 222 Hz. Not at 220 Hz or 224 Hz.
>>
>> You were correct before.
>
> That's a misunderstanding.
> A vibrating element here (such as a cubic micrometre
> of matter) experiences different changing forces. Yet
> the element cannot follow all of them at the same time.

It does. Not identically but it does follow all of them.

> As a matter of fact the resulting force (the resultant) is
> fully determining the change of the velocity (vector) of
> the element.
> The resulting force on our element is changing at the
> frequency of 222 Hz, so the matter is vibrating at the
> one and only 222 Hz.

Your idea of frequency is informal and leaves out
essential aspects of how physical systems work.

You have looked at a segment of the waveform
and judged "frequency" based on a few peaks.
Your method is incomplete and cannot be applied

generally.

<snip>

3302. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 16:28:25 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4698f948$0$4736$4c368faf@roadrunner.com>
Source record: 38612
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Brenda Ann" <brendad@shinbiro.com> wrote in message
news:veadnW0BnPgm9AXbnZ2dnUVZ_ournZ2d@giganews.com...
>
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>> news:46984f9d$0$8004$4c368faf@roadrunner.com...
>> |
>> | "Rich Grise" <rich@example.net> wrote in message
>> | news:pan.2007.07.12.17.28.11.148983@example.net...
>> | > On Wed, 11 Jul 2007 22:52:17 -0700, Jeff Liebermann wrote:
>> | >
>> | >> "NotMe" <me@privacy.net> hath wroth:
>> | >>
>> | >> (Please learn to trim quotations)
>> | >>
>> | >>>Actually the human ear can detect a beat note down to a few cycles.
>> |
>> | If you are talking about the beat between two close
>> | audio frequencies then one can easily hear a beat way
>> | below 1 Hz.
>
> But what you hear below ~20 Hz is not the beat note, but changes in sound

Semantics.
The "beat" heard in tuning a guitar is commonly
referred to as a "beat".
Yes, it is not the same thing as the "beat" from
a BFO in a radio receiver.

> pressure (volume) as the mixing product goes in and out of phase. This
> actually becomes easier to hear as you near zero beat.
>
>
>

3303. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 18:21:10 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-0B9CC3.10211314072007@netnews.worldnet.att.net>
Source record: 38613

In article <s0hg9355m1r744vjkfmv7imaqv4meggiht@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

> Talk about convolution. Plug your legal counsel in and see if DX pegs
> the S-Meter.
>
> 73's
> Richard Clark, KB7QHC

No, Legal Counsel type folks are just one step Up the ladder from
Politicos, and they are only good for starting Diesel Engines in
very cold weather. Lots of HOT AIR, coming out of those guys.....
but how to get them to Blow it down the Intake Manifold.....

Bruce in alaska
--
add a <2> before @

3304. Re: micro--waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 18:23:29 UTC
From: You <You@shadow.orgs>
Message-ID: <You-5314E8.10233214072007@netnews.worldnet.att.net>
Source record: 38614

In article <m-B7EC67.07270214072007@news.verizon.net>, ml <m@di.net>
wrote:

> i was sorta wondering what a 'wave' looks like in 3d
>
> what got me thinking was i know my microwave oven's door has a screen
> such that the holes are supposed to me smaller than the microwave itself
> so it dosn't leave the area
>
> but i wasn't sure how to think of the wave itself was it a narrow beam
> sorta like a pencil that had the length =freq i am guessing not or if
> ever it turned onto it's profile then it would go thru the screen
> apature so do i assume it's length and width are always same? in x y z
>
> or even out of a directional microwave emitter is it immediately like a
> doughnut always sorta propagating
>
> all the books i have always show waves like a pencil line and sorta
> describe it 2d

Remember back to your High School Physics Class, where you had the
water filled pool, and dropped an object in and it created "Waves"
in the pool????? There you go......

3305. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 18:28:09 UTC
From: Art Clemons <n8blk@aolSPAM.com>
Message-ID: <7qydnRF7dMYkiATbnZ2dnUVZ_qXinZ2d@comcast.com>
Source record: 38615

Bob John wrote:

> The dealer informed me the price had once again gone up and they
> are now $289.99. Add to this amount the sales tax, auto-controller and
> mount and you are way over $600.00. This is more then I paid for my
> FT-100D, which I purchased new. At this point in time, the Hustler antenna
> is working fine and I don't have to worry about theft.

Why not build your own? Screwdrivers are not all that hard to build frankly although they do take some patience and skill. The auto-controller or at least similarly based items also have been described in QST for less than you seem to be paying, and as for a mount, well, I suggest you get the 2000 WorldRadio CD which features Don Johnson's books for a description of how to build your own mount. The same "books" also describe how to build a working screwdriver antenna. Scaled down, you can build the equivalent of the Little Tarheel.

3306. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 19:42:18 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469927cb$0$336$e4fe514c@news.xs4all.nl>
Source record: 38616
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:
> Hein ten Horn wrote:
>> A vibrating element here (such as a cubic micrometre
>> of matter) experiences different changing forces. Yet
>> the element cannot follow all of them at the same time.
>
> It does. Not identically but it does follow all of them.

Impossible. Remember, we're talking about sound. Mechanical
forces only. Suppose you're driving, just going round the corner.
From the outside a fistful of forces is working on your body,
downwards, upwards, sidewards. It is absolutely impossible
that your body's centre of gravity is following different forces in
different directions at the same time. Only the resulting force is
changing your movement (according to Newton's second law).

>> As a matter of fact the resulting force (the resultant) is
>> fully determining the change of the velocity (vector) of
>> the element.
>> The resulting force on our element is changing at the
>> frequency of 222 Hz, so the matter is vibrating at the
>> one and only 222 Hz.
>
> Your idea of frequency is informal and leaves out
> essential aspects of how physical systems work.

Nonsense. Mechanical oscillations are fully determined by
forces acting on the vibrating mass. Both mass and resulting force
determine the frequency. It's just a matter of applying the laws of physics.

Question

Is our auditory system in some way acting like a spectrum analyser?
(Is it able to distinguish the composing frequencies from a vibration?)

Ron?
Somebody else?

Thanks

gr, Hein

3307. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 19:51:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <1184442700.012432.322480@o61g2000hsh.googlegroups.com>
Source record: 38617
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 14, 12:42 pm, "Hein ten Horn" <tenhornRem...@ThiSraketnet.nl>
wrote:
> Ron Baker, Pluralitas! wrote:
> > Hein ten Horn wrote:
> >> A vibrating element here (such as a cubic micrometre
> >> of matter) experiences different changing forces. Yet
> >> the element cannot follow all of them at the same time.
>
> > It does. Not identically but it does follow all of them.
>
> Impossible. Remember, we're talking about sound. Mechanical
> forces only. Suppose you're driving, just going round the corner.
> From the outside a fistful of forces is working on your body,
> downwards, upwards, sidewards. It is absolutely impossible
> that your body's centre of gravity is following different forces in
> different directions at the same time. Only the resulting force is
> changing your movement (according to Newton's second law).
>
> >> As a matter of fact the resulting force (the resultant) is
> >> fully determining the change of the velocity (vector) of
> >> the element.
> >> The resulting force on our element is changing at the
> >> frequency of 222 Hz, so the matter is vibrating at the
> >> one and only 222 Hz.
>
> > Your idea of frequency is informal and leaves out
> > essential aspects of how physical systems work.
>
> Nonsense. Mechanical oscillations are fully determined by
> forces acting on the vibrating mass. Both mass and resulting force
> determine the frequency. It's just a matter of applying the laws of physics.
>
> Question
>
> Is our auditory system in some way acting like a spectrum analyser?
> (Is it able to distinguish the composing frequencies from a vibration?)
>
> Ron?
> Somebody else?
>
> Thanks
>

> gr, Hein

3308. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 21:04:41 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <h0ei9358m8si0s6bds1fahhdpdcqab0jg6@4ax.com>
Source record: 38618
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sat, 14 Jul 2007 19:51:40 -0000, Jim Kelley <jwkelley@uci.edu>
wrote:

>On Jul 14, 12:42 pm, "Hein ten Horn" <tenhornRem...@ThiSraketnet.nl>
>wrote:
>> Ron Baker, Pluralitas! wrote:
>> > Hein ten Horn wrote:
>> >> A vibrating element here (such as a cubic micrometre
>> >> of matter) experiences different changing forces. Yet
>> >> the element cannot follow all of them at the same time.
>>
>> > It does. Not identically but it does follow all of them.
>>
>> Impossible. Remember, we're talking about sound. Mechanical
>> forces only. Suppose you're driving, just going round the corner.
>> From the outside a fistful of forces is working on your body,
>> downwards, upwards, sidewards. It is absolutely impossible
>> that your body's centre of gravity is following different forces in
>> different directions at the same time. Only the resulting force is
>> changing your movement (according to Newton's second law).
>>
>> >> As a matter of fact the resulting force (the resultant) is
>> >> fully determining the change of the velocity (vector) of
>> >> the element.
>> >> The resulting force on our element is changing at the
>> >> frequency of 222 Hz, so the matter is vibrating at the
>> >> one and only 222 Hz.
>>
>> > Your idea of frequency is informal and leaves out
>> > essential aspects of how physical systems work.
>>
>> Nonsense. Mechanical oscillations are fully determined by
>> forces acting on the vibrating mass. Both mass and resulting force
>> determine the frequency. It's just a matter of applying the laws of physics.
>>
>> Question
>>
>> Is our auditory system in some way acting like a spectrum analyser?
>> (Is it able to distinguish the composing frequencies from a vibration?)

Yes, of course.

The cilia in the cochlea are different lengths and, consequently,
"tuned" to different frequencies to which they respond by undulating
and sending electrical signals to the brain when the nerves to which
they're connected fire. See:

http://en.wikipedia.org/wiki/Organ_of_Corti

--
JF

3309. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 21:14:44 UTC
From: Chuck Olson <chuckolson01@REMOVETHIScomcast.net>
Message-ID: <RpCdnSlc-4VMoQTbnZ2dnUVZ_u2mnZ2d@comcast.com>
Source record: 38619

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.14.01.16.31.890353@from.qrz.com...
>
> Thanks to all for all the information you have provided, including the
> latest thread on "ground rods at base of tower". The explanations
> received were very well thought out and comprehensive, and make all the
> sense in the world when one stops to think for a minute... :-)
>
> Now the fun begins.
>
> I went down to the electrical supply house and bought 3 8-ft ground rods
> and started driving one in at about a 45 degree angle under the window of
> the shack.
>
> As expected, I am having one hell of a time getting it into the ground.
>
> Every little while I stop and put a pencil mark on the rod down near the
> ground, and beat the end of the rod 10 or 15 more times, then look to see
> if the pencil mark has moved. So far it is moving but not much... but at
> least it's moving so presumably I haven't hit immovable rock yet.
>
> Someone said something about an electric hammer and that I could drive
> the rod into the ground in "minutes". If I go to try to rent one of those,
> what should I be looking for?
>
> Also, when I bought the ground rods the guy at the electrical shop showed
> me something called a Sluggo-Ox (www.sluggo-ox.com), touted as "the
> ultimate ground rod driving tool". It's not much more than a heavy block
> of tempered steel with a hole in one end that you place over the rod, and
> a LARGE head on the other end that you hit with your hammer. It claims to
> makes it easier to actually hit the end of the rod (which I am doing only
> about 60 percent of the time when I swing the sledgehammer). It also
> costs $120 (!!), at least that's what this place charges for it. I'm
> almost ready to go get one if it will help. Well, maybe not quite "almost"
> ready... ;-)
>
> Anything else that will make the job a little easier? I gave up for the
> day after about an hour and a half (it started raining so I figured that
> was as good an excuse as I needed...)... figured on starting in again on
> Sunday (tomorrow is booked...).
>
>
You've received about all the good ideas there are on how to do it. The only
thing I have to offer is an alternative to rods, and that is many square

feet of "hardware cloth" either on top of the ground before seeding or under newly laid sod. Hardware cloth comes in a number of sizes - - I used 1/2" square - - and it is galvanized by a dipping process that guarantees electrical continuity to every square foot. I laid two 50ft runs using 36" wide material, with the two runs at 90 degrees and my Butternut vertical at the corner. Of course, you need to solder wires to the hardware cloth at the antenna base for the ground connection. Watering your lawn can only help, and in fact you may need only half or a quarter the size I put in if it's under a watered lawn.

3310. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 21:37:33 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1184449053.688071.59830@x35g2000prf.googlegroups.com>
Source record: 38620

Bob John wrote:
> Is Tarheel pricing their products out of the market? I had consideration
> purchasing a little Tarheel II during our local Hamfest last weekend in
> Aurora, IL. The dealer informed me the price had once again gone up and they
> are now $289.99. Add to this amount the sales tax, auto-controller and mount
> and you are way over $600.00. This is more then I paid for my FT-100D, which
> I purchased new. At this point in time, the Hustler antenna is working fine
> and I don't have to worry about theft.
>
> Bob, AA8X

Check out fair radio sales, they had some surplus screwdriver antenna
parts.

Jimmie

3311. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 21:43:55 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469943cd$0$322$e4fe514c@news.xs4all.nl>
Source record: 38621
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
Ron Baker, Pluralitas! wrote:
> Hein ten Horn wrote:
>> Ron Baker, Pluralitas! wrote:
>>>
>>> How do you arrive at a "beat"?
>>
>> Not by train, neither by UFO. ;)
>> Sorry. English, German and French are only 'second'
>> languages to me.
>> Are you after the occurrence of a beat?
>
> Another way to phrase the question would have been:
> Given a waveform x(t) representing the sound wave
> in the air how do you decide whether there is a
> beat in it?

Oh, nice question. Well, usually (in my case) the functions
are quite simple (like the ones we're here discussing) so that
I see the beat in a picture of a rough plot in my mind.

>> Then: a beat appears at constructive interference, thus
>> when the cosine function becomes maximal (+1 or -1).
>> Or are you after the beat frequency (6 Hz)?
>> Then: the cosine function has two maxima per period
>> (one being positive, one negative) and with three
>> periodes a second it makes six beats/second.
>>
>>> Hint: Any such assessment is nonlinear.

Mathematical terms like linear, logarithmic, etc. are familiar
to me, but the guys here use linear and nonlinear in another
sense. Something to do with harmonics or so? Anyway,
that's why the hint isn't working here.

>>> (And kudos to you that you can do the math.)
>>>
>>> Simplifying the math:
>>> x = cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>> (Where a = 2 * pi * f_1 * t and b = same but f_2.)
>>> All three of the above are equivalent. There is no difference.
>>> You get x if you add two sine waves or if you
>>> multiply two (different) sine waves.
>>
```

>> ??
>> sin(a) + sin(b) <> sin(a) * sin(b)
>> In case you mistyped cosine:
>> sin(a) + sin(b) <> cos(a) * cos(b)
>
> It would have been more proper of me to say
> "sinusoid" rather than "sine wave". I called
> cos() a "sine wave". If you look at cos(2pi f1 t)
> on an oscilloscope it looks the same as sin(2pi f t).
> In that case there is essentially no difference.
> Yes, there are cases where it makes a difference.
> But at the beginning of an analysis it is rather
> arbitrary and the math is less cluttered with
> cos().

Got the (co)sin-stuff. But the unequallities are still there.
It's easy to understand: the left-hand term is sooner or later
greater then one, the right-hand term not (in both unequalities).
As a consequence we've two different x's.

>>> So which is it really? Hint: If all you have is x then
>>> you can't tell how it was generated.

Yep.

>>> What you do with it afterwards can make a
>>> difference.

Sure (but nature doesn't mind).

>> Referring to the physical system, what's now your point?
>> That system contains elements vibrating at 25003 Hz.
>> There's no math in it.
>
> Whoops. You'll need math to understand it.

I would say we need the math to work with it, to get our
things done. Understanding nature is not self-evident the
same thing. I would really appreciate it if you would take
the time to read my UTC 9:57 reply to JK once again,
but then with a more open mind. Thanks.

gr, Hein

3312. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 22:33:15 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <46994eca$0$24695$4c368faf@roadrunner.com>
Source record: 38623
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:469927cb$0$336$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> Hein ten Horn wrote:
>>> A vibrating element here (such as a cubic micrometre
>>> of matter) experiences different changing forces. Yet
>>> the element cannot follow all of them at the same time.
>>
>> It does. Not identically but it does follow all of them.
>
> Impossible. Remember, we're talking about sound. Mechanical
> forces only. Suppose you're driving, just going round the corner.
> From the outside a fistful of forces is working on your body,
> downwards, upwards, sidewards. It is absolutely impossible
> that your body's centre of gravity is following different forces in
> different directions at the same time. Only the resulting force is
> changing your movement (according to Newton's second law).
>
>>> As a matter of fact the resulting force (the resultant) is
>>> fully determining the change of the velocity (vector) of
>>> the element.
>>> The resulting force on our element is changing at the
>>> frequency of 222 Hz, so the matter is vibrating at the
>>> one and only 222 Hz.
>>
>> Your idea of frequency is informal and leaves out
>> essential aspects of how physical systems work.
>
> Nonsense. Mechanical oscillations are fully determined by
> forces acting on the vibrating mass. Both mass and resulting force
> determine the frequency. It's just a matter of applying the laws of
> physics.

Let me call you an idiot now and get that out of the way.
You're an idiot.
You don't know the laws of physics or how to
apply them.

How do you determine "the frequency"?
Show me the math.

What is "the frequency" of
cos(2pi 200 t) + cos(2pi 210 t) + cos(2pi 1200 t) + cos(2pi 1207 t)

>
>
> Question
>
> Is our auditory system in some way acting like a spectrum analyser?
> (Is it able to distinguish the composing frequencies from a vibration?)
>
> Ron?
> Somebody else?
>
> Thanks
>
> gr, Hein
>
>

3313. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 22:36:51 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-391A33.18365114072007@nntp.aioe.org>
Source record: 38624

In article <rmbBc7JbFLmGFA1x@ifwtech.co.uk>,
Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:

> Any SDS+ drill with the "rotary stop" option will make a very effective
> hammer for earth rods.

Ian-

I found SDA+ hammer drills in a couple of the local hardware stores today. The smallest was around 3 kilograms (6.5 pounds), but I suspect is the "2 kilogram" class you refer to.

One question the sales people couldn't answer, was what you meant by "rotary stop". The drills I saw all had a linear stop in the form of a rod that can be adjusted to stop penetration of the drill bit at a desired depth. Do you mean that kind of stop, or do you mean something like stopping rotary action, leaving only the hammering action?

Fred
K4DII

3314. Texas CB Forum

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 22:42:55 UTC
From: DJboutit <Recordking@Hotmail.com>
Message-ID: <46994ab4$0$4922$4c368faf@roadrunner.com>
Source record: 38622

For anybody that lives in Texas who is into cb radio to chat & meet others
who are also into cb radio www.texascbforum.co.sr

3315. Re: micro--waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 22:51:10 UTC
From: ml <m@di.net>
Message-ID: <m-D8D90F.18510714072007@news.verizon.net>
Source record: 38625

In article <You-5314E8.10233214072007@netnews.worldnet.att.net>,
You <You@shadow.orgs> wrote:

> In article <m-B7EC67.07270214072007@news.verizon.net>, ml <m@di.net>
> wrote:
>
> > i was sorta wondering what a 'wave' looks like in 3d
> >
> > what got me thinking was i know my microwave oven's door has a screen
> > such that the holes are supposed to me smaller than the microwave itself
> > so it dosn't leave the area
> >
> > but i wasn't sure how to think of the wave itself was it a narrow beam
> > sorta like a pencil that had the length =freq i am guessing not or if
> > ever it turned onto it's profile then it would go thru the screen
> > apature so do i assume it's length and width are always same? in x y z
> >
> > or even out of a directional microwave emitter is it immediately like a
> > doughnut always sorta propagating
> >
> > all the books i have always show waves like a pencil line and sorta
> > describe it 2d
>
> Remember back to your High School Physics Class, where you had the
> water filled pool, and dropped an object in and it created "Waves"
> in the pool????? There you go......

,<<thanks very much for responding

i sorta was thinking about that but looking at it, i kinda don't know
if the waves are also below the surface so to speak that is in the
case of a radio wave is it like a round ball? like waves around a
magnet

3316. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:10:03 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <4699576a$0$8002$4c368faf@roadrunner.com>
Source record: 38626
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:469943cd$0$322$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> Hein ten Horn wrote:
>>> Ron Baker, Pluralitas! wrote:
>>>>
>>>> How do you arrive at a "beat"?
>>>
>>> Not by train, neither by UFO. ;)
>>> Sorry. English, German and French are only 'second'
>>> languages to me.
>>> Are you after the occurrence of a beat?
>>
>> Another way to phrase the question would have been:
>> Given a waveform x(t) representing the sound wave
>> in the air how do you decide whether there is a
>> beat in it?
>
> Oh, nice question. Well, usually (in my case) the functions
> are quite simple (like the ones we're here discussing) so that
> I see the beat in a picture of a rough plot in my mind.

Sorry, but your mental images are hardly linear
or authoritative on the laws of physics.

>
>>> Then: a beat appears at constructive interference, thus
>>> when the cosine function becomes maximal (+1 or -1).
>>> Or are you after the beat frequency (6 Hz)?
>>> Then: the cosine function has two maxima per period
>>> (one being positive, one negative) and with three
>>> periodes a second it makes six beats/second.
>>>
>>>> Hint: Any such assessment is nonlinear.
>
> Mathematical terms like linear, logarithmic, etc. are familiar
> to me, but the guys here use linear and nonlinear in another
> sense. Something to do with harmonics or so? Anyway,
> that's why the hint isn't working here.

You have a system decribed by a function f( ) with
input x(t) and output y(t).
y(t) = f(x(t))

It is linear if
a * f(x(t)) = f(a*x(t))
and
f(x1(t)) + f(x2(t)) = f(x1(t) + x2(t))

A linear amplifier is
y(t) = f(x(t)) = K * x(t)
A ("double balanced") mixer is
y(t) = f(x1(t), x2(t)) = x1(t) * x2(t)
(which is not linear.)

>
>>>> (And kudos to you that you can do the math.)
>>>>
>>>> Simplifying the math:
>>>> x = cos(a) * cos(b) = 0.5 * (cos[a+b] + cos[a-b])
>>>> (Where a = 2 * pi * f_1 * t and b = same but f_2.)
>>>> All three of the above are equivalent. There is no difference.
>>>> You get x if you add two sine waves or if you
>>>> multiply two (different) sine waves.
>>>
>>> ??
>>> sin(a) + sin(b) <> sin(a) * sin(b)
>>> In case you mistyped cosine:
>>> sin(a) + sin(b) <> cos(a) * cos(b)
>>
>> It would have been more proper of me to say
>> "sinusoid" rather than "sine wave". I called
>> cos() a "sine wave". If you look at cos(2pi f1 t)
>> on an oscilloscope it looks the same as sin(2pi f t).
>> In that case there is essentially no difference.
>> Yes, there are cases where it makes a difference.
>> But at the beginning of an analysis it is rather
>> arbitrary and the math is less cluttered with
>> cos().
>
> Got the (co)sin-stuff. But the unequallities are still there.
> It's easy to understand: the left-hand term is sooner or later
> greater then one, the right-hand term not (in both unequalities).
> As a consequence we've two different x's.

You left out the "0.5".
cos(a) * cos(b) = 0.5 * (cos(a+b) + cos(a-b))

>
>>>> So which is it really? Hint: If all you have is x then
>>>> you can't tell how it was generated.
>
> Yep.
>
>>>> What you do with it afterwards can make a

>>>> difference.
>
> Sure (but nature doesn't mind).
>
>>> Referring to the physical system, what's now your point?
>>> That system contains elements vibrating at 25003 Hz.
>>> There's no math in it.
>>
>> Whoops. You'll need math to understand it.
>
> I would say we need the math to work with it, to get our
> things done. Understanding nature is not self-evident the
> same thing.

Nature works by laws. We express the laws
in math. Nature is complicated and it may be
difficult to simplify the system one is looking
at or to put together of mathematical model
that is representative of the system but it
is often possible. It is regularly possible to
have a mathematical model of a system that
is accurate to better than 5 decimal places.

> I would really appreciate it if you would take
> the time to read my UTC 9:57 reply to JK once again,
> but then with a more open mind. Thanks.

Hmm. You're definitely not going to like part of it.
(You seem so much more reasonable here.)

>
> gr, Hein
>
>

3317. Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:16:59 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.23.16.58.136865@from.qrz.com>
Source record: 38627

In the "How to drive the ground rods in" thread, Ralph Mowery wrote:

> Dig out a hole about 4 or 5 inches in diameter and about that deep.
> Fill it with water. Put the ground rod in the center of that hole and
> push it down. Then pull it back slightly. Doing this several times you
> should be able to get to get it down several inches with each cycle.
> Keep doing this without stopping. If you get to about 3 or 4 feet put
> the rod all the way out and fill the hole with water . Put the rod back
> in the same hole and keep pushing and pulling it a few inches at a
> time.

Good evening, Ralph.

That brought something else to mind... something I'm sure has been thought of by greater minds than mine, and one or two of you have hinted at something like it in these last few threads...

How about a 10-foot length of copper water pipe, connected to a garden hose with an adapter fitting (as simple as a short length of another garden hose, clamped to the pipe with radiator hose clamps). Run water down the pipe and stick the pipe in the ground, pulling it up and pushing it down so that the water helps drill the hole in a manner just like you described. Keep it up until it has gone in as far as it will go, then (if it hasn't gone in the whole 10 feet) cut it off and solder a copper cap on the end.

You end up with a hollow pipe in the ground instead of a solid steel rod, but everything I read about lightning strikes says that the vast majority of the current flows in skin effect anyway.

I did something like this once in my backyard when I was about 9 years old, using our garden hose. I recall being amazed at how the hose just kept going in, kept going in ... 'course then when I tried to pull it out again it was a different story. My father was not happy. :-(

If a hollow water pipe isn't a good enough ground rod, how about drilling the hole as described above using the water pipe, and then (if I can get the pipe back out of the ground) beating the ground rod into the resulting hole? Should go in pretty easy...

I know that by now everyone pretty much believes that a house's copper water pipes don't make good grounds, but that's mostly because they aren't connected very well to actual ground... in my house, the copper water pipes go to the water pump which sucks the water out of the well via a hard rubber hose... not very good for ground. The only connection to ground we got (before I connected the copper pipes to the service ground) was through the minerals in the water.

3318. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:21:43 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.23.21.43.510508@from.qrz.com>
Source record: 38628

On Sat, 14 Jul 2007 02:04:34 +0000, Owen Duffy wrote:

> You will see articles on the net describing drilling a hole with a hose
> and a peice of pipe. I have reservations about this, because it is no
> longer a drive electrode. I have not seen this method used by commercial
> applications and I suspect that if one was contracted to drive
> electrodes, this would not be an acceptable method.

Good evening, Owen.

I just started a new thread on this, titled "Using a copper water pipe in place of a ground rod?". That was after I looked for the above paragraph from you and didn't find it until just now.

I'd like to know why you think it's not acceptable, but I'll continue this in that thread.

3319. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:24:33 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.23.24.33.484418@from.qrz.com>
Source record: 38629

On Sat, 14 Jul 2007 02:04:34 +0000, Owen Duffy wrote:

> You will see articles on the net describing drilling a hole with a hose
> and a peice of pipe. I have reservations about this, because it is no
> longer a drive electrode. I have not seen this method used by commercial
> applications and I suspect that if one was contracted to drive
> electrodes, this would not be an acceptable method.

Good evening, Owen.

I am unsure what you mean by "it is no longer a drive electrode" and "I suspect... this would not be an acceptable method".

Certainly the earth's grip on the ground rod will be much less tight this way, but only for a little while... over time, won't the earth shift with weather and rain and such, so that eventually (in days or weeks) it will grip the ground rod sufficiently well?

Or am I missing your point? (No surprise there...) :-)

3320. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:32:59 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.23.32.58.473851@from.qrz.com>
Source record: 38630

On Sat, 14 Jul 2007 02:04:34 +0000, Owen Duffy wrote:

> You will see articles on the net describing drilling a hole with a hose
> and a peice of pipe.

Owen;

Can you please give me a hand finding those articles? I tried Google and Yahoo with various combinations of things like "drill hole in ground with water pipe" and "hole ground hose pipe" and am coming up empty.

Thanks...

3321. Re: Please don't trivialize [was Re: Do magnetars emit audible LW AM radio waves that can be heard on receivers?]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:33:57 UTC
From: Don Kelly <dhky@shaw.ca>
Message-ID: <F3dmi.116248$NV3.19621@pd7urf2no>
Source record: 38631
Cross-posted to: rec.audio.tech,rec.radio.amateur.antenna,sci.physics,sci.physics.electromag,rec.radio.amateur.space

<jimp@specsol.spam.sux.com> wrote in message
news:7h2mm4-36k.ln1@mail.specsol.com...
> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>> On Jul 13, 4:55 pm, j...@specsol.spam.sux.com wrote in
>> http://groups.google.com/group/sci.astro.amateur/msg/4672c2fa9e3e8f5e?hl=en&
>> :
>
>> > In rec.radio.amateur.space Radium <gluceg...@gmail.com> wrote:
>
>> > > Okay. But what if this is a supercooled AM radio receiver on a
>> > > spaceship orbiting Earth? If I am on a space station like MIR and
>> > > this
>> > > station has a supercooled AM radio 44.1 KHz frequency receiver, will
>> > > I
>> > > hear anything specific of magnetars?
>
>> > Generally, super cooled electronic components stop working.
>
>> Isn't a super cooled receiver less vulnerable to thermal noise than a
>> receiver of a higher temperature? This is why SETI super-cools their
>> radio receivers. So that the heat will not generate electric currents
>> that would drown-out the intended signals in hiss.
>
>> > > 44.1 KHz is the carrier-frequency this hypothetical receiver
>> > > receives.
>
>> > A super stupid frequency to pick. Generally for listening for natural
>> > phenomena, you want a wide as possible bandwidth given the noise
>> > floor.
>
>> But humans only hear from 20 to 20,000 Hz. So why use a higher
>> frequency?
>
>> >From what you think, what is the best frequency for listening to
>> magnetars and other natural phenomena?
>
>> > > I place the frequency of this hypothetical AM radio carrier wave at
>> > > 44.1 KHz for the same reason CDs use a sample rate of 44.1 KHz -- it
>> > > is the minimum required to prevent aliasing.
>
>> > An AM receiver isn't digitizing anything, sample rates don't apply,
>> > and aliasing doesn't apply.

>
>> Isn't it true that the carrier-frequency must be at least 2x the
>> highest intended frequency of the modulator signal?
>
>> I am not talking about sample rates. I am talking about carrier
>> frequency. From the answers to my previous questions regarding carrier
>> frequencies, I thought it was established that you mathematically
>> can't have a modulator frequency more than 0.5x the carrier-frequency.
>> What happened?
>
>> Since humans hear up to 20 KHz it is mathematically-required that the
>> carrier frequency be at least 40 KHz or 2 x 20 KHz. Due to physical
>> factors it would be most practical to use a carrier frequency slightly
>> higher than 2x the maximum intended modulator frequency -- hence 44.1
>> KHz.
>
> If you had the slightest bit of education or common sense, you would
> be asking a question that makes sense instead of going on forever
> about the minutiae of what makes your questions idiotic.
>
> Here's a question that makes sense:
>
> Are there any sources of RF energy outside our solar system that
> could possiblely be detected given an environment free of the
> constraints of the ionsphere and man made noise?
>
> If so, what frequecy or frequencies would they be seen at and what
> would be the general characteristics of such a signal?
>
> Also, the same question but operating from the Earth's surface.
>
> And this is an astronomy/astro-physics question, not an electromagnetics
> question.
>
> Notice there is nothing in there about "supercooling", modulation
> type, sampling rates, or any of the other nonsense in your question.
>
> Babbling twit.
>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Perhaps archimedes plutonium has changed his name. Sounds about the same-
ploughing on and on without any idea of what he is doing -no answer will
shut him up. Possibly that is the right approach-killfile.

--

Don Kelly dhky@shawcross.ca
remove the X to answer

3322. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:40:07 UTC
From: Bob John <AA8X@wowway.com>
Message-ID: <4b-dnYSL54ZAwwTbnZ2dnUVZ_tW3nZ2d@wideopenwest.com>
Source record: 38482

Thanks for the information as I will check into it. BTY, the Little Tarheel
now sells for $389.99 which is way too much money for this small antenna.
Bob

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:1184449053.688071.59830@x35g2000prf.googlegroups.com...
>
> Bob John wrote:
>> Is Tarheel pricing their products out of the market? I had consideration
>> purchasing a little Tarheel II during our local Hamfest last weekend in
>> Aurora, IL. The dealer informed me the price had once again gone up and
>> they
>> are now $289.99. Add to this amount the sales tax, auto-controller and
>> mount
>> and you are way over $600.00. This is more then I paid for my FT-100D,
>> which
>> I purchased new. At this point in time, the Hustler antenna is working
>> fine
>> and I don't have to worry about theft.
>>
>> Bob, AA8X
>
>
> Check out fair radio sales, they had some surplus screwdriver antenna
> parts.
>
> Jimmie
>

3323. What if "single point ground" isn't possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-14 23:53:02 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.14.23.53.01.201316@from.qrz.com>
Source record: 38483

Many things I've read over the last couple of weeks on the proper grounding of towers and ham stations all emphasize the importance of a single point ground.

What if it's not possible to implement that?

My tower is on the other end of the house from where the electrical service (and its associated ground) are. I did not put the tower there and if it had been left up to me it wouldn't have gone there, but that's another story for another time... point is that the tower and the service ground are 50+ feet apart, and the shack (using the only available spare bedroom) is on the end of the house where the service ground is.

I can beat a fistful of ground rods around the tower, and put another one in the ground below the shack window (that's the one I'm doing now), and bond it all together with buried heavy gauge copper wire that also bonds to the service ground... but that ain't a single point ground, it's more like a 50+ foot long distributed ground.

So, how do I achieve that ideal "single point ground" in a situation like this?

3324. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 00:02:44 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <dnii93top5no78hmv9013gutn3jafcra82@4ax.com>
Source record: 38484
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sat, 14 Jul 2007 23:43:55 +0200, "Hein ten Horn"
<tenhornRemovE@ThiSraketnet.nl> wrote:

>Ron Baker, Pluralitas! wrote:
>> Hein ten Horn wrote:
>>> Ron Baker, Pluralitas! wrote:
>>>>
>>>> How do you arrive at a "beat"?
>>>
>>> Not by train, neither by UFO. ;)
>>> Sorry. English, German and French are only 'second'
>>> languages to me.
>>> Are you after the occurrence of a beat?
>>
>> Another way to phrase the question would have been:
>> Given a waveform x(t) representing the sound wave
>> in the air how do you decide whether there is a
>> beat in it?
>
>Oh, nice question. Well, usually (in my case) the functions
>are quite simple (like the ones we're here discussing) so that
>I see the beat in a picture of a rough plot in my mind.

And what does it look like, then?

>>> Then: a beat appears at constructive interference, thus
>>> when the cosine function becomes maximal (+1 or -1).
>>> Or are you after the beat frequency (6 Hz)?
>>> Then: the cosine function has two maxima per period
>>> (one being positive, one negative) and with three
>>> periodes a second it makes six beats/second.
>>>
>>>> Hint: Any such assessment is nonlinear.
>
>Mathematical terms like linear, logarithmic, etc. are familiar
>to me, but the guys here use linear and nonlinear in another
>sense.

Where is "here"?

I'm writing from sci.electronics.basics and, classically, a device with a linear response will provide an output signal change over its linear dynamic range which varies as a function of an input signal amplitude change and some system constants and is described by:

Y = mx+b

Where Y is the output of the system, and is the distance traversed by the output signal along the ordinate of a Cartesian plot,

m is a constant describing the slope (gain) of the system,

x is the input to the system, is the distance traversed by the input signal along the abscissa of a Cartesian plot, and

b is the DC offset of the output, plotted on the ordinate.

In the context of this thread, then, if a couple of AC signals are injected into a linear system, which adds them, what will emerge from the output will be an AC signal which will be the instantaneous arithmetic sum of the amplitudes of both signals, as time goes by.

As nature would have it, if the system was perfectly linear, the spectrum of the output would contain only the lines occupied by the two inputs.

Kinda like if we listened to some perfectly recorded and played back music...

If the system is non-linear, however, what will appear on the output will be the AC signals input to the system as well as some new companions.

Those companions will be new, real frequencies which will be located spectrally at the sum of the frequencies of the two AC signals and also at their difference.

>Something to do with harmonics or so? Anyway,
>that's why the hint isn't working here.

Harmonics _and_ heterodynes.

If the hint isn't working then you must confess ignorance, yes?

--
JF

3325. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 00:06:47 UTC
From: james <james27613@yahoo.com>
Message-ID: <46996517.8EA255BE@yahoo.com>
Source record: 38485

hi,

I think the prices for USA manufactured antenna of this quality
is about right, compared to others in this class.

the Tarheel series is a production antenna, you can take a dozen or
so of the Tarheels off individual vehicles, disassemble them and mix
the parts up in a box and put it back together and each one will fit and
work as designed. They are not tossed together from random parts rund.

The original poster could order one from Tarheel and save the sales
taxes
if you live out of NC.

Bob John wrote:
>
> Thanks for the information as I will check into it. BTY, the Little Tarheel
> now sells for $389.99 which is way too much money for this small antenna.
> Bob

3326. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 00:17:42 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-E78DFE.20174214072007@nntp.aioe.org>
Source record: 38486

In article <pan.2007.07.14.23.32.58.473851@from.qrz.com>,
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote:

> Can you please give me a hand finding those articles? I tried Google and
> Yahoo with various combinations of things like "drill hole in ground with
> water pipe" and "hole ground hose pipe" and am coming up empty.

Rick-

My recollection is the use of this method to sink a well pipe for a lawn
pump. Try this approach in your search.

Fred
K4DII

3327. Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 00:49:52 UTC
From: nuttin <nuttin@nowhar.net>
Message-ID: <MLudnYcyQPBf8wTbnZ2dnUVZ_gWdnZ2d@hawaiiantel.net>
Source record: 38487

I am going to install one of these units at my location.

The printed material that came with the unit says nothing should be between the control box and the relay box.

Well, does this mean the control box will handle the 1200-1500 watts from my linear? that would be the last piece of equipment in the line.

Need some input please!

3328. Re: What if "single point ground" isn't possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 00:57:32 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2007.07.15.00.56.54@ME.networksplus.net>
Source record: 38488

On Sat, 14 Jul 2007 19:53:02 -0400, Rick (W-A-one-R-K-T) wrote:

> So, how do I achieve that ideal "single point ground" in a situation
> like this?

As I understand it, a "single point ground" means that everything is tied to the same ground system however big or small that is. What you don't want is the shack tied to a ground and the tower to its own ground with the cabling tying the two together. The result will be unequal potential at the tower and in the shack. A "single point ground" reference means that the potential everywhere will be the same, rising and falling together in the event of a strike.

I have seen it recommended to make that 50' run of #2 stranded copper and place a ground rod approximately every eight feet along the run (no closer than eight feet). You will have a much improved lightning ground *and* a "single point ground". Beating a bunch of ground rods in the ground is of little value unless they are at least eight feet apart.

Poke around Polyphaser's Web site for more detail information.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds, the pessimist fears this is true."

3329. Re: What if "single point ground" isn't possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 01:27:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <TJemi.1848$Wh4.430@trndny06>
Source record: 38489

"Nate Bargmann" <n0nb.DO.NOT.SPAM@ME.networksplus.net> wrote in message
news:pan.2007.07.15.00.56.54@ME.networksplus.net...
> On Sat, 14 Jul 2007 19:53:02 -0400, Rick (W-A-one-R-K-T) wrote:
>
>> So, how do I achieve that ideal "single point ground" in a situation
>> like this?
>
> As I understand it, a "single point ground" means that everything is tied
> to the same ground system however big or small that is. What you don't
> want is the shack tied to a ground and the tower to its own ground with
> the cabling tying the two together. The result will be unequal potential
> at the tower and in the shack. A "single point ground" reference means
> that the potential everywhere will be the same, rising and falling
> together in the event of a strike.
>
> I have seen it recommended to make that 50' run of #2 stranded copper and
> place a ground rod approximately every eight feet along the run (no
> closer than eight feet). You will have a much improved lightning ground
> *and* a "single point ground". Beating a bunch of ground rods in the
> ground is of little value unless they are at least eight feet apart.
>
> Poke around Polyphaser's Web site for more detail information.
>
> 73, de Nate >>
>
> --
>
> "The optimist proclaims that we live in the best of all possible worlds,
> the pessimist fears this is true."

the infamous 'single point ground' only refers to protecting equipment in a
single room or building... it does not refer to tying the grounds of
everything outside of a building or room together in any way... while that
is required by electrical code it is not going to protect your equipment,
all it does is make sure that if you touch 2 pieces of equipment their cases
are don't have power line voltage difference between them. The concept of a
single point ground is that you define a single point for your shack that is
the 'ground' and everything is connected to that one point, usually on an
outside wall of the shack. So any power, phone, catv, antenna, or other
wire coming into the shack is grounded and has lightning protectors on the
same panel at one spot on the wall. if this is done properly then
everything in the room will be at the same potential even during a surge
from a lightning stroke.

3330. Re: Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 01:45:45 UTC
From: James <jnipperxxx@nospamfdn.com>
Message-ID: <CaydnQSql5LV4QTbnZ2dnUVZ_jCdnZ2d@comcast.com>
Source record: 38490

I believe that this is the unit that uses the coax to send the voltage to the relay. What you are reading must simply be saying that you don't have to have seperate voltage wires going from your control box out to the relay at your antenna. Your antenna coax carries this voltage to the relay.

Ameritron does make a unit that requires voltage wiring to be run to the relay.

Does this help ?

73 de jim K4PYT

3331. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 01:49:41 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996E7851FAD73nonenowhere@61.9.191.5>
Source record: 38492

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.14.23.24.33.484418@from.qrz.com:

>
> On Sat, 14 Jul 2007 02:04:34 +0000, Owen Duffy wrote:
>
>> You will see articles on the net describing drilling a hole with a
hose
>> and a peice of pipe. I have reservations about this, because it is no
>> longer a drive electrode. I have not seen this method used by
commercial
>> applications and I suspect that if one was contracted to drive
>> electrodes, this would not be an acceptable method.
>
> Good evening, Owen.

Good morning Rick,

>
> I am unsure what you mean by "it is no longer a drive electrode" and "I
> suspect... this would not be an acceptable method".
>
> Certainly the earth's grip on the ground rod will be much less tight
this
> way, but only for a little while... over time, won't the earth shift
with
> weather and rain and such, so that eventually (in days or weeks) it
will
> grip the ground rod sufficiently well?
>
> Or am I missing your point? (No surprise there...) :-)
>

I should have said it is no longer a driven electrode.

Over a long time, it probably becomes equivalent, but in the first
instance, it is in less intimate contact with the ground.

It has been my experience with voltage operated ELCBs and loose earth
electrodes that they are unreliable and cause false tripping at quite low
leakage currents which I attributed to a variable resistance, and they
were usually fixed by driving a decent electrode.

You will find lots of discussion about the merit of boring a hole,
placing an electrode and filling it with bentonite or kitty litter or
some other enhancing material. Some hams assert that they water the

electrode (plain tap water or urine or both) as a conductivity enhancer, I think that is more an excuse for consuming 807s.

If you read performance data for a driven electrode, it doesn't necessarily apply to an electrode in a bored hole and then backfilled, whether by slurry or compaction or whatever.

I am not saying they don't work when done in that way, but they are different and quite likely to be poorer than driving the electrode.

For a multi mode RF / AC protective / Lighting ground, shallow buried radials might be more effective than one or several driven electrodes anyway. A driven electrode (or any vertical electrode) is not very useful for RF.

Someone commented to the effect that a vertical electrode that hits rock is a waste of time. That depends, the ground above the rock may be much wetter than for the presence of the rock, it which case the shorter electrode might reach more conductive earth and be good. However a short electrode in dry sandy soil that strikes rock may be quite high resistance and recourse to buried strip electrodes is warranted.

I drove an electrode at a holiday cottage at the coast (where it rains) and it hit a serious rock shelf at 2.1m. The electrode measured very low resistance at 1kHz, much lower resistance than I expected from a single 2.4m electrode in clay. I attribute that to the rock shelf serving to drain ground water down the hill and presenting quite wet clay in the region above the shelf.

Owen

3332. Re: What if "single point ground" isn't possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 01:49:46 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <_4ednQ9czf_O4ATbnZ2dnUVZ8vednZ2d@bt.com>
Source record: 38491

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.14.23.53.01.201316@from.qrz.com...
>
> Many things I've read over the last couple of weeks on the proper
> grounding of towers and ham stations all emphasize the importance of a
> single point ground.
>
> What if it's not possible to implement that?
>
> My tower is on the other end of the house from where the electrical
> service (and its associated ground) are. I did not put the tower there
> and if it had been left up to me it wouldn't have gone there, but that's
> another story for another time... point is that the tower and the service
> ground are 50+ feet apart, and the shack (using the only available spare
> bedroom) is on the end of the house where the service ground is.
>
> I can beat a fistful of ground rods around the tower, and put another one
> in the ground below the shack window (that's the one I'm doing now), and
> bond it all together with buried heavy gauge copper wire that also bonds
> to the service ground... but that ain't a single point ground, it's more
> like a 50+ foot long distributed ground.
>
> So, how do I achieve that ideal "single point ground" in a situation like
> this?
>
Rick

You are thinking too deeply about this and worrying unnecessarily. If you have grounding at the antenna and grounding 50+ feet away connected by a heavy guage copper cable buried in the ground, the whole system will be at the same potential and can be considered as a single point. The mistake that gets made is when people put two separate earthing points in at different locations and assume that both earth points are at the same potential. This isn't necessarily the case if earth leakage currents are flowing to ground and the earth electrode resistances are slightly different. Computers, switch mode power supplies, washing machines, electric motors and electric cookers all tend to generate some earth leakage current, usually only a few millivolts, but for radio purposes you are receiving signals 1000 x fainter in the microvolt range. This is where a lot of interference problems arise. Bonding all the earth points together with thick cable is a perfectly valid solution to ensuring that all the earth points are at the same common potential.

If the antenna tower gets hit by lightning, the current will disipate into the ground by the most direct route possible. Sure there will be an

instantaneous voltage gradient going out a few feet around the antenna base for a couple of milliseconds immediately after the strike, but any equipment damage will most likely be caused by electromagnetic pulse from the lightning strike and not voltage flowing up the earth wire into your equipment. A lightning strike that close can potentially damage equipment that is completely disconnected and powered down.

The earth leakage currents are often caused by induced voltages in equipment casings due to high currents flowing in rotary motors operating washing machines and the like. In event of a nearby lightning strike the process is effectively reversed. The equipment casing absorbs energy and a voltage differential is created and absorbed across components inside the case. Unless you are using valve equipment, a direct lightning strike will very likely cause some damage to connected electronic equipment. With a decent earth it may only take out the protection diodes across a receiver front end - fairly easily fixable. Worst case, your insurance will have to pay out for new equipment.

Just stick the ground rods in, connect them all together and job done.

Mike G0ULI

3333. Re: What if "single point ground" isn't possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 01:55:25 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996E794ADE6D0nonenowhere@61.9.191.5>
Source record: 38493

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.14.23.53.01.201316@from.qrz.com:

>
> Many things I've read over the last couple of weeks on the proper
> grounding of towers and ham stations all emphasize the importance of a
> single point ground.
>
> What if it's not possible to implement that?
>
> My tower is on the other end of the house from where the electrical
> service (and its associated ground) are. I did not put the tower there
> and if it had been left up to me it wouldn't have gone there, but
that's
> another story for another time... point is that the tower and the
service
> ground are 50+ feet apart, and the shack (using the only available
spare
> bedroom) is on the end of the house where the service ground is.
>
> I can beat a fistful of ground rods around the tower, and put another
one
> in the ground below the shack window (that's the one I'm doing now),
and
> bond it all together with buried heavy gauge copper wire that also
bonds
> to the service ground... but that ain't a single point ground, it's
more
> like a 50+ foot long distributed ground.
>
> So, how do I achieve that ideal "single point ground" in a situation
like
> this?
>

Rick,

I think you are envisaging too great a scope for your single point
ground, and it is unlikely to work as you want.

The reason for single point grounding is to make sure that you do not
have endesired current paths (and associated potential drops), and
prinipally between equipment in an equipment room.

If you thing about what it is trying to achieve, minimising potential
differences between equipment interfaces by avoiding potential

differences between the "ground" points of equipments, then you should be able to intelligently design a single point grounding scheme in the equipment room and bond it to your external grounds (tower, AC earthing, others) in a similarly sensible way.

Owen

3334. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 02:05:01 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996E7AEB41E26nonenowhere@61.9.191.5>
Source record: 38494

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
news:rmbBc7JbFLmGFA1x@ifwtech.co.uk:

> There's a potential language gap here, but "electric hammers" fall into
> three broad groups. Working downward in size:

Ian,

The device I use (Hitach PH65) would be called a small electric
demolition hammer or concrete breaker (and it does not have rotation, it
is not a drill).

It has sufficient power to break through / deflect thin shale or small
rocks in the path.

Smaller pneumatic drills which can operate chasing chisels etc *may* work
fine in soft soil for shorter electrodes. It is probably possible to make
a driving adapter by cutting the end off a chisel or point and welding a
peice of pipe of 100mm length and snug fit over the chisel to create a
socket to locate the adapter over the electrode.

I usually place a few wraps of electrical tape over the rod end to reduce
the damage to the copper cladding and reduce spreading or noodling of the
end of the rod, especially if another rod will be driven behind it using
a coupler.

Owen

3335. Re: micro--waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 02:07:21 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996E7B50F3A72nonenowhere@61.9.191.5>
Source record: 38495

ml <m@di.net> wrote in news:m-B7EC67.07270214072007@news.verizon.net:

> i was sorta wondering what a 'wave' looks like in 3d
>
> what got me thinking was i know my microwave oven's door has a screen
> such that the holes are supposed to me smaller than the microwave itself
> so it dosn't leave the area

The explanation for why that screen works is that each hole is a very short wavequide. If you calculate the attenuation in such a wavequide the frequency involved, you have your answer as to why it works as it does.

Owen

3336. George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 02:57:34 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184468254.568850.94820@o11g2000prd.googlegroups.com>
Source record: 38496
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

George Dishman says Karl Uppiano is wrong about AM radio, carrier-
frequencies, and aliasing. Who should I believe and why?

On Jul 14, 4:11 pm, "George Dishman" <geo...@briar.demon.co.uk> wrote
in http://groups.google.com/group/sci.astro.amateur/msg/1d3b52bbf05843c0?hl=en&
:
> "Radium" <gluceg...@gmail.com> wrote in message
>
> news:1184446739.705444.308660@i38g2000prf.googlegroups.com...
>
> > On Jul 14, 1:17 am, "George Dishman" <geo...@briar.demon.co.uk> wrote:
> >> "Radium" <gluceg...@gmail.com> wrote in message
>
> >>news:1184373407.506861.132200@m37g2000prh.googlegroups.com...
> >> ..
>
> >> > Isn't it true that the carrier-frequency must be at least 2x the
> >> > highest intended frequency of the modulator signal?
>
> >> No.
>
> > Karl Uppiano sharply disagrees.
>
> > Karl Uppiano explained in
> >http://groups.google.com/group/sci.energy/msg/a74d4d8ddcea47a5?hl=en&
>
> He is wrong. The basis of AM is that the sine wave
> carrier is multiplied by another signal which can be
> treated as a sum of sines. The relevant maths is:
>
> http://www.sosmath.com/trig/prodform/prodform.html
>
> If the carrier frequency if fc and the modulation has
> frequencies up to fm then you get sidebands like
> this:
>
> http://en.wikipedia.org/wiki/Image:Am-sidebands.png
>
> If you multiply 44.1kHz by a band from 20Hz to 20kHz,
> you get an upper sideband given 44.12kHz to 64.1kHz
> and a lower sideband from 44.08kHz down to 24.1kHz
>

> >> The highest modulating frequency for AM must be less than 1/2 the carrier
> >> frequency. Conversely, the lowest carrier frequency must be twice the
> >> highest modulating frequency. Period. I don't care what specific
> >> frequencies
> >> and/or energies and/or colors you propose.
>
> >> If you want to modulate at 20KHz, the carrier must be at least 40KHz. It
> >> is
> >> no coincidence that CD audio uses a 44.1KHz sample rate. It is
> >> essentially
> >> the same principle. If you exceed the Nyquist criterion, the sidebands
> >> overlap the baseband (i.e., aliasing occurs) and you cannot unambiguously
> >> decode the original modulation.
>
> Nyquist applies to sampling.
>
> > So who is right and who is wrong?
>
> Look at the maths, it is never wrong. Modulating fc
> with fm gives a lowest frequency of fc-fm so as long
> as fc > fm, you don't get aliasing.
>
> George

So is it possible for me to receive a 10 KHz audio sine-wave tone on a
1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
Shannon. Right?

3337. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 03:04:38 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1184468678.329985.172970@z28g2000prd.googlegroups.com>
Source record: 38497

Bob John wrote:
> Thanks for the information as I will check into it. BTY, the Little Tarheel
> now sells for $389.99 which is way too much money for this small antenna.
> Bob
>
> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
> news:1184449053.688071.59830@x35g2000prf.googlegroups.com...
> >
> > Bob John wrote:
> >> Is Tarheel pricing their products out of the market? I had consideration
> >> purchasing a little Tarheel II during our local Hamfest last weekend in
> >> Aurora, IL. The dealer informed me the price had once again gone up and
> >> they
> >> are now $289.99. Add to this amount the sales tax, auto-controller and
> >> mount
> >> and you are way over $600.00. This is more then I paid for my FT-100D,
> >> which
> >> I purchased new. At this point in time, the Hustler antenna is working
> >> fine

What I saw in the catalog was the coils for about $70. I dont see it
online. I think it still needed the stinger and a motor plus the
control box.

Jimmie
> >> and I don't have to worry about theft.
> >>
> >> Bob, AA8X
> >
> >
> > Check out fair radio sales, they had some surplus screwdriver antenna
> > parts.
> >
> > Jimmie
> >

3338. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 03:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <trgom4-vmm.ln1@mail.specsol.com>
Source record: 38498
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> George Dishman says Karl Uppiano is wrong about AM radio, carrier-
> frequencies, and aliasing. Who should I believe and why?

The math; it is always correct.

> > He is wrong. The basis of AM is that the sine wave
> > carrier is multiplied by another signal which can be
> > treated as a sum of sines. The relevant maths is:
> >
> > http://www.sosmath.com/trig/prodform/prodform.html

<snip remaining idiocy>

--
Jim Pennino

Remove .spam.sux to reply.

3339. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 05:04:11 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184475851.942566.121140@e16g2000pri.googlegroups.com>
Source record: 38499
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

On Jul 14, 8:35 pm, j...@specsol.spam.sux.com wrote:

> > > http://www.sosmath.com/trig/prodform/prodform.html

That link says nothing about Amplitude Modulation

3340. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 06:02:23 UTC
From: Ron Capik <r.capik@worldnet.att.net>
Message-ID: <4699B81E.48B8ADE2@worldnet.att.net>
Source record: 38500
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

Radium wrote:

> < ......snip.. >
>
>
>
> So is it possible for me to receive a 10 KHz audio sine-wave tone on a
> 1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
> Shannon. Right?

Don't guess, read the papers and do the math!

Later...

RC
--

3341. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 06:36:52 UTC
From: Karl Uppiano <karl.uppiano@verizon.net>
Message-ID: <8gjmi.831$s25.461@trndny04>
Source record: 38501
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

"Radium" <glucegen1@gmail.com> wrote in message
news:1184468254.568850.94820@o11g2000prd.googlegroups.com...
> George Dishman says Karl Uppiano is wrong about AM radio, carrier-
> frequencies, and aliasing. Who should I believe and why?
>
> On Jul 14, 4:11 pm, "George Dishman" <geo...@briar.demon.co.uk> wrote
> in
> http://groups.google.com/group/sci.astro.amateur/msg/1d3b52bbf05843c0?hl=en&
> :
>> "Radium" <gluceg...@gmail.com> wrote in message
>>
>> news:1184446739.705444.308660@i38g2000prf.googlegroups.com...
>>
>> > On Jul 14, 1:17 am, "George Dishman" <geo...@briar.demon.co.uk> wrote:
>> >> "Radium" <gluceg...@gmail.com> wrote in message
>>
>> >>news:1184373407.506861.132200@m37g2000prh.googlegroups.com...
>> >> ..
>>
>> >> > Isn't it true that the carrier-frequency must be at least 2x the
>> >> > highest intended frequency of the modulator signal?
>>
>> >> No.
>>
>> > Karl Uppiano sharply disagrees.
>>
>> > Karl Uppiano explained in
>> >http://groups.google.com/group/sci.energy/msg/a74d4d8ddcea47a5?hl=en&
>>
>> He is wrong. The basis of AM is that the sine wave
>> carrier is multiplied by another signal which can be
>> treated as a sum of sines. The relevant maths is:
>>
>> http://www.sosmath.com/trig/prodform/prodform.html
>>
>> If the carrier frequency if fc and the modulation has
>> frequencies up to fm then you get sidebands like
>> this:
>>
>> http://en.wikipedia.org/wiki/Image:Am-sidebands.png
>>
>> If you multiply 44.1kHz by a band from 20Hz to 20kHz,

>> you get an upper sideband given 44.12kHz to 64.1kHz
>> and a lower sideband from 44.08kHz down to 24.1kHz
>>
>> >> The highest modulating frequency for AM must be less than 1/2 the
>> >> carrier
>> >> frequency. Conversely, the lowest carrier frequency must be twice the
>> >> highest modulating frequency. Period. I don't care what specific
>> >> frequencies
>> >> and/or energies and/or colors you propose.
>>
>> >> If you want to modulate at 20KHz, the carrier must be at least 40KHz.
>> >> It
>> >> is
>> >> no coincidence that CD audio uses a 44.1KHz sample rate. It is
>> >> essentially
>> >> the same principle. If you exceed the Nyquist criterion, the sidebands
>> >> overlap the baseband (i.e., aliasing occurs) and you cannot
>> >> unambiguously
>> >> decode the original modulation.
>>
>> Nyquist applies to sampling.
>>
>> > So who is right and who is wrong?
>>
>> Look at the maths, it is never wrong. Modulating fc
>> with fm gives a lowest frequency of fc-fm so as long
>> as fc > fm, you don't get aliasing.
>>
>> George
>
> So is it possible for me to receive a 10 KHz audio sine-wave tone on a
> 1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
> Shannon. Right?

Since my name came up here, I decided to chime in. It must have been very
late when I typed my original post. George is right. Sorry about any
confusion.

3342. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 06:51:18 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <KdpStoBmPcmGFADo@ifwtech.co.uk>
Source record: 38502

Fred McKenzie wrote:
>In article <rmbBc7JbFLmGFA1x@ifwtech.co.uk>,
> Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:
>
>> Any SDS+ drill with the "rotary stop" option will make a very effective
>> hammer for earth rods.
>
>Ian-
>
>I found SDA+ hammer drills in a couple of the local hardware stores
>today. The smallest was around 3 kilograms (6.5 pounds), but I suspect
>is the "2 kilogram" class you refer to.
>
Probably... the "2 kilogram" drills look like a stretched version of a normal pistol-grip drill, with a horizontal motor. For example:
http://tinyurl.com/33zcrr
http://tinyurl.com/3algeq

(I have no idea why the store calls one of these drills "3/4-inch" and the other "7/8inch". There is only ONE size of SDS+ chuck and drill shank.)

The "4 kilogram" drills are "L-shaped" with a vertical motor, and are much heavier and harder to control. For example:
http://tinyurl.com/37w97w

For most applications the extra power of the 4kg drill is not necessary - certainly not for hammering or drilling for grounds rods.

>One question the sales people couldn't answer, was what you meant by
>"rotary stop". The drills I saw all had a linear stop in the form of a
>rod that can be adjusted to stop penetration of the drill bit at a
>desired depth. Do you mean that kind of stop, or do you mean something
>like stopping rotary action, leaving only the hammering action?
>
That's correct. The rod is usually known as a "depth stop".

Check for the following features:

1. "Rotary stop": ability to stop rotation and use hammer only. On better drills, this also allows the chuck to be locked in a number of pre-set positions for use with a chisel bit.

2. "Hammer stop": ability to switch off the hammer action. Very good for starting holes in exactly the right location.

3. Safety clutch: DON'T BUY a drill that doesn't have one!

4. Very good trigger-operated speed control, that will allow the drill
to be started at a slow crawl. This is something that you can only check
by trying the drill in the store.

More information:
http://www.diyfaq.org.uk/powertools/sds.htm

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3343. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 07:23:59 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996EB0FFA78ACnonenowhere@61.9.191.5>
Source record: 38503

Owen Duffy <none@no.where> wrote in
news:Xns996E7AEB41E26nonenowhere@61.9.191.5:

> Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
> news:rmbBc7JbFLmGFA1x@ifwtech.co.uk:
>
>> There's a potential language gap here, but "electric hammers" fall
>> into three broad groups. Working downward in size:
>
> Ian,
>
> The device I use (Hitach PH65) would be called a small electric
> demolition hammer or concrete breaker (and it does not have rotation,
> it is not a drill).

I should have found a URL with specs and a pic, shouldn't I?

Oh well, better late than never:

http://www.hitachikoki.com.sg/product_details.jsp?pid=181

It is a bit bigger than 2kg or 4kg... the machine alone is 15kg.

I should take a couple of pics of the machine, my adapter for earth rods,
and a commercial adapter for start pickets, and the thing being used to
drive 2.4m earth rod sections (which can go in behind each other with an
double tapered joiner).

I think the start picket adapter cost around A$160 from Makita, the bull
point I modified for the earth rod driver cost about A$30 and an hours
work to anneal, drill, and retemper.

Owen

3344. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 07:35:32 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <97kmi.504055$JN6.178084@newsfe17.phx>
Source record: 38504

"Denny" <k8do@mailblocks.com> wrote in message
news:1184240302.631657.42090@o61g2000hsh.googlegroups.com...

< snip >

> Don't waste time over analyzing - pick a tuner, throw up some wire
> and ground radials, and operate...
> A local ham who lives in a trailor park is closing in on 300 countries
> confirmed and his only antenna for all this is a single multiband
> vertical, 21 feet tall, disguised as a flag pole...
>
> Just do it...

Yup. I'm on HF with a $50.00 used transceiver, a $5.00 pi-network tuner,
some coax, a balun and two pieces of copper pipe laying on my roof. It
ain't purty but I'm talking to people and they're talking back.

"Sal"

3345. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 07:54:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139jkm7ebsfom3a@corp.supernews.com>
Source record: 38505
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

This looks like a good time to point out that equivalent-time and random sampling oscilloscopes display waveforms having bandwidths in the tens of GHz which were captured by sampling at rates from a hundred kHz to a few MHz, and have done so for decades.

Roy Lewallen, W7EL

Ron Capik wrote:
> Radium wrote:
>
>> < ......snip.. >
>>
>>
>>
>> So is it possible for me to receive a 10 KHz audio sine-wave tone on a
>> 1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
>> Shannon. Right?
>
> Don't guess, read the papers and do the math!
>
>
>
> Later...
>
> RC
> --
>
>

3346. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 10:26:27 UTC
From: Dave <noone@nowhere.com>
Message-ID: <nDmmi.661$bP4.114@trndny01>
Source record: 38506
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

"Radium" <glucegen1@gmail.com> wrote in message
news:1184468254.568850.94820@o11g2000prd.googlegroups.com...
> George Dishman says Karl Uppiano is wrong about AM radio, carrier-
> frequencies, and aliasing. Who should I believe and why?

you can believe whoever you prefer, makes no difference to me.

3347. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 10:37:16 UTC
From: George Dishman <george@briar.demon.co.uk>
Message-ID: <f7ct5lcra1@news.freedom2surf.net>
Source record: 38507
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

"Karl Uppiano" <karl.uppiano@verizon.net> wrote in message
news:8gjmi.831$s25.461@trndny04...
...
> Since my name came up here, I decided to chime in. It must have been very
> late when I typed my original post. ...

A problem I often suffer from too :-(

best regards
George

3348. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 11:14:33 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1184498073.295222.303850@k79g2000hse.googlegroups.com>
Source record: 38508
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 14, 6:31 am, John Fields <jfie...@austininstruments.com> wrote:
> On Thu, 05 Jul 2007 07:32:20 -0700, Keith Dysart
>
> >Since your modulator version has a DC offset applied to
> >the 1e5 signal, some of the 1e6 signal is present in the
> >output, so your spectrum has components at .9e6, 1e6 and
> >1.1e6.
>
> ---
> Yes, of course, and 1e5 as well.

There is no 1e5 if the modulator is a perfect multiplier. A
practical multiplier will leak a small amount of 1e5.

Don't be fooled by the apparent 1e5 in the FFT from your
simulation. This is an artifact. Run the simulation with
a maximum step size of 0.03e-9 and it will completely
disappear. (Well, -165 dB).

> >To generate the same signal with the summing version you
> >need to add in some 1e6 along with the .9e6 and 1.1e6.
>
> ---
> That wouldn't be the same signal since .9e6 and 1.1e6 wouldn't have
> been created by heterodyning and wouldn't be sidebands at all.

It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
the resulting signal. One can multiply 1e6 by 1e5 with a DC
offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
signal is identical.

This can be seen from the mathematical expression
0.5 * (cos(a+b) + cos(a-b)) + cos(a)
= (1 + cos(b)) * cos(a)

Note that cos(b) is not prsent in the spectrum, only a,
a+b and a-b are there. And a will go away if the DC offset
is removed.

> >The results will be identical and the results of summing
> >will be quite detectable using an envelope detector just
> >as they would be from the modulator version.
>
> ---

> The results would certainly _not_ be identical, since the 0.9e6

To clearly see the equivalency, in the summing version of the
circuit, add in the 1.0e6 signal as well. The resulting
signal will be identical to the one from the multiplier
version.

(You can improve the fidelity of the resulting summed version
by eliminating the op-amp. Just use three resistors. The op-amp
messes up the signal quite a bit.)

If you have access to Excel, you might try the spreadsheet
available here (http://keith.dysart.googlepages.com/radio5).
It plots the results of adding and multiplying, and lets
you play with the frequencies and phases.

...Keith

3349. Re: micro--waves

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 11:32:25 UTC
From: ml <m@di.net>
Message-ID: <m-922AD3.07322215072007@news.verizon.net>
Source record: 38509

In article <Xns996E7B50F3A72nonenowhere@61.9.191.5>,
Owen Duffy <none@no.where> wrote:

> ml <m@di.net> wrote in news:m-B7EC67.07270214072007@news.verizon.net:
>
> > i was sorta wondering what a 'wave' looks like in 3d
> >
> > what got me thinking was i know my microwave oven's door has a screen
> > such that the holes are supposed to me smaller than the microwave itself
> > so it dosn't leave the area
>
> The explanation for why that screen works is that each hole is a very short
> wavequide. If you calculate the attenuation in such a wavequide the
> frequency involved, you have your answer as to why it works as it does.
>
> Owen

ahh didn't think of that i always for no reason pictured waveguides
differently

thank you very much

3350. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 13:53:14 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469a27e2$0$333$e4fe514c@news.xs4all.nl>
Source record: 38510
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
Ron Baker, Pluralitas! wrote:
> Hein ten Horn wrote:
>> Ron Baker, Pluralitas! wrote:
>>> Hein ten Horn wrote:

>>>> As a matter of fact the resulting force (the resultant) is
>>>> fully determining the change of the velocity (vector) of
>>>> the element.
>>>> The resulting force on our element is changing at the
>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>> one and only 222 Hz.
>>>
>>> Your idea of frequency is informal and leaves out
>>> essential aspects of how physical systems work.
>>
>> Nonsense. Mechanical oscillations are fully determined by
>> forces acting on the vibrating mass. Both mass and resulting force
>> determine the frequency. It's just a matter of applying the laws of
>> physics.
>
> You don't know the laws of physics or how to apply them.

I'm not understood. So, back to basics.
Take a simple harmonic oscillation of a mass m, then
x(t) = A*sin(2*pi*f*t)
v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
hence
a(t) = -(2*pi*f)^2*x(t)
and, applying Newton's second law,
Fres(t) = -m*(2*pi*f)^2*x(t)
or
f = ( -Fres(t) / m / x(t) )^0.5 / (2pi).

So my statements above, in which we have
a relatively slow varying amplitude (4 Hz),
are fundamentally spoken valid.
Calling someone an idiot is a weak scientific argument.
Hard words break no bones, yet deflate creditability.

gr, Hein
```

3351. extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 14:41:33 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <xmqmi.670$bP4.364@trndny01>
Source record: 38511

I constructed an extended double zepp for
10 meters out of #12 solid house wire .
I didn't have any ladder line laying around so I decided to make my own but
all I had was some #10 stranded wire. I made the spacers 1" apart and and
put about one per foot and the total feedling is approximately 25 ft. and
it's going through an MFJ 941E Versatuner .
I can't get my SWR's below 2 . I'm sure there are a lot of varibles here but
I was hoping someone could point me in the right direction.My first guess is
that I should have used the #12 for the feedline and the #10 for the antenna
.
Thanks in advance ,
Will

3352. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:00:48 UTC
From: nm5k@wt.net
Message-ID: <1184511648.936609.140970@g4g2000hsf.googlegroups.com>
Source record: 38512

On Jul 15, 9:41 am, "Amerigo Vespucci" <e...@italian.res> wrote:
> I constructed an extended double zepp for
> 10 meters out of #12 solid house wire .
> I didn't have any ladder line laying around so I decided to make my own but
> all I had was some #10 stranded wire. I made the spacers 1" apart and and
> put about one per foot and the total feedling is approximately 25 ft. and
> it's going through an MFJ 941E Versatuner .
> I can't get my SWR's below 2 . I'm sure there are a lot of varibles here but
> I was hoping someone could point me in the right direction.My first guess is
> that I should have used the #12 for the feedline and the #10 for the antenna
> .
> Thanks in advance ,
> Will

Seems kind of strange the tuner would not match it..
The spacing probably has more effect on the feedline Z
than the wire diameter. Shouldn't really be that critical.
The wider the spacing, the higher the Z..
I guess you could try a different length of line..
Or scrounge up some other ladder line, maybe with a
different length. Even 300 TV line would be ok if it's
not wet.
Myself, I used to feed them with coax, and coax
series transformers. I imagine you could also feed
with coax and use twin matching coils at the feedpoint
for both sides of the element. Same as matching a
5/8 GP, you are just doing the same with a complete
antenna. I've never tried it, but it should work.
MK

3353. beginner co-ax problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:20:34 UTC
From: Andre C <webmaster@aol.com>
Message-ID: <qdek93t9r95ir63a3hhbumc3o02okv9flq@4ax.com>
Source record: 38513

Ok this is going to be simplistic.

I have a CW-80 special and some 19M of 50 ohn coax running to the back of either a MFJ tuner or directly into the TS-850.

If I screw the shield on the pl259 plug tight onto the chasis socket then I receive no signals, if I leave it loose but touching I receive signals. Firest thought a short in the co-ax. Ohm meter reading shows infinite reading so I assume (rightly or wrongly) no short.

I then took, as an experiement, my 2m areial co-ax, plugged it in and tuned to a good local MW signal. Exactly the same phenomena occurs.

I transmit fine on 2m. Using the CW-80 I can sucessful transmit when the plug is loose but I may be getting some rf leak as Mixw is pickin gup stray characters in transmit strings.

Kust as an experiement I plugged in my RX320 and exactly thesame phenomena.

Now I am still very new but I also note that the ohm meter across the socket on the TS850 shows 50 ohm which I guess is corect though the mobile 2m transmitter shows infinite.

So the botom line is I am struggling to find the cause of the problem.

Any clues?

3354. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:21:54 UTC
From: nm5k@wt.net
Message-ID: <1184512914.755653.86170@k79g2000hse.googlegroups.com>
Source record: 38514

On Jul 14, 8:49 pm, Owen Duffy <n...@no.where> wrote:

>
> For a multi mode RF / AC protective / Lighting ground, shallow buried
> radials might be more effective than one or several driven electrodes
> anyway. A driven electrode (or any vertical electrode) is not very useful
> for RF.

I was considering this the other day... Seems to me, a good set of
radials on/in the ground are about the only system which could
cover all three jobs. Course, it would be kind of silly to use that
ground as the wiring safety ground, but it could work, as long
as the earth connection at the center of the radials is good.
I can't really think of any other systems that can provide a good
RF ground system, and lightning at the same time. Of course,
from the lightning end, it again assumes a good earth connection
at the center of the radials.
Some might be surprised that my ground rods are not very long
at all. And all are copper tubing, not rods..
My longest one is probably only about 4 ft long. But I have
several spaced around the mast, and tied together underground.
But all are pretty close to the mast. Not even close to being 8 ft..
More like 3 ft across...
That then also ties to the steel water pipe which is about 2-3 ft
away. So far, that ground seems good enough as far as a
lightning return. And I've had two strikes with me sitting here to
be able to say that. Seemed to be a good ground connection.
How can I tell? The sound..
A strike to my mast is very quiet. All you hear is an arc, which
sounds like a light bulb being thrown on the ground and breaking.
Course, you hear the overhead sonic boom, but that doesn't
count.. :/ That's not the real sound of the strike.
In comparison, a poor ground return will cause the strike to be
very loud, with a real loud "CRACK" to it. Then again, the
overhead sonic boom... :(Trees make for a noisy strike..
My ground outside is for lightning return only. Does nothing
else. I use no RF ground. All my antennas are complete.
If a certain antenna requires an RF ground, that will be provided
as part of the antenna design.
My safety ground is provided by the house wiring.
So my outside ground scheme is a one trick pony.. :/
MK

3355. Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:39:00 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.15.15.38.58.614707@from.qrz.com>
Source record: 38515

Good morning, all...

When connecting a copper ground wire to a copper-plated ground rod, is there a compound of some kind that should be used to inhibit corrosion?

I have asked the man behind the counter at the local electrical supply store (where I got the ground rods) and he says it's not necessary, but I have seen references to it here and there on the net including in this NG.

I thought about maybe using some of that Butternut conductive grease that we use on our antennas.

Thanks...

3356. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:53:48 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <gqrmi.841$s25.477@trndny04>
Source record: 38516

<nm5k@wt.net> wrote in message
news:1184511648.936609.140970@g4g2000hsf.googlegroups.com...
> On Jul 15, 9:41 am, "Amerigo Vespucci" <e...@italian.res> wrote:
>> I constructed an extended double zepp for
>> 10 meters out of #12 solid house wire .
>> I didn't have any ladder line laying around so I decided to make my own
>> but
>> all I had was some #10 stranded wire. I made the spacers 1" apart and and
>> put about one per foot and the total feedling is approximately 25 ft.
>> and
>> it's going through an MFJ 941E Versatuner .
>> I can't get my SWR's below 2 . I'm sure there are a lot of varibles here
>> but
>> I was hoping someone could point me in the right direction.My first guess
>> is
>> that I should have used the #12 for the feedline and the #10 for the
>> antenna
>> .
>> Thanks in advance ,
>> Will
>
> Seems kind of strange the tuner would not match it..
> The spacing probably has more effect on the feedline Z
> than the wire diameter. Shouldn't really be that critical.
> The wider the spacing, the higher the Z..
> I guess you could try a different length of line..
> Or scrounge up some other ladder line, maybe with a
> different length. Even 300 TV line would be ok if it's
> not wet.
> Myself, I used to feed them with coax, and coax
> series transformers. I imagine you could also feed
> with coax and use twin matching coils at the feedpoint
> for both sides of the element. Same as matching a
> 5/8 GP, you are just doing the same with a complete
> antenna. I've never tried it, but it should work.
> MK

The way I understood it was the best way to feed it was with ladderline or
something equal to it. I looked at the wireman website and saw their 450 ohm
ladderline is only like 26 cents a foot so I'll order 80 feet of it and send
the antenna up higher and take it from there. The reason I built the EDZ is
it has 3 db over a dipole and it will also work for other bands with a
tuner.Another reason I made the EDZ is a real estate issue(lacking) so
something monsterous would be out of the question, but hey that's what makes

ameteur radio such a great hobby,the experimentation that goes along with
it.

3357. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 15:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <32spm4-9ck.ln1@mail.specsol.com>
Source record: 38517
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jul 14, 8:35 pm, j...@specsol.spam.sux.com wrote:

> > > > http://www.sosmath.com/trig/prodform/prodform.html

> That link says nothing about Amplitude Modulation

Try this one:

http://www.rfcafe.com/references/electrical/amplitude_modulation.htm

and this one:

http://ccrma.stanford.edu/~jos/mdft/Sinusoidal_Amplitude_Modulation_AM.html

and see if you notice any similartity in the equations.

Of course, anyone with more than half a brain could have done a Google
search for AM modulation equation and come up with thousands of hits.

--
Jim Pennino

Remove .spam.sux to reply.

3358. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 16:00:10 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469a4428$0$12178$4c368faf@roadrunner.com>
Source record: 38518
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:469a27e2$0$333$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> Hein ten Horn wrote:
>>> Ron Baker, Pluralitas! wrote:
>>>> Hein ten Horn wrote:
>
>>>>> As a matter of fact the resulting force (the resultant) is
>>>>> fully determining the change of the velocity (vector) of
>>>>> the element.
>>>>> The resulting force on our element is changing at the
>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>> one and only 222 Hz.
>>>>
>>>> Your idea of frequency is informal and leaves out
>>>> essential aspects of how physical systems work.
>>>
>>> Nonsense. Mechanical oscillations are fully determined by
>>> forces acting on the vibrating mass. Both mass and resulting force
>>> determine the frequency. It's just a matter of applying the laws of
>>> physics.
>>
>> You don't know the laws of physics or how to apply them.
>
> I'm not understood. So, back to basics.
> Take a simple harmonic oscillation of a mass m, then
> x(t) = A*sin(2*pi*f*t)
> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
> hence
> a(t) = -(2*pi*f)^2*x(t)

Only for a single sinusoid.

> and, applying Newton's second law,
> Fres(t) = -m*(2*pi*f)^2*x(t)
> or
> f = (-Fres(t) / m / x(t))^0.5 / (2pi).

Only for a single sinusoid.
What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)

>
> So my statements above, in which we have
> a relatively slow varying amplitude (4 Hz),
> are fundamentally spoken valid.
> Calling someone an idiot is a weak scientific argument.

Yes.
And so is "Nonsense." And so is your idea of
"the frequency".

> Hard words break no bones, yet deflate creditability.
>
> gr, Hein
>
>

3359. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 16:37:16 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <j1jk931c32ertckn5lq6h32i9n654jeog7@4ax.com>
Source record: 38519

On Sun, 15 Jul 2007 14:41:33 GMT, "Amerigo Vespucci" <eat@italian.res>
wrote:

>I constructed an extended double zepp for
>10 meters out of #12 solid house wire .
>I didn't have any ladder line laying around so I decided to make my own but
>all I had was some #10 stranded wire. I made the spacers 1" apart and and
>put about one per foot and the total feedling is approximately 25 ft. and
>it's going through an MFJ 941E Versatuner .
>I can't get my SWR's below 2 . I'm sure there are a lot of varibles here but
>I was hoping someone could point me in the right direction.My first guess is
>that I should have used the #12 for the feedline and the #10 for the antenna
>.
>Thanks in advance ,
> Will
>
For what it's worth, a graph in one of my older ARRL antenna books
says #10 wire at 1-inch spacing should have a characteristic impedance
a little under 400 ohms.

bob
k5qwg

3360. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 16:44:04 UTC
From: richardharrison@webtv.net
Message-ID: <13824-469A4ED4-639@storefull-3251.bay.webtv.net>
Source record: 38521

W-A-one-R-K-T wrote:
"I thought about using some of that Butternut conductive grease that we use on our antennas."

It probably wouldn`t hurt, but isn`t required as tarnish compounds formed naturally are sufficiently conductive for grounding purposes.

Most codes require an approved ground clamp be used to connect to a ground rod as excessive current could cause a poor solder joint to melt.

Best regards, Richard Harrison, KB5WZI

3361. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 16:54:09 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <CpGdnb5mBtypzAfbnZ2dnUVZ8t6pnZ2d@pipex.net>
Source record: 38520

Rick (W-A-one-R-K-T) wrote:
> Good morning, all...
>
> When connecting a copper ground wire to a copper-plated ground rod, is
> there a compound of some kind that should be used to inhibit corrosion?
>
> I have asked the man behind the counter at the local electrical supply
> store (where I got the ground rods) and he says it's not necessary, but I
> have seen references to it here and there on the net including in this NG.
>
> I thought about maybe using some of that Butternut conductive grease that
> we use on our antennas.
==========
When connection is made and dry , I would suggest you cover with
self-amalgamating tape or a putty meant to protect coax connectors ,made
by Universal Electronics Inc - 4555/13 Groves Road , Columbus -Ohio.
The latter comes in length of 60 inches and is 0.5 inch wide.
I bought it many moons ago at a hamfest in the Netherlands.

Frank GM0CSZ / KN6WH

3362. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:13:53 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-BC306E.13135315072007@nntp.aioe.org>
Source record: 38522

In article <KdpStoBmPcmGFADo@ifwtech.co.uk>,
Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:

> Probably... the "2 kilogram" drills look like a stretched version of a
> normal pistol-grip drill, with a horizontal motor. For example:
> http://tinyurl.com/33zcrr

Ian-

Your first example is the one I was looking at.

Neither store had anything like a Ground Rod adapter or half inch socket adapter in stock. I searched the web and was not able to find a ground rod adapter compatible with SDS+. I found one comment that such an adapter would not be sufficiently strong to withstand the forces required to drive a ground rod. There were several references to an SDS-Max adapter, but that may not be compatible with SDS+. Yes, the prices were high!

I did find references to a half inch socket adapter. It is a Hitachi "1/2 inch Chemical Anchor Adapter", Code No. 303044.

Fred
K4DII

3363. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:20:53 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <lqok93hqmplpvfo2978lj1mnil07tirbs5@4ax.com>
Source record: 38523

On Sun, 15 Jul 2007 15:53:48 GMT, "Amerigo Vespucci" <eat@italian.res> wrote:

snip
>The way I understood it was the best way to feed it was with ladderline or
>something equal to it. I looked at the wireman website and saw their 450 ohm
>ladderline is only like 26 cents a foot so I'll order 80 feet of it and send
>the antenna up higher and take it from there. The reason I built the EDZ is
>it has 3 db over a dipole and it will also work for other bands with a
>tuner.Another reason I made the EDZ is a real estate issue(lacking) so
>something monsterous would be out of the question, but hey that's what makes
>ameteur radio such a great hobby,the experimentation that goes along with
>it.
>
Hi Amerigo,

The transmission line you constucted should work just fine--don't go buying any more line, because the
difference will be insignificant.

And another point you should be aware of is that the 3dB improvement using the EDZ is only in the direction at
right angles to the antenna, because the broadside lobe of the EDZ is somewhat narrower than that of the 1/2
wave dipole, and as a result, the gain in all other directions is LESS than that of the 1/2 wave dipole.

Walt, W2DU

3364. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:23:13 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <45pk93t622udl9lt2lucr3qefjm23r3b02@4ax.com>
Source record: 38524

On Sat, 14 Jul 2007 19:16:59 -0400, "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
wrote:

>
>In the "How to drive the ground rods in" thread, Ralph Mowery wrote:
>
>> Dig out a hole about 4 or 5 inches in diameter and about that deep.
>> Fill it with water. Put the ground rod in the center of that hole and
>> push it down. Then pull it back slightly. Doing this several times you
>> should be able to get to get it down several inches with each cycle.
>> Keep doing this without stopping. If you get to about 3 or 4 feet put
>> the rod all the way out and fill the hole with water . Put the rod back
>> in the same hole and keep pushing and pulling it a few inches at a
>> time.
>
>Good evening, Ralph.
>
>That brought something else to mind... something I'm sure has been thought
>of by greater minds than mine, and one or two of you have hinted at
>something like it in these last few threads...
>
>How about a 10-foot length of copper water pipe, connected to a garden
>hose with an adapter fitting (as simple as a short length of another
>garden hose, clamped to the pipe with radiator hose clamps). Run water
>down the pipe and stick the pipe in the ground, pulling it up and pushing
>it down so that the water helps drill the hole in a manner just like you
>described. Keep it up until it has gone in as far as it will go, then (if
>it hasn't gone in the whole 10 feet) cut it off and solder a copper cap on
>the end.
>
>You end up with a hollow pipe in the ground instead of a solid steel rod,
>but everything I read about lightning strikes says that the vast majority
>of the current flows in skin effect anyway.
>
>I did something like this once in my backyard when I was about 9
>years old, using our garden hose. I recall being amazed at how the hose
>just kept going in, kept going in ... 'course then when I tried to pull it
>out again it was a different story. My father was not happy. :-(
>
>If a hollow water pipe isn't a good enough ground rod, how about drilling
>the hole as described above using the water pipe, and then (if I can get
>the pipe back out of the ground) beating the ground rod into the resulting
>hole? Should go in pretty easy...
>

>I know that by now everyone pretty much believes that a house's copper
>water pipes don't make good grounds, but that's mostly because they aren't
>connected very well to actual ground... in my house, the copper water
>pipes go to the water pump which sucks the water out of the well via a
>hard rubber hose... not very good for ground. The only connection to
>ground we got (before I connected the copper pipes to the service ground)
>was through the minerals in the water.
This topic has aroused my curiosity. As a grounding device, why would a solid rod be better than a hollow
pipe, except for the current carrying capabilitY?

Walt, W2DU

3365. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:26:20 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.15.17.26.19.167940@from.qrz.com>
Source record: 38525

On Sun, 15 Jul 2007 11:44:04 -0500, Richard Harrison wrote:

> Most codes require an approved ground clamp be used to connect to a
> ground rod as excessive current could cause a poor solder joint to melt.

Right, and I have some that are approved in this area, just wanted to know
if some kind of anti-corrosion compound is desirable in addition to using
the approved clamp.

Frank's suggestion of the self-amalgamating tape sounds like a good one.

3366. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:29:08 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.15.17.29.08.78220@from.qrz.com>
Source record: 38526

On Sun, 15 Jul 2007 17:23:13 +0000, Walter Maxwell wrote:

> This topic has aroused my curiosity. As a grounding device, why would a
> solid rod be better than a hollow pipe, except for the current carrying
> capability?

Good afternoon, Walt.

The thing is, the current carrying capability for transient events like lightning strikes should be about the same for the same diameter pipe or rod, since most of the current is carried in skin effect anyway.

3367. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <2r2qm4-jq7.ln1@mail.specsol.com>
Source record: 38527

Walter Maxwell <walt@w2du.com> wrote:

<big snip>

> This topic has aroused my curiosity. As a grounding device, why would a solid rod be better than a hollow
> pipe, except for the current carrying capabilitY?

> Walt, W2DU

I would expect that a driven, solid rod would be in more intimate contact with the earth while a water drilled pipe would have lots of surface air gaps, at least initially.

After some period of time the gaps would fill in in most dirt and I wouldn't expect there to be any difference.

--
Jim Pennino

Remove .spam.sux to reply.

3368. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 17:53:58 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Watmi.7705$tj6.5889@newsread4.news.pas.earthlink.net>
Source record: 38528

"Walter Maxwell" <walt@w2du.com> wrote in message
news:45pk93t622udl9lt2lucr3qefjm23r3b02@4ax.com...
> This topic has aroused my curiosity. As a grounding device, why would a
> solid rod be better than a hollow
> pipe, except for the current carrying capabilitY?
>
> Walt, W2DU

I doubt that there would be any real differance to start with. The pipes
are thin enough they would be hard to drive in the ground and after a while
they would rust out sooner.

3369. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:03:37 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <cridndQiWIjk_AfbnZ2dnUVZ_r7inZ2d@kans.com>
Source record: 38529

On Sun, 15 Jul 2007 11:39:00 -0400, Rick (W-A-one-R-K-T) wrote:

> Good morning, all...
>
> When connecting a copper ground wire to a copper-plated ground rod, is
> there a compound of some kind that should be used to inhibit corrosion?
>
> I have asked the man behind the counter at the local electrical supply
> store (where I got the ground rods) and he says it's not necessary, but I
> have seen references to it here and there on the net including in this NG.
>
> I thought about maybe using some of that Butternut conductive grease that
> we use on our antennas.

Noalox is a good compound for this sort of work.

For truly professional quality work:

In our commercial applications when bonding any part of the ground system,
we do it with exothermic welding, commonly called CAD WELD. We get
so-called "one shots" that are a ceramic mold and can be ordered to accept
various wire sizes and number of conductors to bond. Then the powder mix
is poured in and it's lit with a striker. One just had to be sure that
all parts are 100% dry as any moisture will cause the thing to blow apart
quite violently. A properly done CAD WELD results in a connection that
won't corrode or suffer from electrolysis.

Another permanent solution is a compression clamp, but that probably
requires a hydraulic tool.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds,
the pessimist fears this is true."

3370. Re: beginner co-ax problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:14:03 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <cridndciWIh2_gfbnZ2dnUVZ_r7inZ2d@kans.com>
Source record: 38530

On Sun, 15 Jul 2007 16:20:34 +0100, Andre C wrote:

> Ok this is going to be simplistic.
>
> I have a CW-80 special and some 19M of 50 ohn coax running to the back
> of either a MFJ tuner or directly into the TS-850.
>
> If I screw the shield on the pl259 plug tight onto the chasis socket
> then I receive no signals, if I leave it loose but touching I receive
> signals. Firest thought a short in the co-ax. Ohm meter reading shows
> infinite reading so I assume (rightly or wrongly) no short.

Now check for continuity from end-to-end of the coax. Center to center
and shield to shield should have DC continuity. If the coax is already
installed, just place a jumper across one end (center to shield) and then
see if you have continuity. It's likely that an "open" exists perhaps
from a cold solder joint or breakage someplace.

> I then took, as an experiement, my 2m areial co-ax, plugged it in and
> tuned to a good local MW signal. Exactly the same phenomena occurs.

Without the shield connected to the frame of the radio, it no longer acts
as a shield as you've noticed. This is normal.

> I transmit fine on 2m. Using the CW-80 I can sucessful transmit when the
> plug is loose but I may be getting some rf leak as Mixw is pickin gup
> stray characters in transmit strings.
>
> Kust as an experiement I plugged in my RX320 and exactly thesame
> phenomena.
>
> Now I am still very new but I also note that the ohm meter across the
> socket on the TS850 shows 50 ohm which I guess is corect though the
> mobile 2m transmitter shows infinite.
>
> So the botom line is I am struggling to find the cause of the problem.
>
> Any clues?

If the coax checks fine for continuity, then check your antenna (I'm not
familiar with it) to be sure all connections are solid. It could well be
a manufacturing defect in the antenna.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds,
the pessimist fears this is true."

3371. Re: beginner co-ax problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:24:49 UTC
From: andre02@andre02.plus.com
Message-ID: <1184523889.446916.75740@m3g2000hsh.googlegroups.com>
Source record: 38531

On 15 Jul, 19:14, Nate Bargmann <n0nb.DO.NOT.S...@ME.networksplus.net>
wrote:

>
> > I then took, as an experiement, my 2m areial co-ax, plugged it in and
> > tuned to a good local MW signal. Exactly the same phenomena occurs.
>
> Without the shield connected to the frame of the radio, it no longer acts
> as a shield as you've noticed. This is normal.
>
Sorry , I do not understand that bit.

What I meant was when the shield was loose I can pick up the station
but as soon as I tightened it the signal went. This was on the 2m
antenna which in recevie only mode should work. This implied to me
that either both cables are in error or I am doing something very
wrong.

Andre

3372. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:43:14 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <6Vtmi.4451$225.335@trndny03>
Source record: 38532

"Walter Maxwell" <walt@w2du.com> wrote in message
news:lqok93hqmplpvfo2978lj1mnil07tirbs5@4ax.com...
> On Sun, 15 Jul 2007 15:53:48 GMT, "Amerigo Vespucci" <eat@italian.res>
> wrote:
>
> snip
>>The way I understood it was the best way to feed it was with ladderline or
>>something equal to it. I looked at the wireman website and saw their 450
>>ohm
>>ladderline is only like 26 cents a foot so I'll order 80 feet of it and
>>send
>>the antenna up higher and take it from there. The reason I built the EDZ
>>is
>>it has 3 db over a dipole and it will also work for other bands with a
>>tuner.Another reason I made the EDZ is a real estate issue(lacking) so
>>something monsterous would be out of the question, but hey that's what
>>makes
>>ameteur radio such a great hobby,the experimentation that goes along with
>>it.
>>
> Hi Amerigo,
>
> The transmission line you constucted should work just fine--don't go
> buying any more line, because the
> difference will be insignificant.

I tried pruning the antenna a couple of inches and fiddled with the feeder
line and manged to get mr SWR's down below two but with a tuner I'm still
not happy. My rig is a Kenwood TS 530S so the finals are a little more
forgiving but I still wanna mess with it some more when the weather cools a
bit.
Thnks all for you help I'll update you later on with whatever progress I
get.

>
> And another point you should be aware of is that the 3dB improvement using
> the EDZ is only in the direction at
> right angles to the antenna, because the broadside lobe of the EDZ is
> somewhat narrower than that of the 1/2
> wave dipole, and as a result, the gain in all other directions is LESS
> than that of the 1/2 wave dipole.
>
> Walt, W2DU

3373. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:47:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996F30C39753Dnonenowhere@61.9.191.5>
Source record: 38533

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.15.17.29.08.78220@from.qrz.com:

> On Sun, 15 Jul 2007 17:23:13 +0000, Walter Maxwell wrote:
>
>> This topic has aroused my curiosity. As a grounding device, why would a
>> solid rod be better than a hollow pipe, except for the current carrying
>> capability?
>
> Good afternoon, Walt.
>
> The thing is, the current carrying capability for transient events like
> lightning strikes should be about the same for the same diameter pipe or
> rod, since most of the current is carried in skin effect anyway.

I think that is flawed thinking.

A lighning down conductor needs to carry something like 20kA for 100ms, so it needs to be substantial enough that it doesn't melt and remains in place to protect against the next strike.

Owen

3374. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 18:56:41 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns996F324C6880Bnonenowhere@61.9.191.5>
Source record: 38534

richardharrison@webtv.net (Richard Harrison) wrote in news:13824-469A4ED4-639@storefull-3251.bay.webtv.net:

> W-A-one-R-K-T wrote:
> "I thought about using some of that Butternut conductive grease that we
> use on our antennas."
>
> It probably wouldn`t hurt, but isn`t required as tarnish compounds
> formed naturally are sufficiently conductive for grounding purposes.

I don't know what "Butternut conductive grease" contains, but if it is intended for aluminium, does that imply it is suitable for copper?

Such compounds often contain a grease to exclude air (oxygen) and water, and a metal powder to break through metal oxides within the joint. If in doubt about the compatibility of the metal powder with the metals being joined, good quality marine grease will achieve much of the benefit without the risk of galvanic corrosion worsened by the joint compound.

Back to the specific application to lightning conductors or AC protective earth systems, they are usually copper conductors and copper clad earth rods. Mechanical clamps, crimp lugs, and purpose specific welding are the usual methods.

BTW, there are a number of reasons to avoid galvanised earth electrodes though you will see them in use. In this part of the world galvanised earth stakes or galvanised water pipe are used, but tests show them less consistent than copper clad steel rods.

Owen

3375. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 19:12:40 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <8jpk931igtbpdn8o40fauh1qulc3ac2q1g@4ax.com>
Source record: 38535
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 04:14:33 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 14, 6:31 am, John Fields <jfie...@austininstruments.com> wrote:
>> On Thu, 05 Jul 2007 07:32:20 -0700, Keith Dysart
>>
>> >Since your modulator version has a DC offset applied to
>> >the 1e5 signal, some of the 1e6 signal is present in the
>> >output, so your spectrum has components at .9e6, 1e6 and
>> >1.1e6.
>>
>> ---
>> Yes, of course, and 1e5 as well.
>
>There is no 1e5 if the modulator is a perfect multiplier. A
>practical multiplier will leak a small amount of 1e5.
>
>Don't be fooled by the apparent 1e5 in the FFT from your
>simulation. This is an artifact. Run the simulation with
>a maximum step size of 0.03e-9 and it will completely
>disappear. (Well, -165 dB).
>
>> >To generate the same signal with the summing version you
>> >need to add in some 1e6 along with the .9e6 and 1.1e6.
>>
>> ---
>> That wouldn't be the same signal since .9e6 and 1.1e6 wouldn't have
>> been created by heterodyning and wouldn't be sidebands at all.
>
>It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
>the resulting signal. One can multiply 1e6 by 1e5 with a DC
>offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
>signal is identical.

No, it isn't, since in the additive mode any modulation impressed on
the carrier (1.0e6) will not affect the .9e6 and 1.1e6 in any way
since they're unrelated.

>This can be seen from the mathematical expression
>0.5 * (cos(a+b) + cos(a-b)) + cos(a)
> = (1 + cos(b)) * cos(a)

>
>Note that cos(b) is not prsent in the spectrum, only a,
>a+b and a-b are there. And a will go away if the DC offset
>is removed.
>
>> >The results will be identical and the results of summing
>> >will be quite detectable using an envelope detector just
>> >as they would be from the modulator version.
>>
>> ---
>> The results would certainly _not_ be identical, since the 0.9e6
>
>To clearly see the equivalency, in the summing version of the
>circuit, add in the 1.0e6 signal as well. The resulting
>signal will be identical to the one from the multiplier
>version.

It will _look_ identical, but it won't be because there will be
nothing locking the three frequencies together. Moreover, as I
stated earlier, any amplitude changes (modulation) impressed on the
1.0e6 signal won't cause the 0.9e6 and 1.1e6 signals to change in
any way.

>(You can improve the fidelity of the resulting summed version
>by eliminating the op-amp. Just use three resistors. The op-amp
>messes up the signal quite a bit.)

Actually the resistors "mess up the signal" more than the opamp does
since the signals aren't really adding in the resistors. That is,
if f1 is at 1V, and f2 is at 1V, and f3 is also at 1V, the output
of the resistor network won't be at 3V, it'll be at 1V. By using
the opamp as a current-to-voltage converter, all the input signals
will be added properly since the inverting input will be at
virtual ground and will sink all the current supplied by the
resistors, making sure the sources don't interact.

Here:

Version 4
SHEET 1 980 680
WIRE 160 -48 -80 -48
WIRE 272 -48 240 -48
WIRE 160 64 32 64
WIRE 272 64 272 -48
WIRE 272 64 240 64
WIRE 320 64 272 64
WIRE 528 64 400 64
WIRE 448 112 352 112
WIRE 352 144 352 112

```
WIRE 160 160 128 160
WIRE 272 160 272 64
WIRE 272 160 240 160
WIRE 320 160 272 160
WIRE 528 176 528 64
WIRE 528 176 384 176
WIRE 320 192 272 192
WIRE -80 208 -80 -48
WIRE 32 208 32 64
WIRE 128 208 128 160
WIRE 352 224 352 208
WIRE 448 224 448 112
WIRE -80 320 -80 288
WIRE 32 320 32 288
WIRE 32 320 -80 320
WIRE 128 320 128 288
WIRE 128 320 32 320
WIRE 272 320 272 192
WIRE 272 320 128 320
WIRE 352 320 352 304
WIRE 352 320 272 320
WIRE 448 320 448 304
WIRE 448 320 352 320
WIRE -80 368 -80 320
FLAG -80 368 0
SYMBOL voltage -80 192 R0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 1 900)
SYMATTR InstName V1
SYMBOL voltage 128 192 R0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 1 1100)
SYMATTR InstName V2
SYMBOL res 256 144 R90
WINDOW 0 -26 57 VBottom 0
WINDOW 3 -25 58 VTop 0
SYMATTR InstName R2
SYMATTR Value 1000
SYMBOL Opamps\\UniversalOpamp 352 176 R0
SYMATTR InstName U1
SYMBOL res 416 48 R90
WINDOW 0 -36 60 VBottom 0
WINDOW 3 -30 62 VTop 0
SYMATTR InstName R3
SYMATTR Value 1000
SYMBOL voltage 448 208 R0
```

```
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value 12
SYMATTR InstName V3
SYMBOL voltage 352 320 R180
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value 12
SYMATTR InstName V4
SYMBOL res 256 48 R90
WINDOW 0 -28 61 VBottom 0
WINDOW 3 -30 62 VTop 0
SYMATTR InstName R6
SYMATTR Value 1000
SYMBOL res 256 -64 R90
WINDOW 0 -32 59 VBottom 0
WINDOW 3 -30 62 VTop 0
SYMATTR InstName R7
SYMATTR Value 1000
SYMBOL voltage 32 192 R0
WINDOW 3 24 104 Invisible 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 1 1000)
SYMATTR InstName V5
TEXT -64 344 Left 0 !.tran .02
```

--
JF

3376. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 19:18:19 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <%pumi.5769$7R4.1512@trndny09>
Source record: 38536

Correction,my rig is a Kenwood 520SE

"Amerigo Vespucci" <eat@italian.res> wrote in message
news:6Vtmi.4451$225.335@trndny03...
>
> "Walter Maxwell" <walt@w2du.com> wrote in message
> news:lqok93hqmplpvfo2978lj1mnil07tirbs5@4ax.com...
>> On Sun, 15 Jul 2007 15:53:48 GMT, "Amerigo Vespucci" <eat@italian.res>
>> wrote:
>>
>> snip
>>>The way I understood it was the best way to feed it was with ladderline
>>>or
>>>something equal to it. I looked at the wireman website and saw their 450
>>>ohm
>>>ladderline is only like 26 cents a foot so I'll order 80 feet of it and
>>>send
>>>the antenna up higher and take it from there. The reason I built the EDZ
>>>is
>>>it has 3 db over a dipole and it will also work for other bands with a
>>>tuner.Another reason I made the EDZ is a real estate issue(lacking) so
>>>something monsterous would be out of the question, but hey that's what
>>>makes
>>>ameteur radio such a great hobby,the experimentation that goes along with
>>>it.
>>>
>> Hi Amerigo,
>>
>> The transmission line you constucted should work just fine--don't go
>> buying any more line, because the
>> difference will be insignificant.
>
> I tried pruning the antenna a couple of inches and fiddled with the feeder
> line and manged to get mr SWR's down below two but with a tuner I'm still
> not happy. My rig is a Kenwood TS 530S so the finals are a little more
> forgiving but I still wanna mess with it some more when the weather cools
> a bit.
> Thnks all for you help I'll update you later on with whatever progress I
> get.
>
>
>>
>> And another point you should be aware of is that the 3dB improvement
>> using the EDZ is only in the direction at

>> right angles to the antenna, because the broadside lobe of the EDZ is
>> somewhat narrower than that of the 1/2
>> wave dipole, and as a result, the gain in all other directions is LESS
>> than that of the 1/2 wave dipole.
>>
>> Walt, W2DU
>
>

3377. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 19:42:38 UTC
From: richardharrison@webtv.net
Message-ID: <21675-469A78AE-747@storefull-3252.bay.webtv.net>
Source record: 38537

Owen Duffy wrote:
"BTW, there are a number of reasons to avoid galvanised earth electrodes
though you will see them in use."

Yes, their surface is zinc which is the most used sacrificial material
to protect steel. The electrolytic cell formed by the zinc and steel in
a solution consumes the zinc while protecting the steel.

Best regards, Richard Harrison, KB5WZI

3378. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 19:54:56 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <y2vmi.8392$O9.5231@bignews6.bellsouth.net>
Source record: 38538

As long as you use a ground clanp made for that size and type of ground rod
and wire, you do not need to use noalox, or penetrox.
But it may be like chicken soup is for a cold - "it couldn't hurt."

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.15.15.38.58.614707@from.qrz.com...
>
> Good morning, all...
>
> When connecting a copper ground wire to a copper-plated ground rod, is
> there a compound of some kind that should be used to inhibit corrosion?
>
> I have asked the man behind the counter at the local electrical supply
> store (where I got the ground rods) and he says it's not necessary, but I
> have seen references to it here and there on the net including in this NG.
>
> I thought about maybe using some of that Butternut conductive grease that
> we use on our antennas.
>
> Thanks...
>

3379. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 20:07:23 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <HOWdnf2zAI7g4wfbnZ2dnUVZ8saonZ2d@pipex.net>
Source record: 38539

> I doubt that there would be any real difference to start with. The pipes
> are thin enough they would be hard to drive in the ground and after a while
> they would rust out sooner.
==========
Copper ....rusting ? ..... must be veeeery acidic soil
....perhaps in the backyard of a chemical plant ?

Frank GM0CSZ / KN6WH

3380. How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 20:24:46 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184531086.421930.215850@x35g2000prf.googlegroups.com>
Source record: 38540
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
:

> how would u like to change the cell phone industry?

Analog cells phones should stop using FM and should start using AM
with SHF frequencies - at least 3 GHz and at most 30 GHz.

http://en.wikipedia.org/wiki/Super_high_frequency

I choose SHF frequencies because SHF seems to be the sweet spot
between frequencies that are high-enough to rip through charged
particles & provide large amounts of bandwidth, yet low-enough to be
wireless and long-distance. At EHF and above, it starts to get into
the IR range where long-distance wireless reception is not possible
and atmospheric opacity begins to dominate.

Equally important, SHF frequencies can efficiently transmit signals
using extremely small transmitters. Longer wavelengths require larger
transmitters.

Obviously there are frequencies lower than SHF -- VHF and above --
that can easily penetrate charged particles [e.g. anything resembling
the ionosphere or heliosphere]. However, lower-frequencies tend to
result in less bandwidth, so it is better to use higher-frequencies
when the application requires significant bandwidth.

I choose AM because it requires less bandwidth than FM. In addition,
AM tends to retain reception of rather weak signals, while FM
"considers" such signals to be absent.

3381. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 20:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vhdqm4-am8.ln1@mail.specsol.com>
Source record: 38541
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :

> > how would u like to change the cell phone industry?

> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.

Analog cell phones are going away.

Cell phones already use frequencies in the 3 GHz region.

You are an idiot.

<snip crap>

--
Jim Pennino

Remove .spam.sux to reply.

3382. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 20:56:48 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <NLudnWJU14qNFwfbnZ2dnUVZ_qG3nZ2d@giganews.com>
Source record: 38542
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

<jimp@specsol.spam.sux.com> wrote in message
news:vhdqm4-am8.ln1@mail.specsol.com...
>
> Cell phones already use frequencies in the 3 GHz region.
>

Really? Which ones? I'm only aware of cell systems using 800, 900, 1800 and
1900 MHz. There are some (very few) multisystem phones that use all four of
those ranges.

3383. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:04:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <OZvmi.22037$RX.9004@newssvr11.news.prodigy.net>
Source record: 38543

Amerigo Vespucci wrote:
> The way I understood it was the best way to feed it was with ladderline or
> something equal to it.

Did anyone tell you that the matching section needs to be
about 0.2 wavelength?
--
73, Cecil http://www.w5dxp.com

3384. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:14:40 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <062l93doa4mvq3oei6gbqaq3idotvr7cua@4ax.com>
Source record: 38544
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>> how would u like to change the cell phone industry?
>
>Analog cells phones should stop using FM and should start using AM
>with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
>http://en.wikipedia.org/wiki/Super_high_frequency

Maybe if the entire cellular infrastructure would move up to the LMDS 26-30GHz band, I might recover some of the money I sunk into an LMDS startup. Great idea. I like it.

Of course, there are problems. Nobody makes an economical mm wave handset. There will probably need to be 8-10 times more cell sites built than are currently in use on 800/900 and 1800/1900MHz. Of course mm wave propagation is affected by just about everything, so it probably won't work indoors. No problem, just add more cell sites and repeaters. Of course you couldn't get away with the existing relatively low power output handsets and insipid gain antennas, so we'll just crank up the power and antenna gain on the handset and fry a few peoples brains. It's a small sacrifice to make so I watch TV on my cell phone.

>Equally important, SHF frequencies can efficiently transmit signals
>using extremely small transmitters. Longer wavelengths require larger
>transmitters.

They do? I didn't know that. My 49MHz automobile alarm dongle isn't much larger than my 2400MHz USB wi-fi dongle. Are you sure the transmitter has to be bigger or were you thinking of the antenna?

>Obviously there are frequencies lower than SHF -- VHF and above --
>that can easily penetrate charged particles [e.g. anything resembling
>the ionosphere or heliosphere].

I don't know of any wireless service provider that charges for particles. What are they charging and what's the stock symbol? I've always suspected that charged particles might be worth selling.

>However, lower-frequencies tend to
>result in less bandwidth, so it is better to use higher-frequencies
>when the application requires significant bandwidth.

Hint: It doesn't matter what you're doing, there's never enough
bandwidth available. If you provide XX MHz of available bandwidth,
someone will immediately supply an application that required 10 times
the available bandwidth. More simply, applications tend to fill up
available bandwidth quite rapidly.

>I choose AM because it requires less bandwidth than FM. In addition,
>AM tends to retain reception of rather weak signals, while FM
>"considers" such signals to be absent.

I'll make it really simple for you. FM is "hi-fi", while AM is noisy
"no-fi". Don't you want to be cool strutting down the street with
your iPhone watching HDTV with 7.1 sound? It wouldn't do to have it
sound like the typical AM broadcast station. For decent quality, you
gotta have FM.

This is fun. Kinda reminds me of some of the business plans I
reviewed during the dot com boom.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3385. Re: Troll alert - was How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:24:05 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2BFDE85.6F69D%dbowey@comcast.net>
Source record: 38545
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/15/07 1:24 PM, in article
1184531086.421930.215850@x35g2000prf.googlegroups.com, "Radium"
<glucegen1@gmail.com> wrote:

> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=
> en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> http://en.wikipedia.org/wiki/Super_high_frequency
>
> I choose SHF frequencies because SHF seems to be the sweet spot
> between frequencies that are high-enough to rip through charged
> particles & provide large amounts of bandwidth, yet low-enough to be
> wireless and long-distance. At EHF and above, it starts to get into
> the IR range where long-distance wireless reception is not possible
> and atmospheric opacity begins to dominate.
>
> Equally important, SHF frequencies can efficiently transmit signals
> using extremely small transmitters. Longer wavelengths require larger
> transmitters.
>
> Obviously there are frequencies lower than SHF -- VHF and above --
> that can easily penetrate charged particles [e.g. anything resembling
> the ionosphere or heliosphere]. However, lower-frequencies tend to
> result in less bandwidth, so it is better to use higher-frequencies
> when the application requires significant bandwidth.
>
> I choose AM because it requires less bandwidth than FM. In addition,
> AM tends to retain reception of rather weak signals, while FM
> "considers" such signals to be absent.
>

Too much time on your hands again?
```

3386. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:26:55 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <ziwmi.4922$Wh4.2590@trndny06>
Source record: 38546

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:OZvmi.22037$RX.9004@newssvr11.news.prodigy.net...
> Amerigo Vespucci wrote:
>> The way I understood it was the best way to feed it was with ladderline
>> or something equal to it.
>
> Did anyone tell you that the matching section needs to be
> about 0.2 wavelength?

Explain?

> --
> 73, Cecil http://www.w5dxp.com

3387. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:27:36 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <BJSQYuFIFpmGFAS2@ifwtech.co.uk>
Source record: 38549

Fred McKenzie wrote:
>In article <KdpStoBmPcmGFADo@ifwtech.co.uk>,
> Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:
>
>> Probably... the "2 kilogram" drills look like a stretched version of a
>> normal pistol-grip drill, with a horizontal motor. For example:
>> http://tinyurl.com/33zcrr
>
>Ian-
>
>Your first example is the one I was looking at.
>
>Neither store had anything like a Ground Rod adapter or half inch socket
>adapter in stock. I searched the web and was not able to find a ground
>rod adapter compatible with SDS+. I found one comment that such an
>adapter would not be sufficiently strong to withstand the forces
>required to drive a ground rod.

Nah - we're not talking about pile-driving here.

>There were several references to an
>SDS-Max adapter, but that may not be compatible with SDS+. Yes, the
>prices were high!
>
SDS Max is the next league up in terms of brute performance, weight and
price. For normal ground rods, SDS Max is probably more than you need.

>I did find references to a half inch socket adapter. It is a Hitachi
>"1/2 inch Chemical Anchor Adapter", Code No. 303044.

No, it's not that one either...

It seems the magic words might be "nut driver":
http://tinyurl.com/2bohkg

You use the flat end of the nut driver to hammer on the rod, and to
prevent it from skidding off the end of the rod, you snap on the correct
size of automotive nut-driver socket.

These surely must be available somewhere in the USA, if you can figure
out the right name to ask for.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3388. . . . How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:28:55 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184534935.176796.266960@i13g2000prf.googlegroups.com>
Source record: 38547
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 1:24 pm, Radium <gluceg...@gmail.com> wrote:
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote
inhttp://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
> :
>
> > how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> http://en.wikipedia.org/wiki/Super_high_frequency
>
> I choose SHF frequencies because SHF seems to be the sweet spot
> between frequencies that are high-enough to rip through charged
> particles & provide large amounts of bandwidth, yet low-enough to be
> wireless and long-distance. At EHF and above, it starts to get into
> the IR range where long-distance wireless reception is not possible
> and atmospheric opacity begins to dominate.
>
> Equally important, SHF frequencies can efficiently transmit signals
> using extremely small transmitters. Longer wavelengths require larger
> transmitters.
>
> Obviously there are frequencies lower than SHF -- VHF and above --
> that can easily penetrate charged particles [e.g. anything resembling
> the ionosphere or heliosphere]. However, lower-frequencies tend to
> result in less bandwidth, so it is better to use higher-frequencies
> when the application requires significant bandwidth.
>
> I choose AM because it requires less bandwidth than FM. In addition,
> AM tends to retain reception of rather weak signals, while FM
> "considers" such signals to be absent.

. . .

3389. . . . How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:29:27 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184534967.510347.307020@i38g2000prf.googlegroups.com>
Source record: 38548
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 15, 1:45 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Radium <gluceg...@gmail.com> wrote:
>
> > On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
> > :
> > > how would u like to change the cell phone industry?
> > Analog cells phones should stop using FM and should start using AM
> > with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> Analog cell phones are going away.
>
> Cell phones already use frequencies in the 3 GHz region.
>
> You are an idiot.
>
> <snip crap>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

. . .
```

3390. . . . How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:30:30 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184535030.283851.310770@i38g2000prf.googlegroups.com>
Source record: 38550
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 2:14 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> Radium <gluceg...@gmail.com> hath wroth:
>
> >> how would u like to change the cell phone industry?
>
> >Analog cells phones should stop using FM and should start using AM
> >with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> >http://en.wikipedia.org/wiki/Super_high_frequency
>
> Maybe if the entire cellular infrastructure would move up to the LMDS
> 26-30GHz band, I might recover some of the money I sunk into an LMDS
> startup. Great idea. I like it.
>
> Of course, there are problems. Nobody makes an economical mm wave
> handset. There will probably need to be 8-10 times more cell sites
> built than are currently in use on 800/900 and 1800/1900MHz. Of
> course mm wave propagation is affected by just about everything, so it
> probably won't work indoors. No problem, just add more cell sites and
> repeaters. Of course you couldn't get away with the existing
> relatively low power output handsets and insipid gain antennas, so
> we'll just crank up the power and antenna gain on the handset and fry
> a few peoples brains. It's a small sacrifice to make so I watch TV on
> my cell phone.
>
> >Equally important, SHF frequencies can efficiently transmit signals
> >using extremely small transmitters. Longer wavelengths require larger
> >transmitters.
>
> They do? I didn't know that. My 49MHz automobile alarm dongle isn't
> much larger than my 2400MHz USB wi-fi dongle. Are you sure the
> transmitter has to be bigger or were you thinking of the antenna?
>
> >Obviously there are frequencies lower than SHF -- VHF and above --
> >that can easily penetrate charged particles [e.g. anything resembling
> >the ionosphere or heliosphere].
>
> I don't know of any wireless service provider that charges for
> particles. What are they charging and what's the stock symbol? I've
> always suspected that charged particles might be worth selling.
>

> >However, lower-frequencies tend to
> >result in less bandwidth, so it is better to use higher-frequencies
> >when the application requires significant bandwidth.
>
> Hint: It doesn't matter what you're doing, there's never enough
> bandwidth available. If you provide XX MHz of available bandwidth,
> someone will immediately supply an application that required 10 times
> the available bandwidth. More simply, applications tend to fill up
> available bandwidth quite rapidly.
>
> >I choose AM because it requires less bandwidth than FM. In addition,
> >AM tends to retain reception of rather weak signals, while FM
> >"considers" such signals to be absent.
>
> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
> "no-fi". Don't you want to be cool strutting down the street with
> your iPhone watching HDTV with 7.1 sound? It wouldn't do to have it
> sound like the typical AM broadcast station. For decent quality, you
> gotta have FM.
>
> This is fun. Kinda reminds me of some of the business plans I
> reviewed during the dot com boom.
>
> --
> Jeff Liebermann je...@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

. . .

3391. Re: beginner co-ax problem

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:30:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139l4gbk3gepi13@corp.supernews.com>
Source record: 38551

Coax cable will convey the signal from an antenna to your receiver. If there is no antenna at the other end of the coax, no appreciable signal will reach your receiver. The 2 meter antenna is a very poor antenna at MW, so it will pick up very little MF signal for your receiver to hear.

When you disconnect the coax shield, then the coax itself becomes an antenna, and you hear signals. You'll get the same effect by connecting a single wire of the same length to the center conductor of the receiver antenna connector.

If you connect a decent antenna (that is, decent for use at the frequency you're listening to with your receiver) to the far end of the coax, then you'll get a good signal when the coax is properly connected.

Roy Lewallen, W7EL

andre02@andre02.plus.com wrote:
> On 15 Jul, 19:14, Nate Bargmann <n0nb.DO.NOT.S...@ME.networksplus.net>
> wrote:
>
>
>>> I then took, as an experiement, my 2m areial co-ax, plugged it in and
>>> tuned to a good local MW signal. Exactly the same phenomena occurs.
>> Without the shield connected to the frame of the radio, it no longer acts
>> as a shield as you've noticed. This is normal.
>>
> Sorry , I do not understand that bit.
>
> What I meant was when the shield was loose I can pick up the station
> but as soon as I tightened it the signal went. This was on the 2m
> antenna which in recevie only mode should work. This implied to me
> that either both cables are in error or I am doing something very
> wrong.
>
> Andre
>

3392. . . . Troll alert - was How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:31:07 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184535067.066402.14360@j4g2000prf.googlegroups.com>
Source record: 38552
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 2:24 pm, Don Bowey <dbo...@comcast.net> wrote:
> On 7/15/07 1:24 PM, in article
> 1184531086.421930.215...@x35g2000prf.googlegroups.com, "Radium"
>
>
>
>
>
> <gluceg...@gmail.com> wrote:
> > On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
> > en&
> > :
>
> >> how would u like to change the cell phone industry?
>
> > Analog cells phones should stop using FM and should start using AM
> > with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> >http://en.wikipedia.org/wiki/Super_high_frequency
>
> > I choose SHF frequencies because SHF seems to be the sweet spot
> > between frequencies that are high-enough to rip through charged
> > particles & provide large amounts of bandwidth, yet low-enough to be
> > wireless and long-distance. At EHF and above, it starts to get into
> > the IR range where long-distance wireless reception is not possible
> > and atmospheric opacity begins to dominate.
>
> > Equally important, SHF frequencies can efficiently transmit signals
> > using extremely small transmitters. Longer wavelengths require larger
> > transmitters.
>
> > Obviously there are frequencies lower than SHF -- VHF and above --
> > that can easily penetrate charged particles [e.g. anything resembling
> > the ionosphere or heliosphere]. However, lower-frequencies tend to
> > result in less bandwidth, so it is better to use higher-frequencies
> > when the application requires significant bandwidth.
>
> > I choose AM because it requires less bandwidth than FM. In addition,
> > AM tends to retain reception of rather weak signals, while FM
> > "considers" such signals to be absent.

>
> Too much time on your hands again?- Hide quoted text -
>
> - Show quoted text -

. . .

3393. . . . How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:31:51 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184535111.424937.14830@j4g2000prf.googlegroups.com>
Source record: 38553
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Jul 15, 1:56 pm, "Brenda Ann" <bren...@shinbiro.com> wrote:
> <j...@specsol.spam.sux.com> wrote in message
>
> news:vhdqm4-am8.ln1@mail.specsol.com...
>
>
>
> > Cell phones already use frequencies in the 3 GHz region.
>
> Really? Which ones? I'm only aware of cell systems using 800, 900, 1800 and
> 1900 MHz. There are some (very few) multisystem phones that use all four of
> those ranges.

. . .
```

3394. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jhgqm4-44e.ln1@mail.specsol.com>
Source record: 38554
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Brenda Ann <brendad@shinbiro.com> wrote:

> <jimp@specsol.spam.sux.com> wrote in message
> news:vhdqm4-am8.ln1@mail.specsol.com...
> >
> > Cell phones already use frequencies in the 3 GHz region.
> >

> Really? Which ones? I'm only aware of cell systems using 800, 900, 1800 and
> 1900 MHz. There are some (very few) multisystem phones that use all four of
> those ranges.

Notice the word "region"?

--
Jim Pennino

Remove .spam.sux to reply.

3395. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:45:06 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184535906.779387.200980@z28g2000prd.googlegroups.com>
Source record: 38555
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 2:14 pm, Jeff Liebermann <je...@cruzio.com> wrote:

> Radium <gluceg...@gmail.com> hath wroth:

> >> how would u like to change the cell phone industry?

> >Analog cells phones should stop using FM and should start using AM
> >with SHF frequencies - at least 3 GHz and at most 30 GHz.

> >http://en.wikipedia.org/wiki/Super_high_frequency

> There will probably need to be 8-10 times more cell sites
> built than are currently in use on 800/900 and 1800/1900MHz.

Why?

> >Equally important, SHF frequencies can efficiently transmit signals
> >using extremely small transmitters. Longer wavelengths require larger
> >transmitters.

> They do? I didn't know that. My 49MHz automobile alarm dongle isn't
> much larger than my 2400MHz USB wi-fi dongle. Are you sure the
> transmitter has to be bigger or were you thinking of the antenna?

Maybe the antenna.

> >I choose AM because it requires less bandwidth than FM. In addition,
> >AM tends to retain reception of rather weak signals, while FM
> >"considers" such signals to be absent.

> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
> "no-fi".

FM has too much hiss. FM signals are lost very easily. AM tends to
retain reception of a signals even when this signal is extremely weak.
In FM, once you go below a certain wattage, you completely lose the
signal, and the annoying hiss begins. With AM it is much easier to
receive the low-power signal.

AM maybe more vulnerable to electronic disturbances but so what? The
magnetic RF interferences that are heard on the AM radio are
entertaining compared to the deafening hiss on the FM radio.

> For decent quality, you
> gotta have FM.

Nope. For decent quality sound you need audio that is uncompressed PCM
[similar to CDs and WAVE files] with a sample rate of at least 44.1
KHz and a bit-resolution of at least 16-bit. Or the analog equivalent.

3396. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:49:04 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469a9790$0$339$e4fe514c@news.xs4all.nl>
Source record: 38556
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:
> On Sat, 14 Jul 2007 23:43:55 +0200, "Hein ten Horn" wrote:
>>Ron Baker, Pluralitas! wrote:
>>> Hein ten Horn wrote:
>>>> Ron Baker, Pluralitas! wrote:
>>>>>
>>>>> How do you arrive at a "beat"?
>>>>
>>>> Not by train, neither by UFO. ;)
>>>> Sorry. English, German and French are only 'second'
>>>> languages to me.
>>>> Are you after the occurrence of a beat?
>>>
>>> Another way to phrase the question would have been:
>>> Given a waveform x(t) representing the sound wave
>>> in the air how do you decide whether there is a
>>> beat in it?
>>
>> Oh, nice question. Well, usually (in my case) the functions
>> are quite simple (like the ones we're here discussing) so that
>> I see the beat in a picture of a rough plot in my mind.
>
> And what does it look like, then?

Roughly like the ones in your Excel(lent) plots. :)

>>>> Then: a beat appears at constructive interference, thus
>>>> when the cosine function becomes maximal (+1 or -1).
>>>> Or are you after the beat frequency (6 Hz)?
>>>> Then: the cosine function has two maxima per period
>>>> (one being positive, one negative) and with three
>>>> periodes a second it makes six beats/second.
>>>>
>>>>> Hint: Any such assessment is nonlinear.
>>
>> Mathematical terms like linear, logarithmic, etc. are familiar
>> to me, but the guys here use linear and nonlinear in another
>> sense.
>
> Where is "here"?

In this thread.

> I'm writing from sci.electronics.basics

Subscribing to that group would be a good
thing to do, I suspect.

> and, classically, a device
> with a linear response will provide an output signal change over its
> linear dynamic range which varies as a function of an input signal
> amplitude change and some system constants and is described by:
>
>
> Y = mx+b
>
>
> Where Y is the output of the system, and is the distance traversed
> by the output signal along the ordinate of a Cartesian plot,
>
> m is a constant describing the slope (gain) of the system,
>
> x is the input to the system, is the distance traversed by
> the input signal along the abscissa of a Cartesian plot, and
>
> b is the DC offset of the output, plotted on the ordinate.
>
> In the context of this thread, then, if a couple of AC signals are
> injected into a linear system, which adds them, what will emerge
> from the output will be an AC signal which will be the instantaneous
> arithmetic sum of the amplitudes of both signals, as time goes by.

In general: that sum times a constant factor.
Perhaps the factor being one is usually tacitly assumed.

> As nature would have it, if the system was perfectly linear, the
> spectrum of the output would contain only the lines occupied by the
> two inputs.
>
> Kinda like if we listened to some perfectly recorded and played back
> music...
>
> If the system is non-linear, however, what will appear on the output
> will be the AC signals input to the system as well as some new
> companions.
>
> Those companions will be new, real frequencies which will be located
> spectrally at the sum of the frequencies of the two AC signals and
> also at their difference.

From physics (and my good old radio hobby)
I'm familiar with the phenomenon. The meanwhile
cleared using of the word non-linear in a narrower
sense made me sometimes too careful, I guess.

>> Something to do with harmonics or so? Anyway,
>> that's why the hint isn't working here.
>
> Harmonics _and_ heterodynes.
>
> If the hint isn't working then you must confess ignorance, yes?

The continuous thread was clear to me.

Thanks.

gr, Hein

3397. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:50:06 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469a9790$1$339$e4fe514c@news.xs4all.nl>
Source record: 38557
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
Ron Baker, Pluralitas! wrote:
> "Hein ten Horn" wrote:
>> Ron Baker, Pluralitas! wrote:
>>> Hein ten Horn wrote:
>>>> Ron Baker, Pluralitas! wrote:
>>>>> Hein ten Horn wrote:
>>
>>>>>> As a matter of fact the resulting force (the resultant) is
>>>>>> fully determining the change of the velocity (vector) of
>>>>>> the element.
>>>>>> The resulting force on our element is changing at the
>>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>>> one and only 222 Hz.
>>>>>
>>>>> Your idea of frequency is informal and leaves out
>>>>> essential aspects of how physical systems work.
>>>>
>>>> Nonsense. Mechanical oscillations are fully determined by
>>>> forces acting on the vibrating mass. Both mass and resulting force
>>>> determine the frequency. It's just a matter of applying the laws of
>>>> physics.
>>>
>>> You don't know the laws of physics or how to apply them.
>>
>> I'm not understood. So, back to basics.
>> Take a simple harmonic oscillation of a mass m, then
>> x(t) = A*sin(2*pi*f*t)
>> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
>> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
>> hence
>> a(t) = -(2*pi*f)^2*x(t)
>
> Only for a single sinusoid.
>
>> and, applying Newton's second law,
>> Fres(t) = -m*(2*pi*f)^2*x(t)
>> or
>> f = ( -Fres(t) / m / x(t) )^0.5 / (2pi).
>
> Only for a single sinusoid.
> What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)
```

In the following passage I wrote "a relatively
slow varying amplitude", which relates to the
4 Hz beat in the case under discussion (f1 =
220 Hz and f2 = 224 Hz) where your
expression evaluates to
x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t),
indicating the matter is vibrating at 222 Hz.

>> So my statements above, in which we have
>> a relatively slow varying amplitude (4 Hz),
>> are fundamentally spoken valid.
>> Calling someone an idiot is a weak scientific argument.
>
> Yes.
> And so is "Nonsense." And so is your idea of
> "the frequency".

Note the piquant difference: nonsense points
to content and we're not discussing idiots
(despite a passing by of some very strange
postings. :)).

>> Hard words break no bones, yet deflate creditability.

gr, Hein

3398. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 21:57:17 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1184536637.800498.237320@g4g2000hsf.googlegroups.com>
Source record: 38558
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 3:12 pm, John Fields <jfie...@austininstruments.com> wrote:
> On Sun, 15 Jul 2007 04:14:33 -0700, Keith Dysart
> >It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
> >the resulting signal. One can multiply 1e6 by 1e5 with a DC
> >offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
> >signal is identical.
>
> ---
> No, it isn't, since in the additive mode any modulation impressed on
> the carrier (1.0e6) will not affect the .9e6 and 1.1e6 in any way
> since they're unrelated.
> ---

I thought the experiment being discussed was one where the
modulation was 1e5, the carrier 1e6 and the resulting
spectrum .9e6, 1e6 and 1.1e6.

Read my comments in that context, or just ignore them if
that context is not of interst.

> >(You can improve the fidelity of the resulting summed version
> >by eliminating the op-amp. Just use three resistors. The op-amp
> >messes up the signal quite a bit.)
>
> ---
> Actually the resistors "mess up the signal" more than the opamp does
> since the signals aren't really adding in the resistors.

I did not write clearly enough. The three resistors I had
in mind were: one to each voltage source and one to ground.

To get there from your latest schematic, discard the op-amp
and tie the right end of R3 to ground.

To get an AM signal that can be decoded with an envelope
detector, V5 needs to have an amplitude of at least 2 volts.

...Keith

3399. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:23:21 UTC
From: "Bob F." <bob@N0ZPAMfurtaw.com>
Message-ID: <V-ednRkALralMQfbnZ2dnUVZ_rmjnZ2d@comcast.com>
Source record: 38559
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1184531086.421930.215850@x35g2000prf.googlegroups.com...
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
Before making such a recommendation, I suggest you read up on a couple of
topics.

I'd suggest at least topics including:

Near and far antenna performance.
Path loss calculations
Signal penetration
Fading types
Interleaving
SAR
Eb/No
C/I
Frequency stability and accuracy
Component and radio design
Modem methods
Modulation methods.
Vocoders
Digital modulation
General history of modulation techniques, AM, FM and digital
Maybe others as they come up in your reading.

and then study.
Manufacturers and manufacturing history
Company pioneering status
IPR
Regulatory compliance
Government rule making processes (Nat'l and Intl)
Spectrum use (bits / Hz)
Standards setting
Getting vendors to make components for you.

Lead times
Protecting customer's investment
Security
testing methods

Engineering solutions requires you to keep you arms around all of this.

If you are serious about your request and do not at least have a casual working knowledge of all these, you are wasting everyone's time. If your goal is to created fruitless discussion, you are right on track.

No insult intended...just trying to tell it like it is.

Bob F.

3400. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:24:19 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <31bl9317knuqoqtmgb671fjogdg3josoph@4ax.com>
Source record: 38560
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 14:45:06 -0700, Radium <glucegen1@gmail.com>
wrote:

>On Jul 15, 2:14 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
>> Radium <gluceg...@gmail.com> hath wroth:
>
>> >> how would u like to change the cell phone industry?
>
>> >Analog cells phones should stop using FM and should start using AM
>> >with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
>> >http://en.wikipedia.org/wiki/Super_high_frequency
>
>> There will probably need to be 8-10 times more cell sites
>> built than are currently in use on 800/900 and 1800/1900MHz.
>
>Why?
>
>> >Equally important, SHF frequencies can efficiently transmit signals
>> >using extremely small transmitters. Longer wavelengths require larger
>> >transmitters.
>
>> They do? I didn't know that. My 49MHz automobile alarm dongle isn't
>> much larger than my 2400MHz USB wi-fi dongle. Are you sure the
>> transmitter has to be bigger or were you thinking of the antenna?
>
>Maybe the antenna.
>
>> >I choose AM because it requires less bandwidth than FM. In addition,
>> >AM tends to retain reception of rather weak signals, while FM
>> >"considers" such signals to be absent.
>
>> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
>> "no-fi".
>
>FM has too much hiss. FM signals are lost very easily. AM tends to
>retain reception of a signals even when this signal is extremely weak.
>In FM, once you go below a certain wattage, you completely lose the
>signal, and the annoying hiss begins. With AM it is much easier to
>receive the low-power signal.

>
>AM maybe more vulnerable to electronic disturbances but so what? The
>magnetic RF interferences that are heard on the AM radio are
>entertaining compared to the deafening hiss on the FM radio.
>
>> For decent quality, you
>> gotta have FM.
>
>Nope. For decent quality sound you need audio that is uncompressed PCM
>[similar to CDs and WAVE files] with a sample rate of at least 44.1
>KHz and a bit-resolution of at least 16-bit. Or the analog equivalent.

Wrong.

--
JF

3401. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:30:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ji9l931t15oicgna9kiu8k35c3mfmk9106@4ax.com>
Source record: 38561
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>> There will probably need to be 8-10 times more cell sites
>> built than are currently in use on 800/900 and 1800/1900MHz.

>Why?

For a given radio system, higher frequencies don't go as far as lower
frequencies. You can see how it works by just plugging in different
frequencies a "free space loss" calculator such as:
<http://www.terabeam.com/support/calculations/free-space-loss.php>
For every 6dB of additional path loss, your range is cut in half.
Incidentally, this is not my idea or a conspiracy. Mother nature made
it that way and we have to live with the physics.

>> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
>> "no-fi".
>
>FM has too much hiss.

FM has a limiter that eliminates all AM noise components. That's
exactly the way the soon to be obsolete analog cell phones operate. If
you're hearing hiss, then there's something broken in your FM stereo.

>FM signals are lost very easily.

I have a lost and found for missing signals. It's called a spectrum
analyzer. If the signal wanders, I can usually find it. Not a
problem.

>AM tends to
>retain reception of a signals even when this signal is extremely weak.

Not really. If you really want weak signal reception, I suggest you
look into SSB (scientific set back) modulation. Half the bandwidth
gives you twice the sensitivity.

>In FM, once you go below a certain wattage, you completely lose the
>signal, and the annoying hiss begins. With AM it is much easier to
>receive the low-power signal.

Nope. All FM receivers have a squelch to mute the receiver when
there's not enough signal to make it worth listening. The squelch is
much more efficient with FM than an AGC operated squelch for AM.

Anyway, if someone calls with me on my cell phone with a crummy signal, I don't want to talk to them and I usually ask them to call me back when in a better area.

The problem with AM audio is that the ultimate signal to noise ratio isn't very good. AM is noisy at any signal strength. The noise never really goes away. On the other foot, FM is noisy with very weak signals, but becomes very quiet once the limiter starts to work. That's why FM is preferred for music and why analog AM broadcasting sounds marginal at any signal level.

>AM maybe more vulnerable to electronic disturbances but so what? The
>magnetic RF interferences that are heard on the AM radio are
>entertaining compared to the deafening hiss on the FM radio.

If your FM radio has a deafening hiss, you're probably not tuned to any station. Try listening to a station instead of between stations. If it has an AFC, turn it on. There may also be some kind of malfunction in your hi-fi as you should not be hearing any hiss when tuned to a station.

>> For decent quality, you
>> gotta have FM.

>Nope. For decent quality sound you need audio that is uncompressed PCM
>[similar to CDs and WAVE files] with a sample rate of at least 44.1
>KHz and a bit-resolution of at least 16-bit. Or the analog equivalent.

I thought you didn't like digital? You only gave me a choice of AM or FM. Now, you want digital. Well, digital is what today's cell phones use mostly to maximize spectrum efficiency. With compression and proper coding, you can pickup quite a bit of efficiency, at the expense of sounding like you're gargling ball bearings. Not too bad a tradeoff for voice. Really awful for music. Fortunately, none of the broadcasters or cellular carriers use raw CD data, mostly because it's not compressed.

So, are you ready to go public with your idea? When's the IPO?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3402. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:35:08 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <OoOdnfvPVeSxMgfbnZ2dnUVZ_r63nZ2d@giganews.com>
Source record: 38562
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:062l93doa4mvq3oei6gbqaq3idotvr7cua@4ax.com...
> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
> "no-fi". Don't you want to be cool strutting down the street with
> your iPhone watching HDTV with 7.1 sound? It wouldn't do to have it
> sound like the typical AM broadcast station. For decent quality, you
> gotta have FM.

FM is not inherently any more 'hi-fi' than AM. Fidelity is a product of bandwidth, not modulation type. AM is not even so susceptible to noise as the frequency goes up, since the energy of the noise pulses goes down logarithmically as frequency goes up. AM is used for aeronautical communications very successfully for several reasons, one of which is the LACK of 'capture effect'. There are still some frequencies where AM will be more susceptible to interference than FM, but FM would still suffer, for instance the segment between 1330-1400 MHz which is the natural frequency of Hydrogen (lots of that around).

3403. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:39:13 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469aafbf$0$16607$4c368faf@roadrunner.com>
Source record: 38563
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:469a9790$1$339$e4fe514c@news.xs4all.nl...
> Ron Baker, Pluralitas! wrote:
>> "Hein ten Horn" wrote:
>>> Ron Baker, Pluralitas! wrote:
>>>> Hein ten Horn wrote:
>>>>> Ron Baker, Pluralitas! wrote:
>>>>>> Hein ten Horn wrote:
>>>
>>>>>>> As a matter of fact the resulting force (the resultant) is
>>>>>>> fully determining the change of the velocity (vector) of
>>>>>>> the element.
>>>>>>> The resulting force on our element is changing at the
>>>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>>>> one and only 222 Hz.
>>>>>>
>>>>>> Your idea of frequency is informal and leaves out
>>>>>> essential aspects of how physical systems work.
>>>>>
>>>>> Nonsense. Mechanical oscillations are fully determined by
>>>>> forces acting on the vibrating mass. Both mass and resulting force
>>>>> determine the frequency. It's just a matter of applying the laws of
>>>>> physics.
>>>>
>>>> You don't know the laws of physics or how to apply them.
>>>
>>> I'm not understood. So, back to basics.
>>> Take a simple harmonic oscillation of a mass m, then
>>> x(t) = A*sin(2*pi*f*t)
>>> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
>>> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
>>> hence
>>> a(t) = -(2*pi*f)^2*x(t)
>>
>> Only for a single sinusoid.
>>
>>> and, applying Newton's second law,
>>> Fres(t) = -m*(2*pi*f)^2*x(t)
>>> or
>>> f = ( -Fres(t) / m / x(t) )^0.5 / (2pi).
>>
>> Only for a single sinusoid.
```

>> What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)
>
> In the following passage I wrote "a relatively
> slow varying amplitude", which relates to the
> 4 Hz beat in the case under discussion (f1 =
> 220 Hz and f2 = 224 Hz) where your
> expression evaluates to
> x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t),
> indicating the matter is vibrating at 222 Hz.

So where did you apply the laws of physics?
You said, "It's just a matter of applying the laws of
physics." Then you did that for the single sine case. Where
is your physics calculation for the two sine case?
Where is the expression for 'f' as in your first
example? Put x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t)
in your calculations and tell me what you get
for 'f'.

And how do you get 222 Hz out of
cos(2pi 2 t) * sin(2pi 222 t)
Why don't you say it is 2 Hz? What is your
law of physics here? Always pick the bigger
number? Always pick the frequency of the
second term? Always pick the frequency of
the sine?
What is "the frequency" of
cos(2pi 410 t) * cos(2pi 400 t)

What is "the frequency" of
cos(2pi 200 t) + cos(2pi 210 t) + cos(2pi 1200 t) + cos(2pi 1207 t)

>
>>> So my statements above, in which we have
>>> a relatively slow varying amplitude (4 Hz),

How do you determine amplitude?
What's the math (or physics) to derive
amplitude?

>>> are fundamentally spoken valid.
>>> Calling someone an idiot is a weak scientific argument.
>>
>> Yes.
>> And so is "Nonsense." And so is your idea of
>> "the frequency".
>
> Note the piquant difference: nonsense points
> to content and we're not discussing idiots
> (despite a passing by of some very strange
> postings. :)).
>

>>> Hard words break no bones, yet deflate creditability.
>
> gr, Hein
>
>

3404. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-15 23:49:00 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <98bl93leqj6cvmeq9lprjvilgc2diiscdm@4ax.com>
Source record: 38564
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 23:49:04 +0200, "Hein ten Horn"
<tenhornRemovE@ThiSraketnet.nl> wrote:

>John Fields wrote:

>> And what does it look like, then?
>
>Roughly like the ones in your Excel(lent) plots. :)

I've posted nothing like that, so if you have graphics which support
your position I'm sure we'd all be happy to see them.
--

>>> Mathematical terms like linear, logarithmic, etc. are familiar
>>> to me, but the guys here use linear and nonlinear in another
>>> sense.
>>
>> Where is "here"?
>
>In this thread.
>
>> I'm writing from sci.electronics.basics
>
>Subscribing to that group would be a good
>thing to do, I suspect.
>
>> and, classically, a device
>> with a linear response will provide an output signal change over its
>> linear dynamic range which varies as a function of an input signal
>> amplitude change and some system constants and is described by:
>>
>>
>> Y = mx+b
>>
>>
>> Where Y is the output of the system, and is the distance traversed
>> by the output signal along the ordinate of a Cartesian plot,
>>
>> m is a constant describing the slope (gain) of the system,
>>
>> x is the input to the system, is the distance traversed by
>> the input signal along the abscissa of a Cartesian plot, and

>>
>> b is the DC offset of the output, plotted on the ordinate.
>>
>> In the context of this thread, then, if a couple of AC signals are
>> injected into a linear system, which adds them, what will emerge
>> from the output will be an AC signal which will be the instantaneous
>> arithmetic sum of the amplitudes of both signals, as time goes by.
>
>In general: that sum times a constant factor.
>Perhaps the factor being one is usually tacitly assumed.

That's not right.

The output of the system will be the input signal multiplied by the
gain of the system, with the offset added to that product.

>> As nature would have it, if the system was perfectly linear, the
>> spectrum of the output would contain only the lines occupied by the
>> two inputs.
>>
>> Kinda like if we listened to some perfectly recorded and played back
>> music...
>>
>> If the system is non-linear, however, what will appear on the output
>> will be the AC signals input to the system as well as some new
>> companions.
>>
>> Those companions will be new, real frequencies which will be located
>> spectrally at the sum of the frequencies of the two AC signals and
>> also at their difference.
>
>From physics (and my good old radio hobby)
>I'm familiar with the phenomenon. The meanwhile
>cleared using of the word non-linear in a narrower
>sense made me sometimes too careful, I guess.

OK, I guess...

>>> Something to do with harmonics or so? Anyway,
>>> that's why the hint isn't working here.
>>
>> Harmonics _and_ heterodynes.
>>
>> If the hint isn't working then you must confess ignorance, yes?
>
>The continuous thread was clear to me.
>
>Thanks.

:-)

--
JF

3405. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 00:13:22 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184544802.670620.199530@i38g2000prf.googlegroups.com>
Source record: 38565
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 4:30 pm, Jeff Liebermann <je...@cruzio.com> wrote:

> Radium <gluceg...@gmail.com> hath wroth:

> The problem with AM audio is that the ultimate signal to noise ratio
> isn't very good. AM is noisy at any signal strength. The noise never
> really goes away. On the other foot, FM is noisy with very weak
> signals, but becomes very quiet once the limiter starts to work.
> That's why FM is preferred for music and why analog AM broadcasting
> sounds marginal at any signal level.

AFAIK, the main issue with AM is that it is much more vulnerable to
magnetic disruptions than FM. That is why when you are listening to
the AM radio at home and someone turns on the microwave-oven, you here
those odd sounds on the receiver.

Also, if there is a solar prominence you can hear the resulting
magnetic disruptions on an AM radio receiver. They sound scary and
enjoyable at the same time.

> >Nope. For decent quality sound you need audio that is uncompressed PCM
> >[similar to CDs and WAVE files] with a sample rate of at least 44.1
> >KHz and a bit-resolution of at least 16-bit. Or the analog equivalent.

> I thought you didn't like digital? You only gave me a choice of AM or
> FM. Now, you want digital.

It depends, if I can find the analog-equivalent of 44.1 KHz-sample-
rate, 16-bit-resolution digital audio, that just as good.

If I a limited to only AM or FM for analog audio, I choose AM because
I like the sounds generated by solar prominences and other RF magnetic
disruptions.

Ironically, for video, I prefer FM. Yup, video signals on FM carriers
instead of AM carrier. The Y-luminance signal should be broadcasted on
an FM carrier. That's the analog video I like.

> With compression and
> proper coding, you can pickup quite a bit of efficiency, at the
> expense of sounding like you're gargling ball bearings.

Disgusting! I hate most forms of digital audio compression. For me,
either keep it uncompressed or use WMA compression. All non-WMA

digital audio compressions below 320 kbps sound like stinky human
fart. Or an angry infant foaming at the mouth.

> Not too bad a
> tradeoff for voice. Really awful for music.

Awful for both. The only digital audio compression I like is WMA.
The sounds resulting from WMA compression sort of make me think of
those RF electronic telecommunication devices used in The Bourne
Identity. That movie features some really awesome devices that make
those interesting sounds - for example, when the main character is
getting his hand screened. I also associated these sounds with the
electronic telecommunication devices used by the Soviet Union. Soviet
Union has got some really psychedelic sounds in their electronics. You
know, those fancy dial-up modems tones?

> Fortunately, none of the
> broadcasters or cellular carriers use raw CD data, mostly because it's
> not compressed.

All digital audio compression formats other than WMA, stink badly!!

Here are my rules for digital audio:

A. Whether compressed or not, the audio must be monaural and with a
sample-rate of at least 44.1 kHz.

B. The only compression allowed is WMA. No other compression format is
permitted.

C. In its uncompressed form, the audio must have a bit-resolution of
at least 16-bit

D. If compression is used, then the sample-rate of the compressed and
the uncompressed version of the audio must be the same.

E. If compression is used, the only thing that should be decreased is
the bit-resolution. The sample-rate must remain unchanged

Let's say a song that was originally recorded in stereo is given to
me. The song must to be converted to mono* via the following steps:

1. Record audio from CD [or other stereo audio source] into Wavelab,
Adobe Audition [or other audio software] into a file. For simplicity
let's call this file "Track1.wav"

2. Make a copy of Track1.wav and save the copy as "Track1B.wav"

3. Open Track1.wav and reduce the gain of its audio by 77.5%

4. Convert Track1.wav to monaural audio

5. Save Track.1

6. Open Track1B.wav and reduce its audio gain by 50%

7. Invert the phase of the left channel of Track1B.wav

8. Convert Track1B.wav to mono

9. Save Track1B.wav

10. Create a new stereo wave file whose bit-resolution is 16-bit and sample rate is 44.1 kHz. For simplicity let's call this file "untitled.wav"

11. Copy and paste the audio of Track1.wav into the left channel of untitled.wav

12. Copy and paste the audio of Track1B.wave into the right channel of untitled.wav

13. Convert untitled.wav to mono

14. Save untitled.wav

*Songs that were originally-recorded in stereo need to be converted to mono via the above 14 steps because different sounds are recorded differently in the L and R channels. The audio that is originally panned to the center is significantly louder than the audio whose phase is different in the left & right channels. This is why I reduce the loudness of non-inverted stereo audio file by 77.5% [before converting it to mono].

In the stereo file whose left channel has its phase inverted, I decrease the loudness only by 50% and then convert it to mono. Usually -- the lead vocals, bass, and percussion are recorded identically in both the left and right channels. The piano, chorus, guitar, and synth pads are usually recorded differently in the left and right channel.

3406. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 00:24:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <hhcl93hhk1d6imp1b7rne5igcfdd2r1ejs@4ax.com>
Source record: 38566
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Brenda Ann" <brendad@shinbiro.com> hath wroth:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:062l93doa4mvq3oei6gbqaq3idotvr7cua@4ax.com...
>> I'll make it really simple for you. FM is "hi-fi", while AM is noisy
>> "no-fi". Don't you want to be cool strutting down the street with
>> your iPhone watching HDTV with 7.1 sound? It wouldn't do to have it
>> sound like the typical AM broadcast station. For decent quality, you
>> gotta have FM.

>FM is not inherently any more 'hi-fi' than AM.

FM was invented by Edwin Armstrong specifically to eliminate the noise problems of AM broadcasting. What I think you might be referring to is the huge pissing match between Armstrong and John Carson over whether FM was any better than FM in the 1930's. The consensus is that very narrow band FM isn't that much better than AM (of equal occupied bandwidth), but wide band FM (as used in broadcast FM and TV) is far better than AM for just about everything.
<http://fecha.org/armstrong.htm>

>Fidelity is a product of
>bandwidth, not modulation type.

Correct. Actually, it's also a function of modulation linearity (distortion and intermod) and encoding method (dynamic range), but I don't wanna slither down that diversion. Pretend I didn't mention it.

>AM is not even so susceptible to noise as
>the frequency goes up, since the energy of the noise pulses goes down
>logarithmically as frequency goes up.

If you're thinking of impulse noise, you're mostly correct. However, there are plenty of other sources of AM noise available. For example, the typical VHF aircraft radio requires substantial filtering of the magneto to avoid hash. Same with any onboard motor. If you've ever tried to install a TV (VSB is a form of AM) in a vehicle, you'll also find that ignition and motor noise can be a problem.

Also, your statement isn't quite right. I think what you meant to say is that as the frequency increases, the energy produced by an impulse source, in a given bandwidth, goes down. Even that's not accurate as I have a fluorescent lamp calibrated noise source that's quite noisy

well into the GHz range.

>AM is used for aeronautical
>communications very successfully for several reasons, one of which is the
>LACK of 'capture effect'.

The FAA, FCC, and various manufactories have tried to move aircraft
radios away from AM and towards FM several times in the past 30 year
or so. They failed mostly due to international WRC reluctance to swap
out expensive radios. It took literally forever to get GPS receivers
TSO approved and about 15 years for nav/com radios to go from 50KHz to
25KHz channel spacing, and that was just the FAA. Where else can you
find an industry, where progress is somewhat retarded by a regulatory
agency of the federal government?

I listen to a mix of VHF aircraft AM channels and FM ham and public
safety channels on my scanner almost constantly. It's easy to
recognize the AM stations by their uniformly crappy audio.

Most domestic ground to ground airport traffic is now all FM, as is
military ground to ground and ground to air. The reason is that it's
difficult to find a decent AM aircraft band walkie talkie. So, they
use commercial FM radios. The only AM walkie talkies are used by
experimental aviation and ultralights, some of which do not have much
of an electrical system that can handle the grossly inefficient AM
transmitters.

Also, nobody really cares about the "capture effect" as the tower
usually has multiple receiver sites and can generally deal with
simultaneous transmit collisions. However, they do care about the
heterodynes produced by simultaneous transmissions, which obliterate
both transmissions. With FM, they could use commercial receiver
voting systems and largely eliminate the problem.

>There are still some frequencies where AM will be
>more susceptible to interference than FM, but FM would still suffer, for
>instance the segment between 1330-1400 MHz which is the natural frequency of
>Hydrogen (lots of that around).

If my AM or FM receiver is sensitive enough to hear something in the
"water hole", it would be attached to a very big dish antenna.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3407. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 00:38:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rlel9350iha8ohmb1kho5po6i8qlhj7kbd@4ax.com>
Source record: 38567
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>AFAIK, the main issue with AM is that it is much more vulnerable to
>magnetic disruptions than FM.

Wrong. Take a magnet, any magnet. Wave it around your AM or FM
radio. Hear anything different? You won't. Therefore, forget about
magnetic disturbances. The main issue with AM is susceptibility to
pulsed noise, as found in motors, fans, auto engines, and computahs.
FM doesn't have as bad a problem because the limiter in the receiver
clips everything to the same level, thus reducing the effect.

>That is why when you are listening to
>the AM radio at home and someone turns on the microwave-oven, you here
>those odd sounds on the receiver.

No. Microwave ovens operate at 2400Mhz. AM broadcast operates at
1MHz. No way there's going to be any interference there. However,
the microwave oven may have a fan or CPU that runs the display, that
belches garbage at 1MHz. I just tried mine and there's a tiny bit of
buzz coming from the display section when I shove an AM radio right up
to the display. If that's what you're hearing, I would test it with a
different microwave oven. If only yours has the problem, I suggest
you consider a replacement.

>Also, if there is a solar prominence you can hear the resulting
>magnetic disruptions on an AM radio receiver. They sound scary and
>enjoyable at the same time.

You can also hear lightning storms. In the US, most of those are in
the south east of the country. Nothing like interference from 3000
miles away. Lightning detectors operate in the 25-50KHz region.
Incidentally, there are about 8 million lightning hits per day, which
is why the noise sounds almost continuous.

(chomp...)

Sorry, my time is up. Please insert $0.25 for the next 3 minutes.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com

Skype: JeffLiebermann AE6KS 831-336-2558

3408. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 00:55:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <u0sqm4-ncf.ln1@mail.specsol.com>
Source record: 38568
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Jeff Liebermann <jeffl@cruzio.com> wrote:
> Radium <glucegen1@gmail.com> hath wroth:

> >AFAIK, the main issue with AM is that it is much more vulnerable to
> >magnetic disruptions than FM.

> Wrong. Take a magnet, any magnet. Wave it around your AM or FM
> radio. Hear anything different? You won't. Therefore, forget about
> magnetic disturbances. The main issue with AM is susceptibility to
> pulsed noise, as found in motors, fans, auto engines, and computahs.
> FM doesn't have as bad a problem because the limiter in the receiver
> clips everything to the same level, thus reducing the effect.

> >That is why when you are listening to
> >the AM radio at home and someone turns on the microwave-oven, you here
> >those odd sounds on the receiver.

> No. Microwave ovens operate at 2400Mhz. AM broadcast operates at
> 1MHz. No way there's going to be any interference there. However,
> the microwave oven may have a fan or CPU that runs the display, that
> belches garbage at 1MHz. I just tried mine and there's a tiny bit of
> buzz coming from the display section when I shove an AM radio right up
> to the display. If that's what you're hearing, I would test it with a
> different microwave oven. If only yours has the problem, I suggest
> you consider a replacement.

> >Also, if there is a solar prominence you can hear the resulting
> >magnetic disruptions on an AM radio receiver. They sound scary and
> >enjoyable at the same time.

> You can also hear lightning storms. In the US, most of those are in
> the south east of the country. Nothing like interference from 3000
> miles away. Lightning detectors operate in the 25-50KHz region.
> Incidentally, there are about 8 million lightning hits per day, which
> is why the noise sounds almost continuous.

> (chomp...)

> Sorry, my time is up. Please insert $0.25 for the next 3 minutes.

Don't tell him about whistlers.

--
Jim Pennino

Remove .spam.sux to reply.

3409. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 01:17:08 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184548628.349231.147850@g12g2000prg.googlegroups.com>
Source record: 38569
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 5:38 pm, Jeff Liebermann <je...@cruzio.com> wrote:

> Radium <gluceg...@gmail.com> hath wroth:

> >AFAIK, the main issue with AM is that it is much more vulnerable to
> >magnetic disruptions than FM.

> Wrong. Take a magnet, any magnet. Wave it around your AM or FM
> radio. Hear anything different? You won't. Therefore, forget about
> magnetic disturbances.

That's because this magnet isn't vibrating fast enough. If it were to vibrate at the carrier frequency, you would most likely hear something.

> >Also, if there is a solar prominence you can hear the resulting
> >magnetic disruptions on an AM radio receiver. They sound scary and
> >enjoyable at the same time.

> You can also hear lightning storms. In the US, most of those are in
> the south east of the country. Nothing like interference from 3000
> miles away. Lightning detectors operate in the 25-50KHz region.
> Incidentally, there are about 8 million lightning hits per day, which
> is why the noise sounds almost continuous.

The AM audio cause by lightning is so boring. All you get are clicks and pops. Now a solar prominence, this results in some terrifying tones on the AM radio, they resemble the second set of tones played by the Emergency Alert System -- the higher-pitched tones. At times the cosmically-induced AM radio disruptions sound like the audio you get when playing the 1st level of the 1st-stage of Super Mario Bros 1 on channel 4, when the receiver is connected to channel 3. Instead of hearing the game's music, you here those frightening yet enjoyable tones. Sometime you can here these same sounds on a PA system or an airplane. When I was in 1st-grade, the schoolbus I went in had a CB radio which would often make these scary sounds. Such sounds would -- and still to a much smaller extent -- make my eyes water in fear, dissociation, enjoyment, and psychdelia.

When the sun emits a prominence, that prominence causes high-power waves of magnetic energy in the RF region to be emitted. These waves can be heard on the AM radio on Earth. This is the sound that affects CBs and other radio receivers using AM.

The main reason why anyone would prefer FM over AM is if they can't handle these terrifying sounds w/out going hysterical.

There are some who have had emotionally-strong experiences with these sounds -- perhaps a fire on an aircraft -- when these sounds are heard, flashbacks occur which can entirely consume an individual's psyche. Such an individual might not even know why he/she is getting psychologically-excited while listening to the sounds because the brain involuntarily suppresses emotionally-intense memories.

Here is what use to happen -- and still happens to some extent -- to me when I hear the sounds I describe:

1. Psychogenic shock and psychological dissociation due to the extreme fear/enjoyment caused by the sounds.
2. Flashbacks of my house in Stamford, Connecticut in which my parents and me moved out when I was around 2.5 years of age.
3. Enjoyable yet terrifying thoughts about outer space due to the knowledge/belief that the source of the sounds is in outer space
4. Fear of -- and obsession with -- magnetism due to knowledge/belief that the radio waves are magnetic
5. Decrease in heart rate
6. Slow deep breathing
7. Muscle relaxation
8. Increased tear production

Ain't it interesting when things that are so scary are also so enjoyable at the same time. Why else would they develop virtual reality systems? Or visit outer space?

We tend to enjoy what we fear. At times.

3410. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 01:31:26 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <139lijelgnk9ddb@corp.supernews.com>
Source record: 38570
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Jeff Liebermann wrote:

<snip>
> I have a fluorescent lamp calibrated noise source that's quite noisy
> well into the GHz range.

Sounds interesting.

Would you please post some details or pointers to references about
constructing and calibrating such an instrument?

Regards,

Michael

3411. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 01:36:21 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <5bee2$469acb8c$944e306e$16495@STARBAND.NET>
Source record: 38571
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1184531086.421930.215850@x35g2000prf.googlegroups.com...
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.

Maybe you should spend more time reading up on Radio systems, RF
propagation, Modulation techniques, and a whole range of other RF and
electronic related material, before you once again make a fool of yourself.

3412. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 01:47:15 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <139ljh478chiv72@corp.supernews.com>
Source record: 38572
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Jeff Liebermann wrote:

> Radium <glucegen1@gmail.com> hath wroth:
>
<snip>
>>That is why when you are listening to
>>the AM radio at home and someone turns on the microwave-oven, you here
>>those odd sounds on the receiver.
>
>
> No. Microwave ovens operate at 2400Mhz. AM broadcast operates at
> 1MHz. No way there's going to be any interference there.

I have an oven with a bit too much leakage; various components in some
of my broadcast and hf receivers make good antennas at 2.4GHz and as the
stirrer rotates in the oven, the signal level changes (60 Hz modulation
of course).

Regards,

Michael

3413. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 01:58:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <qnil9350s6o1mklr2q5hdbq6ueqocdhpav@4ax.com>
Source record: 38573
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>On Jul 15, 5:38 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
>> Radium <gluceg...@gmail.com> hath wroth:
>
>> >AFAIK, the main issue with AM is that it is much more vulnerable to
>> >magnetic disruptions than FM.
>
>> Wrong. Take a magnet, any magnet. Wave it around your AM or FM
>> radio. Hear anything different? You won't. Therefore, forget about
>> magnetic disturbances.
>
>That's because this magnet isn't vibrating fast enough. If it were to
>vibrate at the carrier frequency, you would most likely hear
>something.

Actually, what you'll hear is whatever is driving the magnet at the carrier frequency. For example, if you shove the magnet into a solenoid coil, and drive the coil at 1MHz, the magnet will move very slightly at 1MHz. However, the crud that you'll hear at 1MHz is coming from the solenoid coil, not the magnet. If the magnetic field cuts across some wire, that happens to be the antenna of your 1MHz receiver, then yes, you'll hear something, but only if it's moving at 1MHz.

>The AM audio cause by lightning is so boring.

If you've ever been hit by lightning, I don't think you'll find it very boring. With 8 million hits per day, chances are good that you'll get hit. Ummm... could you step outside for a moment?

>All you get are clicks
>and pops.

Oh no. It's much better than that. You get snap, crackle, pop, crash, hiss, zap, buzz, braaaaaap, and other noises, all to the accompanyment of loud thunder and the smell of ozone. It can also make the fur stand up on your back. If all you hear are clicks and pops, your receiver is comatose.

>When the sun emits a prominence, that prominence causes high-power
>waves of magnetic energy in the RF region to be emitted. These waves

>can be heard on the AM radio on Earth. This is the sound that affects
>CBs and other radio receivers using AM.

Ummm... coronal mass ejections and solar flares are particles, not
radio waves. The interference to radio communications is mostly from
these particles effects on the ionospheric layers. There is some RF
involved, but it's at microwave frequencies and requires a big radio
telescope to see.
<http://www.nrao.edu/pr/2001/radiocme/>

>The main reason why anyone would prefer FM over AM is if they can't
>handle these terrifying sounds w/out going hysterical.

Hmmm... All my communications radios except the aircraft navcom stuff
is FM. Maybe that explains why I'm spending time explaining to you
the basics. I'll try not to get too hysterical.

>There are some who have had emotionally-strong experiences with these
>sounds (...)

Not a problem. Everyone knows that too much RF rots the brain and
causes cancer of the vocabulary. Anyone involved in RF has to be
insane or will shortly be insane.

(chop...)

>We tend to enjoy what we fear. At times.

I don't fear anything, so that might explain why I'm not enjoying
myself.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3414. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 02:56:11 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pskl93thom8g5jv9q6bil5mtbmdvcm0nmk@4ax.com>
Source record: 38574
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

msg <msg@_cybertheque.org_> hath wroth:

>Jeff Liebermann wrote:
>
><snip>
>> I have a fluorescent lamp calibrated noise source that's quite noisy
>> well into the GHz range.
>
>Sounds interesting.
>
>Would you please post some details or pointers to references about
>constructing and calibrating such an instrument?

Groan. I built it myself from an article in some long lost magazine perhaps 30 years ago. It's just a 5watt fluorescent tube, with a few turns of wire wrapped around it going to a broadband CATV amplifier. One end of the wire coil is terminated at 50 ohms. The other end goes to the broadband amp. The lamp is powered by a heavily filtered isolation xformer. Calibration consisted of taking a scope photo of the output on a spectrum analyzer. Just about any gas discharge tube will work. Neon, fluorescent, blue or green gas discharge display, the new compact fluorescent tubes, plasma tube TV, etc.

Most older microwave noise sources use argon filled gas discharge tubes, but fluorescent will sorta work. The HP 346A (3-18GHz) and 349A (0.4 to 4GHz) noise sources are examples of such gas discharge tube test noise sources. The manual for the 342A NF test system, which includes the 349A noise source is at:
<ftp://bama.sbc.edu/downloads/hp/342a/342a_349a_service_6.pdf>
See section 5.

Some minor notes around Fig 9.24 on Page 207 at:
<http://books.google.com/books?id=sNLQmi3ymTYC&pg=PA206&lpg=PA206>

I could post some photos, but I really don't want to tear it apart to take pictures of the guts.

These daze, microwave noise sources use avalanche diodes although just about any diode with a sharp knee will work. Diodes are more stable, less fragile, and easier to produce than gas discharge tubes.
<http://www.ham-radio.com/sbms/sd/nfsource.htm>
<http://www.atmmicrowave.com/coax-noise.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3415. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 04:26:43 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-F78B82.00264316072007@nntp.aioe.org>
Source record: 38575

In article <BJSQYuFIFpmGFAS2@ifwtech.co.uk>,
Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:

> No, it's not that one either...
>
> It seems the magic words might be "nut driver":
> http://tinyurl.com/2bohkg

Ian-

The Hitachi half inch socket adapter looks like your nut driver in the one illustration I found. It adapts a "standard socket" to SDS+.

I'll take both pictures when I go back to the stores.

Fred
K4DII

3416. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 04:49:02 UTC
From: John Larkin <jjlarkin@highNOTlandTHIStechnologyPART.com>
Message-ID: <n4ul93hojhrkt1avlbl8pgp0imv7lna9dn@4ax.com>
Source record: 38576
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 16:30:13 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Not really. If you really want weak signal reception, I suggest you
>look into SSB (scientific set back) modulation.

what??!! ^^^^^^^^^^^^^^^^^^

John

3417. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 05:05:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <2karm4-dtp.ln1@mail.specsol.com>
Source record: 38577
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna John Larkin <jjlarkin@highnotlandthistechnologypart.com>
wrote:
> On Sun, 15 Jul 2007 16:30:13 -0700, Jeff Liebermann <jeffl@cruzio.com>
> wrote:

> >Not really. If you really want weak signal reception, I suggest you
> >look into SSB (scientific set back) modulation.

> what??!! ^^^^^^^^^^^^^^^^^^

Too subtle for you?

It's called humor.

--
Jim Pennino

Remove .spam.sux to reply.

3418. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 05:39:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <8v0m935n7hn45p4lun8r7on1i4njouvqh6@4ax.com>
Source record: 38578
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Larkin <jjlarkin@highNOTlandTHIStechnologyPART.com> hath wroth:

>On Sun, 15 Jul 2007 16:30:13 -0700, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>>Not really. If you really want weak signal reception, I suggest you
>>look into SSB (scientific set back) modulation.

>what??!! ^^^^^^^^^^^^^^^^^^^

Sigh. Nobody here seems to have a sense of humor.
SSB = Single Side Band
Happy now? You sure take the fun out of acronym mutilation.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3419. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 07:09:54 UTC
From: Bob Cain <arcane@arcanemethods.com>
Message-ID: <0pCdneifgplQhAbbnZ2dnUVZ_qDinZ2d@giganews.com>
Source record: 38579
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

Roy Lewallen wrote:
> This looks like a good time to point out that equivalent-time and random
> sampling oscilloscopes display waveforms having bandwidths in the tens
> of GHz which were captured by sampling at rates from a hundred kHz to a
> few MHz, and have done so for decades.

For random sampling of periodic signals the resolution is about the aperture,
not the rate.

Bob
--

"Things should be described as simply as possible, but no simpler."

A. Einstein

3420. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 07:28:23 UTC
From: Bill Otten <harpman54@tampabay.rr.com>
Message-ID: <469b1e3e$0$32584$4c368faf@roadrunner.com>
Source record: 38580

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.14.23.16.58.136865@from.qrz.com...
>
> How about a 10-foot length of copper water pipe, connected to a garden
> hose with an adapter fitting (as simple as a short length of another
> garden hose, clamped to the pipe with radiator hose clamps). Run water
> down the pipe and stick the pipe in the ground, pulling it up and pushing
> it down so that the water helps drill the hole in a manner just like you
> described. Keep it up until it has gone in as far as it will go, then (if
> it hasn't gone in the whole 10 feet) cut it off and solder a copper cap on
> the end.
>
> You end up with a hollow pipe in the ground instead of a solid steel rod,
> but everything I read about lightning strikes says that the vast majority
> of the current flows in skin effect anyway.

Copper clad steel rods are made precisely because the copper cladding on the outside skin is what conducts the current anyhow. So it makes no difference whether you utilize copper pipe or copper clad steek rods. To drive copper pipe down I use a length of about 1 foot of aluminum tubing connected to a garden hose (tubing fits in garden hose and is clamped tightly, Aluminum tubing slides into copper pipe. The rubber hose goes up against the copper tubing rather tightly to make a quasi seal, it'll be enough although some little bit of spray from backpressure will come out. Turn on the faucet and the copper pipe will very quickly begin to drive itself into the ground. Enough slurried wet soil mix will compact around the pipe to make a good earth ground contact but I usually let the hose saturate the ground area around it for about a half hour after so the voids fill in.

Bill KC9CS
http://home1.gte.net/res0958z/

3421. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 09:59:49 UTC
From: nm5k@wt.net
Message-ID: <1184579989.599901.83850@m37g2000prh.googlegroups.com>
Source record: 38581

On Jul 15, 1:47 pm, Owen Duffy <n...@no.where> wrote:

>
> I think that is flawed thinking.

Dunno.. Not if the ground connection itself is good enough..
>
> A lighning down conductor needs to carry something like 20kA for 100ms, so
> it needs to be substantial enough that it doesn't melt and remains in place
> to protect against the next strike.

A #10 wire can handle that job if the ground connection is up to par.
Course, most real down conductor will be flat copper strap.
The rod or tube in the ground is not the down conductor per say,
although I guess you could consider it the end of it..
As far as DC contact with earth, it's possible the tubing could be
slightly better, as it's got surface both on the outside, and the
inside..
But I imagine RF flowing along tubing would mostly flow on the
outside,
rather than inside. But maybe a bit of both.. Not sure..
Copper tubing itself can easily handle any lightning strike. Way
overkill actually. If you had a well grounded copper tube lightning
rod, and it was struck, all you would see on the tip would be a tiny
arc spot, which might even be unnoticable unless you were looking
for it. Even a lowly #10 wire will barely raise temp when struck as
long as the connection to ground is real good. Of course, if it isn't,
it may well vaporize into blobs of metal..
MK

3422. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 12:04:47 UTC
From: ricknj10@hotmail.com
Message-ID: <469b5e0d.2004078@news.optonline.net>
Source record: 38432

On Sun, 15 Jul 2007 18:43:14 GMT, "Amerigo Vespucci" <eat@italian.res> wrote:

>I tried pruning the antenna a couple of inches and fiddled with the feeder
>line and manged to get mr SWR's down below two but with a tuner I'm still
>not happy. My rig is a Kenwood TS 530S so the finals are a little more
>forgiving

Amerigo,
Are you expecting that if you get the SWR lower your finals will run cooler?
Because the reflected power into them will be less?

(Hey Walt !! We need you)

Rick K2XT

3423. Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 13:10:51 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1184591451.546176.139440@22g2000hsm.googlegroups.com>
Source record: 38433
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

Hello,

Recently we purchased a cellular yagi dual band antenna to help our signal strength on a Sierra 860 AirCard with Cingular/AT&T, in hopes of improving the speed of the card at our home. We are having horrible results and cannot get it to work correctly. The antenna is a CCM brand 24 dB dual band yagi (824-896Mhz & 1870-1950Mhz); it was purchased from here: (http://www.easystreetelectronics.com/index.asp?PageAction=VIEWPROD&ProdID=71). It is attached to a 30 ft RG58U coax cable that runs back to a TNC-to-FME adapter, then to the Sierra card. We tried the antenna at a test location where we know where the tower is at, about 2 miles away, and can get 90% signal strength with the stock antenna there. When we attached the yagi and moved it in small increments to each side until we honed in on the exact spot, the highest signal strength we can get is about 50-60%. I was assuming we should be able to get 100% signal strength easily since the stock antenna already gets 90%.

We tried the yagi at another location where we only get about 30% signal strength with the stock antenna. We do not know where the tower is at so we started in one spot and went in 5 degree increments in a complete circle, noting the signal strength at each stop. The highest we were able to get is about 20%.

We must be missing something here, as I don't see why the yagi has less signal strength than the stock antenna. I have not tested the 30 ft cable or ends yet, but it was factory made and appears to be fine (no kinks, etc). The yagi is mounted on a PVC pole, and the elements of the antenna are vertically oriented, and it the beam is parallel with the ground.

Can anybody help us or provide some tips??? Are we using the right antenna? Right now we are completely stumped, and would really like to get this figured out.

Thank you very much for all feedback and help on this matter...

--
Chris

3424. Re: Butternut ,9 bands antenna ,Model HF9V

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 13:35:12 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns996F618CCE3C6jxp16psuedu@128.118.141.40>
Source record: 38434

Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote in
news:75ydnXRSr9tKyQjbRVnyvQA@pipex.net:
> There are 2 visual anomalies
>
>> I know it is a coil of thick enameled wire with a diameter of approx
> 25 mm (1 inch) but do not know its inductance .
> So in order to make one myself I would appreciate receiving info re
> the dimensions incl number of turns ,alternatively the required
> inductance.
>
> 2)The antenna kit is normally supplied with a specific length of 75
> Ohms coaxial cable directly connected across the inductor (see above)
>
> This length of 75 ohms coax is part of the matching system and is to
> be connected to any length of 50 Ohms coax running to the transceiver.
> In the Pictorial ,page 14 of the manual ,this length of 75 Ohms coax
> is identified by 'R'.
>
>
> TIA for any relevant info
>
>
> Frank GM0CSZ /KN6WH
>
> (supporting member Radio Invalid and Blind Club, RAIBC, based in the
> UK)
>
>

Hi Frank:

I can't help with the coil, but the coax is 1/4 wave length at 20m.

73

John W3JXP

3425. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 14:47:59 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <sa0n93lqfamomvst7f6ft4l8ova6so9t46@4ax.com>
Source record: 38435

If you already have the copper pipe and you can get it in the ground I doubt you will ever notice the difference.

I live on red clay in the Piedmont region of North Carolina. There are times when I could push three feet of #3 rebar in the ground with one hand. At this time of year I doubt I could drive it more than about 6 inches!

Two years ago I had a pro install lightning rods. They added two galvanized 1/2 inch ground rods at diagonal corners of the house. They then tied one of these to the power ground. They also tied one corner to my tower with a massive clamp. A whole house surge protector was installed at the power panel. I have since added a vertical antenna (28 feet) with 35 radials 70 feet long.

I have not had a lightning strike since they did the install. I think the charge bleeds off before it builds up to a serious level.

Before the install I was averaging about $500 a year in VCRs, TV sets, Stereos, etc. The best advice I can offer is to use conventional materials available in your area, meet code and keep your insurance company satisfied.

BTW, I still unplug antennas and rotors when not in use!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3426. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 14:59:34 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <5k1n93tdd19ebmkkq7s9uiohkf26kc1qml@4ax.com>
Source record: 38436

On Fri, 13 Jul 2007 21:16:32 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>
>Thanks to all for all the information you have provided, including the
>latest thread on "ground rods at base of tower". The explanations
>received were very well thought out and comprehensive, and make all the
>sense in the world when one stops to think for a minute... :-)
>
>Now the fun begins.
>
>I went down to the electrical supply house and bought 3 8-ft ground rods
>and started driving one in at about a 45 degree angle under the window of
>the shack.
>
>As expected, I am having one hell of a time getting it into the ground.
>
I have used a big drill bit brazed to a steel rod to drill a pilot
hole. Really hard on a 3/8 drill motor, not easy on the operator.

Some soils are easy when wet, some are easier when dry.

My preferred driver is a weighted piece of pipe with one end closed
and welded on handles. You might be able to borrow-rent one where
chain link fencing is sold. I built mine so I can use it with steel
fence posts as well.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3427. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 15:10:12 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <oTLmi.122947$NV3.76680@pd7urf2no>
Source record: 38437

I have used hollow copper pipe for years.

I have one 10 foot copper clad steel ground rod which I used to drive the pilot hole into the ground, then hauled it out using a car jack. I then put a copper pipe in the hole. The copper pipe has 1/4 inch holes drilled along its length for the bottom three feet.

I used 3 pipes and the copper clad rod as a system of four tied together with #2 copper which is soldered to all four pipes.

At first the copper pipes are loosely set into the hole left by the steel rod, but after a while the ground settles and they are firmly implanted.

Every year I take a mixture of water and epsom salts and pour it down the hollow pipes. I cannot see what is happening under the ground, but I consider my ground system to be as good as can be hoped for.

I have run a couple marconi's without radials using the system and found their performance 'pleasing'. One was an 80m folded marconi -- about 50 ft of it vertical, and the rest folded back at about 45 degrees. It was a great performer and a chum of mine to whom I gave the design has worked all continents and most countries on it. The ground, of course, is the secret.

The system has been in place for 24 years. four years ago I jacked one of the pipes out just to see about all these rumors of corrosion but it was fully intact. I steel-wooled it, then put it back in and resoldered it to the system.

The pipe was cheaper than the ground rod although that was quite a while back. I say go for it!

Irv VE6BP

3428. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 15:31:08 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <csum93tm5336hv1uie42oqbqs9dd9f42cq@4ax.com>
Source record: 38438
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 14:57:17 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 15, 3:12 pm, John Fields <jfie...@austininstruments.com> wrote:
>> On Sun, 15 Jul 2007 04:14:33 -0700, Keith Dysart
>> >It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
>> >the resulting signal. One can multiply 1e6 by 1e5 with a DC
>> >offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
>> >signal is identical.
>>
>> ---
>> No, it isn't, since in the additive mode any modulation impressed on
>> the carrier (1.0e6) will not affect the .9e6 and 1.1e6 in any way
>> since they're unrelated.
>> ---
>
>I thought the experiment being discussed was one where the
>modulation was 1e5, the carrier 1e6 and the resulting
>spectrum .9e6, 1e6 and 1.1e6.

That was my understanding, and is why I was surprised when you made
the claim, above:

"It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
the resulting signal. One can multiply 1e6 by 1e5 with a DC
offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
signal is identical."

which I interpret to mean that three unrelated signals occupying
those spectral positions were identical to three signals occupying
the same spectral locations, but which were created by heterodyning.

Are you now saying that wasn't your claim?

>Read my comments in that context, or just ignore them if
>that context is not of interst.

What I'd prefer to do is point out that if your comments were based
on the concept that the signals obtained by mixing are identical to
those obtained by adding, then the concept is flawed.

>> >(You can improve the fidelity of the resulting summed version
>> >by eliminating the op-amp. Just use three resistors. The op-amp
>> >messes up the signal quite a bit.)
>>
>> ---
>> Actually the resistors "mess up the signal" more than the opamp does
>> since the signals aren't really adding in the resistors.
>
>I did not write clearly enough. The three resistors I had
>in mind were: one to each voltage source and one to ground.
>
>To get there from your latest schematic, discard the op-amp
>and tie the right end of R3 to ground.

That really doesn't change anything, since no real addition will be
occurring. Consider:

```
f1>---[1000R]--+-->E2
|
f2>---[1000R]--+
|
f3>---[1000R]--+
|
[1000R]
|
GND>-----------+
```

Assume that f1, f2, and f3 are 2VPP signals and that we have sampled
the signal at E2 at the instant when they're all at their positive
peak.

Since the resistors are essentially in parallel, the circuit can be
simplified to:

```
E1
|
[333R] R1
|
+---->E2
|
[1000R] R2
|
GND
```

a simple voltage divider, and E2 can be found via:

$$E2 = \frac{E1 * R2}{R1 + R2} = \frac{1V * 1000R}{333R + 1000R} = 0.75V$$

Note that 0.75V is not equal to 1V + 1V + 1V. ;)

>To get an AM signal that can be decoded with an envelope
>detector, V5 needs to have an amplitude of at least 2 volts.

Ever heard of galena? Or selenium? Or a precision rectifier?

--
JF

3429. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 15:52:39 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <WwMmi.11631$bz7.8484@newssvr22.news.prodigy.net>
Source record: 38439
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> If you've ever been hit by lightning, I don't think you'll find it
> very boring. With 8 million hits per day, chances are good that
> you'll get hit. Ummm... could you step outside for a moment?

Reminds me of an afternoon when I was 600 ft up a 1,000 ft TV tower climbing on the inside. The tower took a hit and the lightning bolt followed a aircraft cable hoist line down the inside of the tower. Right between my legs.

3430. Re: Butternut ,9 bands antenna ,Model HF9V

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 15:59:30 UTC
From: <>
Message-ID: <part1of1.1.IDIMIm2MM6GX6Q@ue.ph>
Source record: 38440

Go to the Butternut web site and download the instructions for the
"Counterpoise" which is the radial system for above ground installation. With
that system the base coil is not used and the length of 75 Ohm coax used is
much longer and should be coiled near the feed point, then connected to any
length 50 Ohm coax lead in. I had trouble with the counterpoise system and
finally wound up using several above ground random length (20 feet or longer)
sloping radials. Get the "Counterpoise" instructions off the web!

73

Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote:
>A blind radio amateur living in my area got the above antenna installed
>in his garden complete with an off the ground radial system.
>I now try to set-up the system with an MJ 259B analyser ,but I am
>getting nowhere ,because of the following :
>
>There are 2 visual anomalies
>
>1) The inductor between antenna and ground post e.g. across the
>insulator (labelled 'Q' in the Pictorial ,page 14 of manual) is missing.
>
>I know it is a coil of thick enameled wire with a diameter of approx 25
>mm (1 inch) but do not know its inductance .
>So in order to make one myself I would appreciate receiving info re the
>dimensions incl number of turns ,alternatively the required inductance.
>
>2)The antenna kit is normally supplied with a specific length of 75 Ohms
>coaxial cable directly connected across the inductor (see above)
>
>This length of 75 ohms coax is part of the matching system and is to be
>connected to any length of 50 Ohms coax running to the transceiver.
>In the Pictorial ,page 14 of the manual ,this length of 75 Ohms coax is
>identified by 'R'.
>
>However the actual installation shows 1 length of RG-11 (75 Oms) coax
>all the way to the transceiver.
>My obvious question : What is the required length of 75 Ohms coax ?
>
>
>TIA for any relevant info
>
>
>Frank GM0CSZ /KN6WH
>
>(supporting member Radio Invalid and Blind Club, RAIBC, based in the UK)

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3431. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:07:46 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <4LMmi.11632$bz7.7882@newssvr22.news.prodigy.net>
Source record: 38441
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> If you're thinking of impulse noise, you're mostly correct. However,
> there are plenty of other sources of AM noise available. For example,
> the typical VHF aircraft radio requires substantial filtering of the
> magneto to avoid hash. Same with any onboard motor. If you've ever
> tried to install a TV (VSB is a form of AM) in a vehicle, you'll also
> find that ignition and motor noise can be a problem.

Dang it...my memory is slipping. What did Motorola call their noise filtering circuit on their old low band Motracs. Extenders[tm]? As I recall it was a simple noise blanker.

3432. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:10:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <uLMmi.19389$Rw1.6676@newssvr25.news.prodigy.net>
Source record: 38442

Amerigo Vespucci wrote:
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:OZvmi.22037$RX.9004@newssvr11.news.prodigy.net...
>> Amerigo Vespucci wrote:
>>> The way I understood it was the best way to feed it was with ladderline
>>> or something equal to it.
>> Did anyone tell you that the matching section needs to be
>> about 0.2 wavelength?
>
> Explain?

To make an EDZ system resonant, i.e. a resistive impedance
looking into the feedline, the ladder-line needs to be
about 0.2 wavelengths long (plus N*1/2 wavelengths).
--
73, Cecil http://www.w5dxp.com

3433. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:15:10 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <0SMmi.11634$bz7.9@newssvr22.news.prodigy.net>
Source record: 38443
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
>> how would u like to change the cell phone industry?
>
> Analog cells phones should stop using FM and should start using AM
> with SHF frequencies - at least 3 GHz and at most 30 GHz.

I was not aware there was a compelling reason for analog cell phones to stop using FM. Sounds like a solution looking for a problem.

3434. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:39:40 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <gbNmi.4641$BI5.3525@trnddc07>
Source record: 38444
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

"szilagyic" <chris@groupinfo.com> wrote in message
news:1184591451.546176.139440@22g2000hsm.googlegroups.com...
> Hello,
>
> Recently we purchased a cellular yagi dual band antenna to help our
> signal strength on a Sierra 860 AirCard with Cingular/AT&T, in hopes
> of improving the speed of the card at our home. We are having
> horrible results and cannot get it to work correctly. The antenna is
> a CCM brand 24 dB dual band yagi (824-896Mhz & 1870-1950Mhz); it was
> purchased from here: (
> http://www.easystreetelectronics.com/index.asp?PageAction=VIEWPROD&ProdID=71
>). It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
> to-FME adapter, then to the Sierra card. We tried the antenna at a
> test location where we know where the tower is at, about 2 miles away,
> and can get 90% signal strength with the stock antenna there. When we
> attached the yagi and moved it in small increments to each side until
> we honed in on the exact spot, the highest signal strength we can get
> is about 50-60%. I was assuming we should be able to get 100% signal
> strength easily since the stock antenna already gets 90%.
>
> We tried the yagi at another location where we only get about 30%
> signal strength with the stock antenna. We do not know where the
> tower is at so we started in one spot and went in 5 degree increments
> in a complete circle, noting the signal strength at each stop. The
> highest we were able to get is about 20%.
>
> We must be missing something here, as I don't see why the yagi has
> less signal strength than the stock antenna. I have not tested the 30
> ft cable or ends yet, but it was factory made and appears to be fine
> (no kinks, etc). The yagi is mounted on a PVC pole, and the elements
> of the antenna are vertically oriented, and it the beam is parallel
> with the ground.
>
> Can anybody help us or provide some tips??? Are we using the right
> antenna? Right now we are completely stumped, and would really like
> to get this figured out.
>
> Thank you very much for all feedback and help on this matter...
>
> --
> Chris

Hi Chris

The performance of your "24 dB Yagi" doesnt surprise me. I have doubts about the accuracy of the antenna's specs. It wouldnt surprise me to learn that the CCM antenna had only 10 dB gain over the "stock" antenna. And coax line loss can vary from manufacturer to manufacturer. Some brands of RG 58 could have more than 13 dB in the high frequency band.
It could be very difficult to build an antenna with 24 dB Minimum gain thruout the frequency range 824 to 896 MHz and 1870 to 1950 MHz with one feed point. A 23 dB "gain" antenna will have a very narrow radiation pattern beam width. That would require a fairly large antenna at the low frequency end of your band.

.

3435. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:51:48 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <EmNmi.38371$YL5.31382@newssvr29.news.prodigy.net>
Source record: 38445
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> FM has too much hiss. FM signals are lost very easily. AM tends to
> retain reception of a signals even when this signal is extremely weak.
> In FM, once you go below a certain wattage, you completely lose the
> signal, and the annoying hiss begins. With AM it is much easier to
> receive the low-power signal.
>
> AM maybe more vulnerable to electronic disturbances but so what? The
> magnetic RF interferences that are heard on the AM radio are
> entertaining compared to the deafening hiss on the FM radio.

I really do think you need to revisit some VERY basic principles of
communications theory.

It sounds like you might have a causal peripheral understanding of
communications theory and stumbled upon some obscure radio propagation
concept and want to apply that obscure concept to to change the whole way
we think of communications. Ponder for a moment why said obscure concept
remained obscure.

I could go on and on and pick each of your comments apart...but it would be
a waste of time.

3436. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:56:49 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f7g80umod1@news.service.uci.edu>
Source record: 38447
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:

> That's a misunderstanding.
> A vibrating element here (such as a cubic micrometre
> of matter) experiences different changing forces. Yet
> the element cannot follow all of them at the same time.
> As a matter of fact the resulting force (the resultant) is
> fully determining the change of the velocity (vector) of
> the element.

> The resulting force on our element is changing at the
> frequency of 222 Hz, so the matter is vibrating at the
> one and only 222 Hz.

Under the stated conditions there is no sine wave oscillating at 222 Hz. The wave has a complex shape and contains spectral components at two distinct frequencies (neither of which is 222Hz).

>>It might be correct to say that matter is vibrating at an
>>average, or effective frequency of 222 Hz.
>
>
> No, it is correct. A particle cannot follow two different
> harmonic oscillations (220 Hz and 224 Hz) at the same
> time.

The particle also does not average the two frequencies. The waveform which results from the sum of two pure sine waves is not a pure sine wave, and therefore cannot be accurately described at any single frequency.

>>Obviously. It's a very simple matter to verify this by experiment.
>
>
> Indeed, it is. But watch out for misinterpretations of
> the measuring results! For example, if a spectrum
> analyzer, being fed with the 222 Hz signal, shows
> that the signal can be composed from a 220 Hz and
> a 224 Hz signal, then that won't mean the matter is
> actually vibrating at those frequencies.

:-) Matter would move in the same way the sound pressure wave does, the amplitude of which is easily plotted versus time using Mathematica, Mathcad, Sigma Plot, and even Excel. I think you should

still give that a try.

jk

3437. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 16:58:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5i6n93p2j6bn7omp5fc1qpelpnlqfa9grh@4ax.com>
Source record: 38446
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>Jeff Liebermann wrote:
>> If you're thinking of impulse noise, you're mostly correct. However,
>> there are plenty of other sources of AM noise available. For example,
>> the typical VHF aircraft radio requires substantial filtering of the
>> magneto to avoid hash. Same with any onboard motor. If you've ever
>> tried to install a TV (VSB is a form of AM) in a vehicle, you'll also
>> find that ignition and motor noise can be a problem.

>Dang it...my memory is slipping. What did Motorola call their noise
>filtering circuit on their old low band Motracs. Extenders[tm]? As I recall
>it was a simple noise blanker.

"Extender". It was a 2nd almost identical receiver, tuned to a nearby
empty frequency. If there was any impulse (ignition) noise, both
receivers would detect the pulses. The 2nd (Extender) receiver would
block the IF signal in the main receiver for the duration of the
pulse. This resulted in a "hole" in the receive IF and audio, but it
was far less noticeable than if the pulse were allowed to be heard.
The tricky part of the design was getting the delays nearly identical
in the two receivers. It also made the 80D/140D/Motrac/Motran radios
rather huge and heavy. Extenders were considered a "standard option"
on most Low Band (30-50Mhz) radios as this is where the ignition noise
is the worst.

The more generic term "noise blanker" applies to this scheme, as well
as a mess of others that detect in a single receiver or blank in the
IF or audio. GE decided that "extender" was a good name for their
mobile repeater, and called it a "mobile extender" or more commonly
just "extender".
<http://www.mbay.net/~wb6nvh/chpradio.htm>
Egads. I'm cleaning house and found a large box of 40 year old
Motrash control heads and cables. Want some junk?

There was also a scheme to eliminate ignition noise that involved
running a wire to the points on the distributor. The assumption was
that there was a substantial delay between when the points opened, and
when the spark jumped in the spark plug. This allowed the receiver to
be blanked before the noise pulse arrived, which really improved the
noise blanker performance. I was working on the design when marketing
decided that it should tilt at other windmills. Only a few prototypes

were built, were never patented or produced, and worked really quite well. Cheaper too. That was all just fine because cars were begining to use electronic ignition systems, which didn't have easily accessible ignition points.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3438. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:15:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <v2lsm4-8dk.ln1@mail.specsol.com>
Source record: 38448
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna DTC <no_spam@move_along_folks.foob> wrote:
> Radium wrote:
> > FM has too much hiss. FM signals are lost very easily. AM tends to
> > retain reception of a signals even when this signal is extremely weak.
> > In FM, once you go below a certain wattage, you completely lose the
> > signal, and the annoying hiss begins. With AM it is much easier to
> > receive the low-power signal.
> >
> > AM maybe more vulnerable to electronic disturbances but so what? The
> > magnetic RF interferences that are heard on the AM radio are
> > entertaining compared to the deafening hiss on the FM radio.

> I really do think you need to revisit some VERY basic principles of
> communications theory.

You're assuming he ever did anything more than assemble a list of
technical buzz words to string together at random.

Malaprop Man from the Frank and Ernest comic strip makes more sense.

--
Jim Pennino

Remove .spam.sux to reply.

3439. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:31:27 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns996F6B1AE4375doldridgsprintca@64.59.135.159>
Source record: 38449

nm5k@wt.net wrote in
news:1184511648.936609.140970@g4g2000hsf.googlegroups.com:

> On Jul 15, 9:41 am, "Amerigo Vespucci" <e...@italian.res> wrote:
>> I constructed an extended double zepp for
>> 10 meters out of #12 solid house wire .
>> I didn't have any ladder line laying around so I decided to make my
>> own but all I had was some #10 stranded wire. I made the spacers 1"
>> apart and and put about one per foot and the total feedling is
>> approximately 25 ft. and it's going through an MFJ 941E Versatuner .
>> I can't get my SWR's below 2 . I'm sure there are a lot of varibles
>> here but I was hoping someone could point me in the right
>> direction.My first guess is that I should have used the #12 for the
>> feedline and the #10 for the antenna .
>> Thanks in advance ,
>> Will
>
> Seems kind of strange the tuner would not match it..
> The spacing probably has more effect on the feedline Z
> than the wire diameter. Shouldn't really be that critical.
> The wider the spacing, the higher the Z..
> I guess you could try a different length of line..
> Or scrounge up some other ladder line, maybe with a
> different length. Even 300 TV line would be ok if it's
> not wet.
> Myself, I used to feed them with coax, and coax
> series transformers. I imagine you could also feed
> with coax and use twin matching coils at the feedpoint
> for both sides of the element. Same as matching a
> 5/8 GP, you are just doing the same with a complete
> antenna. I've never tried it, but it should work.

My very first antenna project was a straight 20m zepp, end fed with
homebrew 600-ohm line 1/4 wave long just like in the books. I never ever
measured the SWR or even transmitted on it, but it was one GREAT
receiving antenna for 20m (that was in my SWL days).

--
Dave Oldridge+
ICQ 1800667

3440. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:31:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <n39n93tcm0eal115hk3ttnhnjib6dpf7cn@4ax.com>
Source record: 38450
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>It sounds like you might have a causal peripheral understanding of
>communications theory and stumbled upon some obscure radio propagation
>concept and want to apply that obscure concept to to change the whole way
>we think of communications. Ponder for a moment why said obscure concept
>remained obscure.
>
>I could go on and on and pick each of your comments apart...but it would be
>a waste of time.

Quite the contrary. Taking apart rants and speculation from the
lunatic fringe is great fun. After one has mastered science and
technology, it offers an additional challenge.

Haven't you ever listened to the old Art Bell show? He collected
callers claiming alien visitations, abductions, flying saucers,
conspiracies, ghosts, amazing technology, and all kinds of other
observed phenomenon best attributable to a general lack of sanity and
education. He would treat them quite seriously, drawing out
additional details that seem to fascinate his large and diverse
audience. My guess(tm) is that reality and accurate science are
fundamentally boring, and that speculation, lunacy and fantasy are
suitable diversions. Some of his callers held prestigious academic or
government positions, and apparently wanted to how far off the deep
end they could go. I recognized one or two. To properly present a
pseudoscientific hoax requires a good understanding of the science and
technology, and not just a word salad of buzzwords.

I must confess that I enjoy doing the same thing, as witnessed by this
ummm.... discussion. Lacking a suitable solution to the general lack
of technical sanity problem, I find it far more interesting to become
part of the problem. For example, my rants on being a werewolf:
<http://www.LearnByDestroying.com/nooze/werewolf.txt>

<http://en.wikipedia.org/wiki/Art_Bell>
In 1998, Bell was named as recipient of the less-than-prestigious
Snuffed Candle Award. The Council for Media Integrity cited Bell
"for encouraging credulity, presenting pseudoscience as genuine,
and contributing to the public's lack of understanding of the
methods of scientific inquiry."

That's why it's called "the magic of radio". When the magic wears
off, what's left is boring and mundane science and physics.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3441. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:32:40 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <G_Nmi.10720$rL1.3091@newssvr19.news.prodigy.net>
Source record: 38451
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> Egads. I'm cleaning house and found a large box of 40 year old
> Motrash control heads and cables. Want some junk?

Slacker...I tossed out all my old Moto stuff years ago. Last time I played
with the Motorola line was around the Micors came out. i used a few of them
for tower top UHF repeaters

3442. Re: noise antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:36:18 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns996F6BED97064doldridgsprintca@64.59.135.159>
Source record: 38452

ml <m@di.net> wrote in news:m-EC7D79.07175708072007@news.verizon.net:

> hi
>
> about 6months ago my normally low noise level has been plagued with
> some noise
>
> it's on and off about 30sec to 1 min on and maybe 1min off but
then
> it seems to take a break and might go quite for say 5 min
>
> seems to be on all the bands 160-10 and almost as strong equally
>
> it sounds just like the noise level(norm background static sorta)
> but comes in s7 solid so all but the most strongest stations get
> wipped out
>
>
> i turned off all the power in my apt via the main breaker and powered
> up the rig w/my battery so w/only the rig w/power i still got it same
>
> noise definately comes in stronger w/my roof dipole than say a small
> vertical whip in the apt (i am on 4th fl of 13)
>
> i barly hear the noise w/my indoor whip however i also barley hear any
> singnals inside given all the concreate and steel mesh
>
> so the question:
>
> Obviously i need to hunt around for the noise whats the best way to
> track this down unf i don't have a spectrum analyzer
>
> i do have a ft817 but what is the best antenna but make for this? i
> can't walk around the block w/anything to big
>
> but am willing to get anything i need as long as it's not too$$
>
> any tips appreciated because i can't realy use the lowbands anymore
> really annoying

My noise sniffer is my T90a. I can tune it on AM to any part of the HF spectrum and if it's close enough to the source of the problem, I can spot it. And taking the rubber duck down to the 2m/70cm size will attenuate it even more so I can get a closer fix. Taking the antenna off altogether gives real close-up detection. And it's not all that

obtrusive, being a handheld.

But good luck getting anyone to do anything about the noise once you find it. What does work for me (I'm in an urban apartment setting, too, with commercial properties right outside my window) is my MFJ-1026. It won't kill all noises but it really does a good job on those that exhibit some directivity. You can use the supplied telescopic whip with it or put an external noise antenna on it.

--
Dave Oldridge+
ICQ 1800667

3443. Re: Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 17:41:58 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7gal6kvd2@nntp1.jpl.nasa.gov>
Source record: 38453

nuttin wrote:
> I am going to install one of these units at my location.
>
> The printed material that came with the unit says nothing should be between
> the control box and the relay box.
In particular, anything that is a DC short to ground, or a DC open in
the transmission line (such as some transient suppressors)..

It sends AC (actually either or both halves of rectified AC) up the wire
to control the relays.

>
> Well, does this mean the control box will handle the 1200-1500 watts from my
> linear? that would be the last piece of equipment in the line.
>
> Need some input please!
>

3444. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:04:03 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7gbuk$lu4$1@nntp1.jpl.nasa.gov>
Source record: 38461

Bob John wrote:
> Is Tarheel pricing their products out of the market? I had consideration
> purchasing a little Tarheel II during our local Hamfest last weekend in
> Aurora, IL. The dealer informed me the price had once again gone up and they
> are now $289.99.

Seems a reasonable price for a retail thing. Someone has to buy the
parts, someone has to pay someone to assemble it, someone has to store
it in a warehouse, someone has to sit in a store to sell it, etc.
All those steps add up.

When I worked in product design, we used to figure that retail selling
price (w/o discounts) would be 5-10 times the raw parts (Bill of
Materials, BOM) cost.

So, based on that, the parts cost for that antenna would be somewhere
between $25-50. Considering that most manufacturers avoid buying their
parts surplus (unless it's for a one-off), the motor alone is going
account for a significant fraction of that (unless they buy motors by
the pallet load, and even then, that might make them 30% cheaper, at best).

Then they have to buy finger stock, coils or wire to wind them, tubing
of various sizes, etc. Then, have pieces machined.

Add to this amount the sales tax,

Sales tax is something you can take up with your elected officials.
They have to get revenue somewhere to pave streets, run schools, pay
firemen, operate libraries, etc. Sales tax is a easy way for them to
collect it.

auto-controller and mount
> and you are way over $600.00. This is more then I paid for my FT-100D, which
> I purchased new.

At this point in time, the Hustler antenna is working fine
> and I don't have to worry about theft.
>
> Bob, AA8X
>
>

3445. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:06:57 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <5tOmi.38376$YL5.37166@newssvr29.news.prodigy.net>
Source record: 38454
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
[radically snipped]
> Haven't you ever listened to the old Art Bell show?
> Some of his callers held prestigious academic or
> government positions, and apparently wanted to how far off the deep
> end they could go.

I could be wrong as I'm going back to a late night show over five years ago and I seem to recall it was one of his.

He was talking about GPS and played back a snippet of a conversation of above mentioned prestigious academic person that went ballistic trying to validate his credentials. But I digress...

I so wanted to point out that Art's (if indeed it was his show) was a disingenuous presentation of GPS as it led the less informed to believe there was a very dark and pervasive side to GPS. Continuing the only good aspects of GPS were promoted by manufactures and dealers of GPS systems.

Good or bad...the bottom line was he attracted an audience and an audience translates to advertising revenues.

3446. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:08:32 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7gc70$lu4$2@nntp1.jpl.nasa.gov>
Source record: 38463

Owen Duffy wrote:
> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
> news:pan.2007.07.15.17.29.08.78220@from.qrz.com:
>
>
>>On Sun, 15 Jul 2007 17:23:13 +0000, Walter Maxwell wrote:
>>
>>
>>>This topic has aroused my curiosity. As a grounding device, why would a
>>>solid rod be better than a hollow pipe, except for the current carrying
>>>capability?
>>
>>Good afternoon, Walt.
>>
>>The thing is, the current carrying capability for transient events like
>>lightning strikes should be about the same for the same diameter pipe or
>>rod, since most of the current is carried in skin effect anyway.
>
>
> I think that is flawed thinking.
>
> A lighning down conductor needs to carry something like 20kA for 100ms, so
> it needs to be substantial enough that it doesn't melt and remains in place
> to protect against the next strike.
>
> Owen

The fusing/melting current for 1/2" copper pipe is probably well above
20kA, even for 100ms pulses. A more interesting potential failure mode
might be from the mechanical forces due to the magnetic field. (see,
e.g., quarter shrinking or can-crushing)

3447. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:15:52 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7gckpprk1@usenet01.boi.hp.com>
Source record: 38455
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

<jimp@specsol.spam.sux.com> wrote in message
news:v2lsm4-8dk.ln1@mail.specsol.com...
> You're assuming he ever did anything more than assemble a list of
> technical buzz words to string together at random.

In this same spirit, I have decided how I would like to change the
electric toaster industry.

I believe that henceforth, all electric toasters should be made from
polished unobtainium with "Q"-shaped dilithium heating elements,
as it is obvious that this results in more even toasting of the bread
and an undeniably higher-fidelity output. Further, the toasted bread
should be ejected by carefully-aligned cavorite lifters, timed by
observing both the thermal state of the bread (detected through
counts of left-hand circular polarized neutrino emissions) and the
state of a resublimated thiotimoline crystal being exposed to the
transverse-modulated IR spectrum.

Discuss!

Bob "The New Radium" M.

3448. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:19:22 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7gcrb$q33$1@usenet01.boi.hp.com>
Source record: 38456
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:n39n93tcm0eal115hk3ttnhnjib6dpf7cn@4ax.com...
> audience. My guess(tm) is that reality and accurate science are
> fundamentally boring,

I think a lot of people perceive them as such, but that
perception is, without fail in my experience, the result of
a nearly-complete ignorance of these subjects on the parts
of those people. There are a practically infinite number
of incredibly interesting, beautiful, weird, mind-blowing things
going on in real science - if anything, it's the speculation,
lunacy, and fantasy that winds up looks really dull, if you
have any sort of understanding of the real world. Most of
what passes for interesting material on the Art Bell show
would be kicked out as too dull, too unimaginative, and/or too
mundane by any decent science-fiction editor.

Bob M.

3449. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:22:54 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <7ocn9351d2cgbe7crs885jv09l2nlk5nip@4ax.com>
Source record: 38457
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>Jeff Liebermann wrote:
>> Egads. I'm cleaning house and found a large box of 40 year old
>> Motrash control heads and cables. Want some junk?

>Slacker...I tossed out all my old Moto stuff years ago. Last time I played
>with the Motorola line was around the Micors came out. i used a few of them
>for tower top UHF repeaters

The local hams still have ancient junk pretending to be repeaters and
such.
<http://www.LearnByDestroying.com/k6bj/>
I built most of it out of Micor mobiles and base stations. Since the
Micor stake pin connectors are chronically intermittent, there's a
large rubber hammer in each rack to bang on each radio to reseat the
connectors.

Since no sane person keeps such old parts around, I get to stock old
radios and pieces at my house. When the local comm shop cleaned out
their ancient Motorola parts pile, I ended up with most of their old
parts. I think it's time for a general purge, which means either eBay
or the scrap metal recyclers.

What I find amusing is that many police and fire departments rebuild
antique or vintage police cars and engines. They eventually want a
genuine Motorola twin coffin or 80D radio for the vehicle. I've
supplied about 4 of these radios (working) for various projects. The
first step is to spray the crumbling rubber insulated wiring with
clear acrylic to prevent further deterioration. Getting the radios
working is fairly easy as I have all the old test sets and some docs.
The fun part for me is watching the current crop of comm techs trying
to install the monster case in the vehicle. What do I do with all
this big fat cable is usually the first question.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3450. Re:Gas Tube Noise Source WAS: How I would like to change...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:39:06 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <139neqa8ftcs457@corp.supernews.com>
Source record: 38458
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Jeff Liebermann wrote:

<snip>
>>
>>>I have a fluorescent lamp calibrated noise source that's quite noisy
>>>well into the GHz range.
>>
<snip>
> I built it myself from an article in some long lost magazine
> perhaps 30 years ago. It's just a 5watt fluorescent tube, with a few
> turns of wire wrapped around it going to a broadband CATV amplifier.

I was quite excited by the acquisition of a CATV distrib. amp as a giveaway at a local hamfest earlier this spring; I modified it to accept external power and use BNC connectors and produced a hand-drawn schematic which I will 'capture' when time permits and post together with photos. I have used it as a front end to a freq. counter and an oscilloscope and without it I could not have completed several projects.

These units are so handy it is a wonder that (at least on the Web) there has been little mention of their experimental uses.

BTW, which of the numerous newsgroups in this miserably cross-posted thread do you regularly read?

Regards,

Michael

3451. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <acqsm4-cf6.ln1@mail.specsol.com>
Source record: 38459
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Bob Myers <nospamplease@address.invalid> wrote:

> <jimp@specsol.spam.sux.com> wrote in message
> news:v2lsm4-8dk.ln1@mail.specsol.com...
> > You're assuming he ever did anything more than assemble a list of
> > technical buzz words to string together at random.

> In this same spirit, I have decided how I would like to change the
> electric toaster industry.

> I believe that henceforth, all electric toasters should be made from
> polished unobtainium with "Q"-shaped dilithium heating elements,
> as it is obvious that this results in more even toasting of the bread
> and an undeniably higher-fidelity output. Further, the toasted bread
> should be ejected by carefully-aligned cavorite lifters, timed by
> observing both the thermal state of the bread (detected through
> counts of left-hand circular polarized neutrino emissions) and the
> state of a resublimated thiotimoline crystal being exposed to the
> transverse-modulated IR spectrum.

> Discuss!

> Bob "The New Radium" M.

But will such a scheme work with bagels and, more importantly, only
toast one side?

--
Jim Pennino

Remove .spam.sux to reply.

3452. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:50:15 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7gel7$1an8$1@f04n12.cac.psu.edu>
Source record: 38460

Richard Clark wrote:

> However, in keeping some semblance of a technical discussion on
> antennas (I have to review just which group this is), then some
> technical enquiry is in order (which I admit has a slim prospect of
> any coherent answer).
>
> So, does the
> a.) absence
> b.) presence
> of lunar particle coverings on my antenna
> c.) improve DX
> d.) exclude DX
> 5.) does not matter
>
> To repeat a message that hinged on the outcome of the Battle of the
> Coral Sea:
> "The World Wonders."

I have copyrighted "Moonduster Antennas", so everyone else has to leave it alone. Patent is also pending.

The Moonduster is an antenna made from moondust (of course!)
Moonduster's utilize porous sintering technology to achieve not only the unique qualities of the lunar covering, but the immense surface area allows bandwidth previously achieved only by folded dipoles. All with much greater efficiency.

neener, neener, neener. ;^)

Now all I have to do is figure out how to get there.....

- 73 de Mike KB3EIA -

3453. Re: Butternut ,9 bands antenna ,Model HF9V

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 18:57:14 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7gf2i$1ana$1@f04n12.cac.psu.edu>
Source record: 38462

John Passaneau wrote:
> Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote in
> news:75ydnXRSr9tKyQjbRVnyvQA@pipex.net:
>> There are 2 visual anomalies
>>
>>> I know it is a coil of thick enameled wire with a diameter of approx
>> 25 mm (1 inch) but do not know its inductance .
>> So in order to make one myself I would appreciate receiving info re
>> the dimensions incl number of turns ,alternatively the required
>> inductance.
>>
>> 2)The antenna kit is normally supplied with a specific length of 75
>> Ohms coaxial cable directly connected across the inductor (see above)
>>
>> This length of 75 ohms coax is part of the matching system and is to
>> be connected to any length of 50 Ohms coax running to the transceiver.
>> In the Pictorial ,page 14 of the manual ,this length of 75 Ohms coax
>> is identified by 'R'.
>>
>>
>> TIA for any relevant info
>>
>>
>> Frank GM0CSZ /KN6WH
>>
>> (supporting member Radio Invalid and Blind Club, RAIBC, based in the
>> UK)
>>
>>
>
> Hi Frank:
>
> I can't help with the coil, but the coax is 1/4 wave length at 20m.

I think the coil is around 1.5 inches in diameter, and has around 25
turns or so. It's used to fine tune the swr. In a not very elegant
looking method, you decrease th inductance by pulling the turns apart.
Te better the ground, the worse your coil will look.

It isn't terribly sensitive in the manner that the upper coils are, so
that 1.5 inch/25 turns description will probably get you in the ball park.

I'll check mine (its an HF6V, but should be similar) tonight.

- 73 de Mike KB3EIA -

3454. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 19:00:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <71en93d85p78a605q7thhn0k2n2ivjuhu2@4ax.com>
Source record: 38464
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:n39n93tcm0eal115hk3ttnhnjib6dpf7cn@4ax.com...
>> audience. My guess(tm) is that reality and accurate science are
>> fundamentally boring,

>I think a lot of people perceive them as such, but that
>perception is, without fail in my experience, the result of
>a nearly-complete ignorance of these subjects on the parts
>of those people.

Have you ever attended a meeting or event about something you really don't care about? The lady friend has dragged me to horse shows, dog shows, cat shows, and various cultural events, where it was a major accomplishment for me to stay awake. Yet to her, it was the highlight of excitement and of great interest. In other words, science and technology may be interesting to you and I, but to many, it's just a big boring waste of their time.

There's also the problem of what pretends to be education. Ask even the most basic physics question to a member of the GUM (great unwashed masses), and you'll get some rather strange answers. Jay Leno likes to do that on the streets. My version of this is to watch a movie thriller and try to find the physical impossibilities. I got my introduction to this while attending the movie "The Poseidon Adventure", set in a capsized ocean liner. In attendance was a horde of engineering students from the Naval Postgraduate School in Monterey. I caught a few of the howlers, but they were seeing much more wrong with the physics. Since then, I've made it a pointing out the impossibilities to the point where none of my friends will sit through a movie with me. So much for the joy of physics.

>(...)Most of
>what passes for interesting material on the Art Bell show
>would be kicked out as too dull, too unimaginative, and/or too
>mundane by any decent science-fiction editor.
>Bob M.

Wrong. Science fiction has mutated into social adventure, space opera, and historical fantasy. I haven't seen any really technical science fiction in many years. The reason is that reality just

doesn't sell, while fantasy and nonsense sell quite well. One of my friends is fairly well know multidisciplinary scientist, who gets his thrills seeing his name appear on the credits for perhaps 300 msec. For this honor, he acts as scientific advisor to several movie makers and TV shows. In private, he complains that he is almost universally ignored and is only asked if doing this or that physical impossibility is "believable". He refers to the process as tele-gullibility. Even NASA gets into the act. I was watching a simulation of a rocket to Mars, complete with the sound of the rocket motors whizzing by the moon. Too bad there's no air around to conduct the sound. Oh well.

The Art Bell show was the latest manifesting of the old circus "geek show", where weird people, animals, and objects were presented as real. Nothing really new except that now the presenting is done by the audience. In the case of usenet news, there is no circus and everything comes from the audience.

The real danger of all this is NOT in the average readers inability to distinguish between reality and rubbish, but in the intellectual establishment declaring that they have a monopoly on knowledge. When science and physics gets to the point that it can't handle any critical nonsense, fantasy, speculation, or even lunacy, then it runs a high risk of ossifying progress into dogma. I would prefer tolerating Art Bell with the hope that one small kernel of something new might emerge, than to summarily dismiss all his rantings as unscientific hogwash. Just think of how much science fiction has inspired rather than predicted technical progress. Your choice.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3455. Re: Gas Tube Noise Source WAS: How I would like to change...

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 19:11:14 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <64gn93dsc4p0i604bstd4r2vgerm37dv69@4ax.com>
Source record: 38465
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

msg <msg@_cybertheque.org_> hath wroth:

>> I built it myself from an article in some long lost magazine
>> perhaps 30 years ago. It's just a 5watt fluorescent tube, with a few
>> turns of wire wrapped around it going to a broadband CATV amplifier.

>I was quite excited by the acquisition of a CATV distrib. amp as a
>giveaway at a local hamfest earlier this spring; I modified it to
>accept external power and use BNC connectors and produced a hand-
>drawn schematic which I will 'capture' when time permits and post
>together with photos. I have used it as a front end to a freq.
>counter and an oscilloscope and without it I could not have completed
>several projects.

Good idea. I use a 5-1000MHz CATV amplifier as an output "booster"
for my various RF signal generators. It's especially handy if I want
to talk on a repeater using my signal generator or service monitor.

>These units are so handy it is a wonder that (at least on the Web) there
>has been little mention of their experimental uses.

Oh, they've been around. I've seen articles on how to use them as HF
AM and SSB power amplifiers. Many HF radios use CATV amplifiers for
broadband drivers. You don't see them called CATV amps much because
they are 75 ohms in and out, while just about everything else is 50
ohms.

>BTW, which of the numerous newsgroups in this miserably cross-posted thread do
>you regularly read?

Read? I don't read anything, I just post answers and rants.
<http://groups.google.com/groups/profile?enc_user=tWGMphwAAAAGTj9X4k0U7wKkGyU8QhaBhaxMG2M1
PWkMtCZAt5tdxQ&hl=en>
See "Recent Activity".
19,520 messages. Methinks I need a vacation, project, or something.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3456. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 19:28:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f7ggs9kp1@news.service.uci.edu>
Source record: 38466
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:

> On Fri, 06 Jul 2007 19:04:00 -0000, Jim Kelley <jwkelley@uci.edu>
> wrote:

> In your example, with 300Hz and 400Hz as the carriers, the sidebands
> would be located at:
>
> f3 = f1 + f2 = 300Hz + 400Hz = 700Hz
>
> and
>
> f4 = f2 - f1 = 400Hz - 300Hz = 100Hz
>
>
> both of which are clearly within the range of frequencies to which
> the human ear responds.

Indeed. We would hear f3 and f4 if they were in fact there.

> Your use of the term "beat frequency" is confusing since it's
> usually used to describe the products of heterodyning, not the
> audible warble caused by the vector addition of signals close to
> unison.

The term is commonly used in describing the results of interference in
time, as well as for mixing.

> Since the response of the ear is non-linear in amplitude it has no
> choice _but_ to be a mixer and create sidebands.

Perhaps you're confusing log(sin(a)+sin(b)) with
log(sin(a))+log(sin(b)).

If you don't mind me asking, where did you get this notion about the
ears creating sidebands?

jk

3457. Re: Quoted text

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 19:37:31 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7ghe3$1dk8$1@f04n12.cac.psu.edu>
Source record: 38467

Rick (W-A-one-R-K-T) wrote:
> On Fri, 13 Jul 2007 22:10:05 +0000, Rick wrote:
>
>> Oh you're right. I got it now. But you didn't.
>> Actually I didn't change the topic. I posted it in the newsgroup where
>> the offenders were, so they might see it. I'm not trying to start a
>> fight, just improve things a little.
>
> Good evening, Rick.
>
> Well, I (and presumably others) would have been a lot happier if you
> hadn't done it by "hijacking" the "we're on a ledge" thread.
>
> When you do a followup (reply) to a topic and just change the topic, it
> messes up threaded newsreaders big time, so that now every time a new
> article comes in on the "Quoted text" thread, I get a notification that
> something came in on my "we're built on a ledge" thread when it's really a
> completely different topic entirely.
>
> In the future please, PLEASE start a new thread rather than replying to an
> old one if you're going to change the topic.

Welcome to the newsgroups, Rick! Your thread has reached immortality,
and there will be people arguing about posting practices long after
you've gotten any answer from the original thread.

Rule of thumb is that after three replies the thread heads off into lala
land. 8^)

At any rate, in order to buck the trend, what you want to do is provide
for a electrical ground and an rf ground. They aren't the same thing.

Electrical ground:

Here is an interesting site:

http://ecmweb.com/mag/electric_achieving_acceptable_ground/index.html

Another page at the same site:

http://ecmweb.com/mag/electric_prevent_shocks_communications/

I'd not heard of a ground well before. Sounds kind of cool.

The whole shebang:

http://ecmweb.com/grounding/

lots of grounding links there.

The ufer ground is here:

http://www.psihq.com/iread/ufergrnd.htm

This should keep you pretty busy. It's interesting stuff as far as grounding goes.

Best practice is to put in whatever is the going thing in your area.

Rf ground. If you need radials, you can put in as many as needed to get to the best possible ground for your soil.

Of course, a vertical or inverted L might be too much of a pain in the tookus. Dipoles or beams of one sort or the other might be your best bet.

Hope this helps,

- 73 de Mike KB3EIA -

3458. Re: How to drive the ground rods in

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 19:46:03 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7ghts$1ls4$1@f04n12.cac.psu.edu>
Source record: 38468

Rick (W-A-one-R-K-T) wrote:
> On Sat, 14 Jul 2007 02:04:34 +0000, Owen Duffy wrote:
>
>> You will see articles on the net describing drilling a hole with a hose
>> and a peice of pipe. I have reservations about this, because it is no
>> longer a drive electrode. I have not seen this method used by commercial
>> applications and I suspect that if one was contracted to drive
>> electrodes, this would not be an acceptable method.
>
> Good evening, Owen.
>
> I just started a new thread on this, titled "Using a copper water pipe in
> place of a ground rod?". That was after I looked for the above paragraph
> from you and didn't find it until just now.
>
> I'd like to know why you think it's not acceptable, but I'll continue this
> in that thread.
>

I don't know if this has been covered, but one of the crazy methods I use, along with digging radial trenches with a chainsaw (don't try this at home kids - I'm a trained professional chainsaw trencher) is to sweat a hose adapter onto a copper pipe, attach the hose, and turn 'er on. Point it at the ground where you want to install it, push down, and there ya go! Hydrostatic ground rod insertion works pretty quickly, and you'll find the level at which the rock starts very soon.

- 73 de Mike KB3EIA -

3459. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 20:18:48 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <469BD2AC.64425371@earthlink.net>
Source record: 38469
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Bob Myers wrote:
>
> <jimp@specsol.spam.sux.com> wrote in message
> news:v2lsm4-8dk.ln1@mail.specsol.com...
> > You're assuming he ever did anything more than assemble a list of
> > technical buzz words to string together at random.
>
> In this same spirit, I have decided how I would like to change the
> electric toaster industry.
>
> I believe that henceforth, all electric toasters should be made from
> polished unobtainium with "Q"-shaped dilithium heating elements,
> as it is obvious that this results in more even toasting of the bread
> and an undeniably higher-fidelity output. Further, the toasted bread
> should be ejected by carefully-aligned cavorite lifters, timed by
> observing both the thermal state of the bread (detected through
> counts of left-hand circular polarized neutrino emissions) and the
> state of a resublimated thiotimoline crystal being exposed to the
> transverse-modulated IR spectrum.
>
> Discuss!
>
> Bob "The New Radium" M.

If it will handle full grown trolls, I want the first ione! How long
before Radium would be golden brown, and ready to feed to the hogs? ;-)

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3460. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 21:26:16 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99704BA8C8127nonenowhere@61.9.191.5>
Source record: 38470

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:f7gc70$lu4$2@nntp1.jpl.nasa.gov:

> Owen Duffy wrote:
>> "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
>> news:pan.2007.07.15.17.29.08.78220@from.qrz.com:
>>
>>
>>>On Sun, 15 Jul 2007 17:23:13 +0000, Walter Maxwell wrote:
>>>
>>>
>>>>This topic has aroused my curiosity. As a grounding device, why
>>>>would a solid rod be better than a hollow pipe, except for the
>>>>current carrying capability?
>>>
>>>Good afternoon, Walt.
>>>
>>>The thing is, the current carrying capability for transient events
>>>like lightning strikes should be about the same for the same diameter
>>>pipe or rod, since most of the current is carried in skin effect
>>>anyway.
>>
>>
>> I think that is flawed thinking.
>>
>> A lighning down conductor needs to carry something like 20kA for
>> 100ms, so it needs to be substantial enough that it doesn't melt and
>> remains in place to protect against the next strike.
>>
>> Owen
>
> The fusing/melting current for 1/2" copper pipe is probably well above
> 20kA, even for 100ms pulses. A more interesting potential failure mode
> might be from the mechanical forces due to the magnetic field. (see,
> e.g., quarter shrinking or can-crushing)
>

Hi Jim,

I note the "probably" in your comment, and the "dunno" in N5MK's
response.

The uncertainty in my statement is over the exact lightning scenario,
they vary, and the circuit response (ie current waveshape, amplitude,
duration, ringing etc) depend on the specific excitation and circuit

elements (parameters of the down conductor, nature of the earth system, ground, environment etc).

As far as supposition as to the fusing current for conductors, that is determinable for a given scenario. I have at hand the Protective Earthing Code of Practice published by the Electricity Authority of NSW June 1975 and it shows that a 35mm^2 copper conductor has a fault current withstand of 20kA for 100ms. (I have considered implementing the underlying formulas in an online calculator.)

N5MK stated "A #10 wire can handle that job". If he is talking copper, I understand that #10 means 2.5mm diameter, or ~5mm^2, or less than 15% of the recommended conductor csa for the stated scenario. I am not familiar with your water pipe sizes. If it were, say, a half inch diameter #19, it has a CSA of around 35mm^2, so the #10 wire should melt before the pipe electrode, thus protecting the pipe electrode from failure. Yes, mechanical forces are also relevant to lightning conductors, but my comment was about the fusing current.

In this part of the world there is an Australian Standard (AS1768) relating to lightning protection, there may be a similar standard or "code" in other jurisdictions, and they would not be a bad place to start in understanding lightning protection and designing a protection scheme.

Another source of information is to walk around a mobile phone base station and look at the earthing system from the outside. It is even more enlightning (no pun) to look inside. These things withstand lightning events quite well. Are they over engineered? Probably not, they do suffer damage from time to time.

It is my view that there is a significant risk that an inadequate lightning protection scheme may be much worse than doing nothing.

Owen

3461. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 21:31:21 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <JsRmi.22225$RX.5336@newssvr11.news.prodigy.net>
Source record: 38471
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

jimp@specsol.spam.sux.com wrote:
> But will such a scheme work with bagels and, more importantly, only
> toast one side?

that'll be in the Tuesday hot fix rollout. For double density toasting, you need to buy the upgrade assurance plan.

3462. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 21:42:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r0nn9395elc5t6cl4a05bg06h8q5llvuna@4ax.com>
Source record: 38472

On Mon, 16 Jul 2007 14:50:15 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>I have copyrighted "Moonduster Antennas", so everyone else has to leave
>it alone. Patent is also pending.

Hi Mike,

Pending this idea elevates the gravitas of your contribution to
science and has immediately validated your theory (what was it
again?). Whatever was Einstein thinking when he missed this milestone
in the march of physics?

Once it is patented, the towers of academia will shudder and collapse
into the dust of ages with your eclipse ushering in the golden dawn of
a new age. 100 years of Nobel Laureates will be nothing more than a
chorus line of troglodytes stunned by the harmony of your work.

73's
Richard Clark, KB7QHC

3463. Re: Butternut ,9 bands antenna ,Model HF9V

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 22:20:43 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <462dnWR5wqGjcgbbnZ2dnUVZ8tWnnZ2d@pipex.net>
Source record: 38473

Michael Coslo wrote:
> John Passaneau wrote:
>> I can't help with the coil, but the coax is 1/4 wave length at 20m.
>
> I think the coil is around 1.5 inches in diameter, and has around 25
> turns or so. It's used to fine tune the swr. In a not very elegant
> looking method, you decrease th inductance by pulling the turns apart.
> Te better the ground, the worse your coil will look.
>
> It isn't terribly sensitive in the manner that the upper coils are, so
> that 1.5 inch/25 turns description will probably get you in the ball park.
>
> I'll check mine (its an HF6V, but should be similar) tonight.
==========
Tnx John ,Unknown and Mike for your response. I'll have a look at the
Butternut site and make a base coil.
Many moons ago I witnessed vastly improved performance of a Butternut
HF6V ,which had the base inductor and initially only 1 ground spike.
The antenna was situated in the middle of a lawn.
After covering the area around the antenna with chicken wire mesh
performance improved by 1 to 2 S-points Within 3 weeks the wire mesh
was no longer visible and the grass could be cut by moving a mower over
the wire mesh .
But with the HF9V I first try to set it up by the book (later in august
when I'll be back from a trip)

Tnx agn all

Frank GM0CSZ / KN6WH

PS : In the meantime I'll keep monitoring this NG for any additional
relevant info.

3464. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 23:00:29 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1184626829.678755.104800@q75g2000hsh.googlegroups.com>
Source record: 38474
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 16, 11:31 am, John Fields <jfie...@austininstruments.com>
wrote:
> On Sun, 15 Jul 2007 14:57:17 -0700, Keith Dysart
> <Keith.Dys...@gmail.com> wrote:
> >I thought the experiment being discussed was one where the
> >modulation was 1e5, the carrier 1e6 and the resulting
> >spectrum .9e6, 1e6 and 1.1e6.
>
> ---
> That was my understanding, and is why I was surprised when you made
> the claim, above:
>
> "It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
> the resulting signal. One can multiply 1e6 by 1e5 with a DC
> offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
> signal is identical."
>
> which I interpret to mean that three unrelated signals occupying
> those spectral positions were identical to three signals occupying
> the same spectral locations, but which were created by heterodyning.
>
> Are you now saying that wasn't your claim?
> ---

No, that was indeed the claim. As a demonstration, I've
attached a variant of your original LTspice simulation.
Plot Vprod and Vsum. They are on top of each other.
Plot the FFT for each. They are indistinguishable.

> >Read my comments in that context, or just ignore them if
> >that context is not of interst.
>
> ---
> What I'd prefer to do is point out that if your comments were based
> on the concept that the signals obtained by mixing are identical to
> those obtained by adding, then the concept is flawed.

See the simulation results.

> >I did not write clearly enough. The three resistors I had
> >in mind were: one to each voltage source and one to ground.
>
> >To get there from your latest schematic, discard the op-amp

> >and tie the right end of R3 to ground.
>
> That really doesn't change anything, since no real addition will be
> occurring. Consider:
>
> f1>---[1000R]--+-->E2
> |
> f2>---[1000R]--+
> |
> f3>---[1000R]--+
> |
> [1000R]
> |
> GND>-----------+
<snip>
>
> Note that 0.75V is not equal to 1V + 1V + 1V. ;)

E2 = (V1+V2+V3)/4 -- a scaled sum

Except for scaling, the result is the sum of the inputs.

> >To get an AM signal that can be decoded with an envelope
> >detector, V5 needs to have an amplitude of at least 2 volts.
>
> ---
> Ever heard of galena? Or selenium? Or a precision rectifier?

Oh, yes. And cat whiskers too.

But that was not my point. Because the carrier level was not
high enough, the envelope was no longer a replica of the signal
so an envelope detector would not be able to recover the signal
(no matter how sensitive it was).

...Keith

```
Version 4
SHEET 1 980 680
WIRE -1312 -512 -1552 -512
WIRE -1200 -512 -1232 -512
WIRE -1552 -496 -1552 -512
WIRE -1312 -400 -1440 -400
WIRE -1200 -400 -1200 -512
WIRE -1200 -400 -1232 -400
WIRE -768 -384 -976 -384
WIRE -976 -368 -976 -384
WIRE -1440 -352 -1440 -400
WIRE -544 -352 -624 -352
WIRE -1200 -336 -1200 -400
WIRE -1136 -336 -1200 -336
WIRE -544 -336 -544 -352
```

```
WIRE -768 -320 -912 -320
WIRE -1312 -304 -1344 -304
WIRE -1200 -304 -1200 -336
WIRE -1200 -304 -1232 -304
WIRE -1200 -288 -1200 -304
WIRE -1344 -256 -1344 -304
WIRE -912 -256 -912 -320
WIRE -544 -240 -544 -256
WIRE -464 -240 -544 -240
WIRE -544 -224 -544 -240
WIRE -1552 -144 -1552 -416
WIRE -1440 -144 -1440 -272
WIRE -1440 -144 -1552 -144
WIRE -1344 -144 -1344 -176
WIRE -1344 -144 -1440 -144
WIRE -1200 -144 -1200 -208
WIRE -1200 -144 -1344 -144
WIRE -1552 -128 -1552 -144
WIRE -912 -128 -912 -176
WIRE -544 -128 -544 -144
FLAG -1552 -128 0
FLAG -1136 -336 Vsum
FLAG -976 -368 0
FLAG -912 -128 0
FLAG -544 -128 0
FLAG -464 -240 Vprod
SYMBOL voltage -1552 -512 R0
WINDOW 3 -216 102 Left 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 .5 900 0 0 90)
SYMATTR InstName Vs1
SYMBOL voltage -1344 -272 R0
WINDOW 3 -228 104 Left 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 .5 1100 0 0 -90)
SYMATTR InstName Vs3
SYMBOL res -1216 -320 R90
WINDOW 0 -26 57 VBottom 0
WINDOW 3 -25 58 VTop 0
SYMATTR InstName Rs3
SYMATTR Value 1000
SYMBOL res -1184 -192 R180
WINDOW 0 -48 76 Left 0
WINDOW 3 -52 34 Left 0
SYMATTR InstName Rs4
SYMATTR Value 1000
SYMBOL res -1216 -416 R90
WINDOW 0 -28 61 VBottom 0
```

```
WINDOW 3 -30 62 VTop 0
SYMATTR InstName Rs2
SYMATTR Value 1000
SYMBOL res -1216 -528 R90
WINDOW 0 -32 59 VBottom 0
WINDOW 3 -30 62 VTop 0
SYMATTR InstName Rs1
SYMATTR Value 1000
SYMBOL voltage -1440 -368 R0
WINDOW 3 -210 108 Left 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR Value SINE(0 1 1000 0 0 0)
SYMATTR InstName Vs2
SYMBOL SpecialFunctions\\modulate -768 -384 R0
WINDOW 3 -66 -80 Left 0
SYMATTR InstName A1
SYMATTR Value space=1000 mark=1000
SYMBOL voltage -912 -272 R0
WINDOW 3 14 106 Left 0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
SYMATTR InstName Vp1
SYMATTR Value SINE(1 1 100)
SYMBOL res -560 -240 R0
SYMATTR InstName Rp2
SYMATTR Value 1000
SYMBOL res -560 -352 R0
SYMATTR InstName Rp1
SYMATTR Value 3000
TEXT -1592 -560 Left 0 !.tran 0 .02 0 .3e-7
```

3465. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-16 23:06:15 UTC
From: Amerigo Vespucci <eat@italian.res>
Message-ID: <HRSmi.6676$7R4.306@trndny09>
Source record: 38475

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:uLMmi.19389$Rw1.6676@newssvr25.news.prodigy.net...
> Amerigo Vespucci wrote:
>> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> news:OZvmi.22037$RX.9004@newssvr11.news.prodigy.net...
>>> Amerigo Vespucci wrote:
>>>> The way I understood it was the best way to feed it was with ladderline
>>>> or something equal to it.
>>> Did anyone tell you that the matching section needs to be
>>> about 0.2 wavelength?
>>
>> Explain?
>
> To make an EDZ system resonant, i.e. a resistive impedance
> looking into the feedline, the ladder-line needs to be
> about 0.2 wavelengths long (plus N*1/2 wavelengths).

Thanks Cecil,that may have a lot to do with it.
73 ,Will
BTW call here is Kilo Alph three Victor India Delta

> --
> 73, Cecil http://www.w5dxp.com

3466. Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 00:26:12 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.17.00.26.11.718953@from.qrz.com>
Source record: 38476

This afternoon I went down to the local tool rental place to see about renting a hammer drill. They have one that's considerably larger than the ones recommended here (e.g. http://tinyurl.com/33zcrr) for rent for US$60 per day. I showed the guy a printout of the nut driver adapter (http://tinyurl.com/2bohkg) and asked where I could get one, and he looked at me like I was from Mars.

So, I'm looking for a nut driver adapter... went to Home Depot and they told me where to try and I'll call them tomorrow.

I'll tell you, though, even the big rental unit sure doesn't look like it's up to this job, to say nothing of the much smaller ones at Home Depot. I'm fairly good sized (6 ft 2 in and 230 lhs) and using a standard sized two-handed sledge hammer I can't move this rod more than a tenth of an inch, at most, per strike. Are you guys sure that a hand-held hammer drill will do the job?

I guess it's worth $60 plus the cost of the nut driver adapter (if I can find one) to find out...

3467. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 00:47:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7h3j2$4no$1@nntp1.jpl.nasa.gov>
Source record: 38478

Rick (W-A-one-R-K-T) wrote:
> This afternoon I went down to the local tool rental place to see about
> renting a hammer drill. They have one that's considerably larger than the
> ones recommended here (e.g. http://tinyurl.com/33zcrr) for rent for US$60
> per day. I showed the guy a printout of the nut driver adapter
> (http://tinyurl.com/2bohkg) and asked where I could get one, and he looked
> at me like I was from Mars.
>
> So, I'm looking for a nut driver adapter... went to Home Depot and they
> told me where to try and I'll call them tomorrow.
>
> I'll tell you, though, even the big rental unit sure doesn't look like
> it's up to this job, to say nothing of the much smaller ones at Home
> Depot. I'm fairly good sized (6 ft 2 in and 230 lhs) and using a standard
> sized two-handed sledge hammer I can't move this rod more than a tenth of
> an inch, at most, per strike. Are you guys sure that a hand-held hammer
> drill will do the job?
yes..

In the same way that a pneumatic or electric jackhammer can make short
work of concrete that would take you hours with a single jack and a sledge.

Many short, sharp raps that are quite forceful does the trick.

These things (e.g. the Bosch Bulldog) revolutionized the rock climbing
world. What used to be many arm tiring minutes of hammering on a star
drill, just to make a 1" deep hole for an expansion bolt turned into
seconds with the hammer drill. On the one hand, it made protecting
routes with a lot of exposure easier and safer. On the other, maybe
unassisted man wasn't meant to climb certain things.

(but the battery powered hammer drill was a lot easier than Maestri's
dragging a compressor up Cerro Torre)

>
> I guess it's worth $60 plus the cost of the nut driver adapter (if I can
> find one) to find out...
>

3468. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 00:59:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99706FD8B86CCnonenowhere@61.9.191.5>
Source record: 38477

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.17.00.26.11.718953@from.qrz.com:

> than a tenth of an inch, at most, per strike. Are you guys sure that
> a hand-held hammer drill will do the job?

For avoidance of doubt, I didn't suggest a hammer drill. I have driven scores of electodes with the equipment I did describe, but I will have to leave it to others to assure you about the suitability of a hammer drill to the task.

Owen

3469. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:07:09 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7h4nu$5d3$1@nntp1.jpl.nasa.gov>
Source record: 38384

>>>Owen
>>
>>The fusing/melting current for 1/2" copper pipe is probably well above
>>20kA, even for 100ms pulses. A more interesting potential failure mode
>>might be from the mechanical forces due to the magnetic field. (see,
>>e.g., quarter shrinking or can-crushing)
>>
>
>
> Hi Jim,
>
> I note the "probably" in your comment, and the "dunno" in N5MK's
> response.
That's because I was lazy and didn't want to actually compute it. I've
put multi tens of kA pulses through 1/4" copper pipe, but they're not
100ms long.

>
> The uncertainty in my statement is over the exact lightning scenario,
> they vary, and the circuit response (ie current waveshape, amplitude,
> duration, ringing etc) depend on the specific excitation and circuit
> elements (parameters of the down conductor, nature of the earth system,
> ground, environment etc).

One could certainly use the standard double exponential approximations..
either a 2/50 waveform for a strike or the longer surge impulse (I can't
remember the exact rise/fall times for the surge..)

>
> As far as supposition as to the fusing current for conductors, that is
> determinable for a given scenario. I have at hand the Protective Earthing
> Code of Practice published by the Electricity Authority of NSW June 1975
> and it shows that a 35mm^2 copper conductor has a fault current withstand
> of 20kA for 100ms. (I have considered implementing the underlying
> formulas in an online calculator.)

Preece or Onderdonk?
(http://home.earthlink.net/~jimlux/hv/fuses.htm
>
> N5MK stated "A #10 wire can handle that job". If he is talking copper, I
> understand that #10 means 2.5mm diameter, or ~5mm^2, or less than 15% of
> the recommended conductor csa for the stated scenario.

Preece equation gives fusing current for AWG10 (2.5mm diameter, as you
say) as 316 amps, but that's sort of for a steady state.

Onderdonk's equation, plugging in 100 ms for the melt time, gives 4.7kA, which I can believe. I've blown up a lot of AWG10 wire with those sorts of currents in a quarter shrinker. Partly melting, partly mechanical stresses in that application.

The purpose of the National Electrical Code (National, here, referring chauvinistically to the U.S.) required AWG 6 (diam 0.15 inches, 3.8 mm) bonding wire for grounds is NOT to carry the lightning current (which it wouldn't, in most cases) but to carry fault currents from things like shorts from line to grounding conductor, which are usually in the hundreds of amps range. Say an energized power line falls down and hits the antenna. You want the antenna's grounding conductor to carry the likely fault current and not go open, and carry enough current to trip any overcurrent protective devices.

Lightning protection is usually things like 2/0 (0.364 inch diameter, 9.25 mm), which has a fusing current (viz Onderdonk) of 65kA.

I am not familiar
> with your water pipe sizes. If it were, say, a half inch diameter #19, it
> has a CSA of around 35mm^2, so the #10 wire should melt before the pipe
> electrode, thus protecting the pipe electrode from failure. Yes,
> mechanical forces are also relevant to lightning conductors, but my
> comment was about the fusing current.

35 mm^2 would have a fusing current of around 30-35 kA.

1/2" Copper pipe is 0.625" od and 0.545" id (very close to 1mm wall)
so, has about 47 mm^2 area.

>
> In this part of the world there is an Australian Standard (AS1768)
> relating to lightning protection, there may be a similar standard or
> "code" in other jurisdictions, and they would not be a bad place to start
> in understanding lightning protection and designing a protection scheme.
>
> Another source of information is to walk around a mobile phone base
> station and look at the earthing system from the outside. It is even more
> enlightning (no pun) to look inside. These things withstand lightning
> events quite well. Are they over engineered? Probably not, they do suffer
> damage from time to time.
>
> It is my view that there is a significant risk that an inadequate
> lightning protection scheme may be much worse than doing nothing.

I would agree..

>
> Owen

3470. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:07:28 UTC
From: NotMe <me@privacy.net>
Message-ID: <QzVmi.221$jU2.84@newsfe12.lga>
Source record: 38385
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna

"Radium" <glucegen1@gmail.com> wrote in message
news:1184637169.012774.214960@i13g2000prf.googlegroups.com...
| On Jul 15, 6:58 pm, Jeff Liebermann <je...@cruzio.com> wrote:
|
| > Radium <gluceg...@gmail.com> hath wroth:
|
| > >The AM audio cause by lightning is so boring.
| > >All you get are clicks
| > >and pops.
|
| > Oh no. It's much better than that. You get snap, crackle, pop,
| > crash, hiss, zap, buzz, braaaaaap, and other noises, all to the
| > accompanyment of loud thunder and the smell of ozone. It can also
| > make the fur stand up on your back.
|
| One thing that I do like are the sharp sawtooth wave patterns that
| show up on FM video receivers whenever lightning strikes. FM video
| receivers receive Y [luminance] signals present on FM radio waves.
| Electrical disturbances affect the FM video receiver causing those
| beautifaul zapping and buzzing sawtooth patterns on the screen.

The only FM on standard TV is the audio. Video is vestigial sideband AM.

BTW my grand daughter had that figured out by the time she was 12 y.o.

3471. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:20:45 UTC
From: Tom Shaw <tshaw012@houston.rr.com>
Message-ID: <469c196a$0$30640$4c368faf@roadrunner.com>
Source record: 38479
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

Well im a ham, and a CB'er, and im not slime.....You can do both...i
also like scanners, and SWL...You dont have to be a jerk about things..That
would be like saying all CBer's are stupid, not true.
<KCX-4130> wrote in message
news:46843b2e$0$16381$88260bb3@free.teranews.com...
>
> "<SLUGO> The Meanie-Hammie" <ham@tripe.org> wrote in message
> news:468430b4$0$16364$88260bb3@free.teranews.com...
>> take it from the slim balls (HAMS) and give it to the cb/freeband
>> ops.....only then it will be used to its full potential.
>>
>
> The key word is TAKE!
> WTF could those handi-ham freak types do about it? NOT A DAM THING!!
>> --
>> Posted via a free Usenet account from http://www.teranews.com
>>
>
>
> --
> Posted via a free Usenet account from http://www.teranews.com
>

3472. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:22:54 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.17.01.22.48.770195@from.qrz.com>
Source record: 38480

On Tue, 17 Jul 2007 00:59:42 +0000, Owen Duffy wrote:

> For avoidance of doubt, I didn't suggest a hammer drill. I have driven
> scores of electodes with the equipment I did describe, but I will have
> to leave it to others to assure you about the suitability of a hammer
> drill to the task.

Thanks, Owen. Yes, I know you didn't suggest a hammer drill, but for the moment that's the only thing I have readily available other than the sledge hammer. I guess that if $60 and a day later I find that it didn't work I'll try to duplicate what you had.

Eventually we're going to have to replace our front steps which will involve a lot of cutting and splitting of rock and concrete, so I told the XYL that we should just bite the bullet and go down to Home Depot and buy one, and she told me to go lie down until the thought went away... :-)

3473. Re: 222-225 mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:25:31 UTC
From: Mark@TayleorRobesin.org
Message-ID: <dj6o93dh93g4dv6o1802059p5dlenb70o8@4ax.com>
Source record: 38420
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.dx,rec.radio.amateur.antenna,alt.ham-radio.vhf-uhf,alt.fan.ab8mq

On Mon, 16 Jul 2007 20:20:45 -0500, "Tom Shaw"
<tshaw012@houston.rr.com> wrote:

>Well im a ham, and a CB'er, and im not slime.....You can do both...i
>also like scanners, and SWL...You dont have to be a jerk about things..That
>would be like saying all CBer's are stupid, not true.

wel said but you are responding to a troll but at least it is On Topic
><KCX-4130> wrote in message
>news:46843b2e$0$16381$88260bb3@free.teranews.com...
>>
>> "<SLUGO> The Meanie-Hammie" <ham@tripe.org> wrote in message
>> news:468430b4$0$16364$88260bb3@free.teranews.com...
>>> take it from the slim balls (HAMS) and give it to the cb/freeband
>>> ops.....only then it will be used to its full potential.
>>>
>>
>> The key word is TAKE!
>> WTF could those handi-ham freak types do about it? NOT A DAM THING!!
>>> --
>>> Posted via a free Usenet account from http://www.teranews.com
>>>
>>
>>
>> --
>> Posted via a free Usenet account from http://www.teranews.com
>>
>

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/

G

--
Posted via a free Usenet account from http://www.teranews.com

3474. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:42:38 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184636558.435909.96110@e9g2000prf.googlegroups.com>
Source record: 38481
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 16, 9:15 am, DTC <no_spam@move_along_folks.foob> wrote:

> I was not aware there was a compelling reason for analog cell phones to
> stop using FM. Sounds like a solution looking for a problem.

FM audio is boring -- no entertaining high-pitched tones from solar
prominences which would definitely be heard on AM audio.

OTOH, AM video is boring. FM video is better. As I said before, the Y
[luminance] signal should be carried on an FM wave rather than an AM
wave.

Analog radio-frequency audio devices should use AM.

Analog radio-frequency video devices should use FM.

3475. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:51:50 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.17.01.51.45.116312@from.qrz.com>
Source record: 38382

On Mon, 16 Jul 2007 21:26:16 +0000, Owen Duffy wrote:

> It is my view that there is a significant risk that an inadequate
> lightning protection scheme may be much worse than doing nothing.

Owen, certainly optimal is better than sub-optimal, but I don't understand why sub-optimal can be worse than nothing at all. So far you have been exceedingly helpful and I have learned a lot. Can you explain why something isn't necessarily better, and in fact can be much worse, than nothing?

3476. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 01:52:49 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184637169.012774.214960@i13g2000prf.googlegroups.com>
Source record: 38383
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 15, 6:58 pm, Jeff Liebermann <je...@cruzio.com> wrote:

> Radium <gluceg...@gmail.com> hath wroth:

> >The AM audio cause by lightning is so boring.
> >All you get are clicks
> >and pops.

> Oh no. It's much better than that. You get snap, crackle, pop,
> crash, hiss, zap, buzz, braaaaaap, and other noises, all to the
> accompanyment of loud thunder and the smell of ozone. It can also
> make the fur stand up on your back.

One thing that I do like are the sharp sawtooth wave patterns that
show up on FM video receivers whenever lightning strikes. FM video
receivers receive Y [luminance] signals present on FM radio waves.
Electrical disturbances affect the FM video receiver causing those
beautifaul zapping and buzzing sawtooth patterns on the screen.

3477. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 02:30:38 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <jRVmi.489458$g24.349438@newsfe12.phx>
Source record: 38386
Cross-posted to: sci.electronics.basics,rec.radio.amateur.antenna,alt.cellular.cingular

"Radium" <glucegen1@gmail.com> wrote in message
news:1184636558.435909.96110@e9g2000prf.googlegroups.com...

< snip >

> Analog radio-frequency video devices should use FM.
>

Like satellite downlinks do? Yes, that's best for their purposes. Others
would fall in if it were best for them. Apparently it isn't.

3478. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 02:36:44 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <uNednWZ1SbymtgHbnZ2dnUVZ_uKknZ2d@giganews.com>
Source record: 38387
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"NotMe" <me@privacy.net> wrote in message
news:QzVmi.221$jU2.84@newsfe12.lga...
>
> "Radium" <glucegen1@gmail.com> wrote in message
> news:1184637169.012774.214960@i13g2000prf.googlegroups.com...
> | On Jul 15, 6:58 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> |
> | > Radium <gluceg...@gmail.com> hath wroth:
> |
> | > >The AM audio cause by lightning is so boring.
> | > >All you get are clicks
> | > >and pops.
> |
> | > Oh no. It's much better than that. You get snap, crackle, pop,
> | > crash, hiss, zap, buzz, braaaaaap, and other noises, all to the
> | > accompanyment of loud thunder and the smell of ozone. It can also
> | > make the fur stand up on your back.
> |
> | One thing that I do like are the sharp sawtooth wave patterns that
> | show up on FM video receivers whenever lightning strikes. FM video
> | receivers receive Y [luminance] signals present on FM radio waves.
> | Electrical disturbances affect the FM video receiver causing those
> | beautifaul zapping and buzzing sawtooth patterns on the screen.
>
> The only FM on standard TV is the audio. Video is vestigial sideband AM.
>
> BTW my grand daughter had that figured out by the time she was 12 y.o.
>

Analog satellite still uses FM, but there is very little of that left. 30MHz
wide channels. Think there used to be one version of SECAM (in France, IIRC)
that used FM video. That's gone now, too.
```

3479. Re: Connecting ground wire to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 02:56:08 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns996FCB30CEA3Fspectrumhogstarbandn@198.186.192.196>
Source record: 38388

>
> When connecting a copper ground wire to a copper-plated ground rod, is
> there a compound of some kind that should be used to inhibit
> corrosion?

The best way to connect copper grounding connections is with CadWeld.

However, I find the best non-weld solution is a liberal use of a
product called " Kopr-Shield " on the copper clamps. Its pricey, but
better than any of those so called conductive grease compounds. Do a
Google search to find it.

Ed K7AAT

3480. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 03:04:01 UTC
From: You <You@shadow.orgs>
Message-ID: <You-40DFA5.19035816072007@netnews.worldnet.att.net>
Source record: 38389
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

In article <1184591451.546176.139440@22g2000hsm.googlegroups.com>,
szilagyic <chris@groupinfo.com> wrote:

> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
> to-FME adapter, then to the Sierra card.

Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
Frequencies......

3481. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 03:22:58 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99708822D254Cnonenowhere@61.9.191.5>
Source record: 38390

...

Jim, a lot of interesting stuff with which I generally agree.

The approach that my reference took to rating the conductor for a lightning discharge includes a safety factor (as you might expect), and so will rate the conductor at lower I^2*t than finding the conditions to melt the wire. In real life, you would want the conductor to withstand a second strike or fault soon after, and you would want to allow some tolerance for other variables, hence the safety factor. The approach is to find the I^2*t that raises the conductor one third of the way from ambient (323K) to melting point. The calculator you used might assume resistivity is at 0°C , ambient is 0°C, and the material is raised to melting point with no heat loss, and that would give a fusing current close to double of the approach that I used.

BTW, we have half inch copper water pipe over here (we still do but it has a nominal metric size) and it is half in od... whereas half inch galvanised steel pipe is half inch nominal bore... actually about 5/8" id. Don't you like consistency in the same field!

Some years ago I did extensive modelling of a double exponential excitation of structures and facilities (not lightning, faster than lightning) and it was interesting how much the circuit configuration affected the transformation of the excitation waveform to structure current, including ringing. The same software could run a lightning scenario, but that wasn't the main goal of the analysis so my experience with the lightning scenario is more limited. So, as I said, the nature of the current waveform is the big uncertainty and so measures are usually quite conservative to cover that uncertainty.

Owen

3482. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 03:29:55 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997089501E607nonenowhere@61.9.191.5>
Source record: 38391

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.17.01.51.45.116312@from.qrz.com:

> On Mon, 16 Jul 2007 21:26:16 +0000, Owen Duffy wrote:
>
>> It is my view that there is a significant risk that an inadequate
>> lightning protection scheme may be much worse than doing nothing.
>
> Owen, certainly optimal is better than sub-optimal, but I don't
> understand why sub-optimal can be worse than nothing at all. So far
> you have been exceedingly helpful and I have learned a lot. Can you
> explain why something isn't necessarily better, and in fact can be
> much worse, than nothing?
>
>

Rick,

I guess to some extent it goes to the meaning of do nothing.

If you did not install a lightning protection system, but only connected antennas at a time of low risk, then you might be much better off than trusing an inadequate protection scheme.

It does reach a point where the disconnect strategy is not convenient / practical / effective, so you are faced with performing a risk assessment and designing a solution to mitigate the high risk factor risks. (Risk factor considers the likelihood of an outcome and the severity of an outcome.)

Owen

3483. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 03:30:51 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-6903FD.20305116072007@newsgroups.comcast.net>
Source record: 38392
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <1184626829.678755.104800@q75g2000hsh.googlegroups.com>,
Keith Dysart <Keith.Dysart@gmail.com> wrote:

> On Jul 16, 11:31 am, John Fields <jfie...@austininstruments.com>
> wrote:
> > On Sun, 15 Jul 2007 14:57:17 -0700, Keith Dysart
> > <Keith.Dys...@gmail.com> wrote:
> > >I thought the experiment being discussed was one where the
> > >modulation was 1e5, the carrier 1e6 and the resulting
> > >spectrum .9e6, 1e6 and 1.1e6.
> >
> > ---
> > That was my understanding, and is why I was surprised when you made
> > the claim, above:
> >
> > "It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
> > the resulting signal. One can multiply 1e6 by 1e5 with a DC
> > offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
> > signal is identical."
> >
> > which I interpret to mean that three unrelated signals occupying
> > those spectral positions were identical to three signals occupying
> > the same spectral locations, but which were created by heterodyning.
> >
> > Are you now saying that wasn't your claim?
> > ---
>
> No, that was indeed the claim. As a demonstration, I've
> attached a variant of your original LTspice simulation.
> Plot Vprod and Vsum. They are on top of each other.
> Plot the FFT for each. They are indistinguishable.

-- lots o' snipping goin' on --

OK. I haven't been (had the patience to keep on) following this
discussion, so I apologize if this is totally inappropriate, but

If the statements above refer to creating that set of signals by using a
bunch of signal generators, or alternately by using some sort of actual
"modulation", the answer is, there is a very significant difference.

In the case where the set is created by modulating the "carrier" with
the low frequency, there is a very specific phase relationship between

the signals which would be essentially impossible to achieve if the signals were to be generated independently. In fact, the only difference between AM and FM/PM is that the phase relationship between the carrier and the sideband set differs by 90 degrees between the two.

Isaac

3484. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 03:45:16 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns996FF1C15BA67mcoslocomcastnet@216.196.97.136>
Source record: 38393

Richard Clark <kb7qhc@comcast.net> wrote in
news:r0nn9395elc5t6cl4a05bg06h8q5llvuna@4ax.com:

> On Mon, 16 Jul 2007 14:50:15 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>>I have copyrighted "Moonduster Antennas", so everyone else has to leave
>>it alone. Patent is also pending.
>
> Hi Mike,
>
> Pending this idea elevates the gravitas of your contribution to
> science and has immediately validated your theory (what was it
> again?). Whatever was Einstein thinking when he missed this milestone
> in the march of physics?
>
> Once it is patented, the towers of academia will shudder and collapse
> into the dust of ages with your eclipse ushering in the golden dawn of
> a new age. 100 years of Nobel Laureates will be nothing more than a
> chorus line of troglodytes stunned by the harmony of your work.

I could just hug myself! ;^)

In the end, we shall all see that indeed it is turtles all the way
down....

Let us now sing

The turtles are ancient and they are justified,

The source of all matter and wit.

The dust of the cosmos proper is naught but turtle.....

Let this be a warning to everyone, don't mix Alka-Seltzer plus and
Starbucks coffee.......

- 73 de Mike KB3EIA -

3485. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 04:18:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997091956C2E9nonenowhere@61.9.191.5>
Source record: 38394

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:f7h4nu$5d3$1@nntp1.jpl.nasa.gov:

> The purpose of the National Electrical Code (National, here, referring
> chauvinistically to the U.S.) required AWG 6 (diam 0.15 inches, 3.8
> mm) bonding wire for grounds is NOT to carry the lightning current
> (which it wouldn't, in most cases) but to carry fault currents from
> things like shorts from line to grounding conductor, which are usually
> in the hundreds of amps range. Say an energized power line falls down
> and hits the antenna. You want the antenna's grounding conductor to
> carry the likely fault current and not go open, and carry enough
> current to trip any overcurrent protective devices.

I meant to comment:

I think that it is common in electricity distribution level networks,
that they are designed to hold fault current to about 20 times the
maximum working current.

In this part of the world, a single phase 240 home probably has a 80A
rated service, and fault current would usually be not worse than than
about 1600A, so the specified 6mm^2 earthing conductor and 4mm^2 bonding
conductor should withstand that current for 100ms until the protective
device operates. (4mm^2 withstands 3200A for 0.1s with a safety factor of
3.)

You probably know the numbers for your own distribution network practice,
they may be of interest to readers.

So you raise a good point, that if your tower falls onto power lines, it
would be good if your earth system could withstand the likely fault
current to take out the protection on the power lines and leave the tower
un-energised. In this part of the world with LV distribution, the
protection is probably a 500A HRC fuse with a fault current level of 10
+kA. It may be much lower for you if power lines are HV where the fault
current level should be a good deal lower.

Owen

3486. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 04:23:02 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99709251AE1C3nonenowhere@61.9.191.5>
Source record: 38395

Owen Duffy <none@no.where> wrote in
news:Xns997091956C2E9nonenowhere@61.9.191.5:
> protective device operates. (4mm^2 withstands 3200A for 0.1s with a
> safety factor of 3.)

That should read:

protective device operates. (4mm^2 withstands 2400A for 0.1s with a
safety factor of 3.)

3487. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 05:42:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139olm6k4ubql13@corp.supernews.com>
Source record: 38396

Jim Lux wrote:
> Bob John wrote:
>> Is Tarheel pricing their products out of the market? I had
>> consideration purchasing a little Tarheel II during our local Hamfest
>> last weekend in Aurora, IL. The dealer informed me the price had once
>> again gone up and they are now $289.99.
>
> Seems a reasonable price for a retail thing. Someone has to buy the
> parts, someone has to pay someone to assemble it, someone has to store
> it in a warehouse, someone has to sit in a store to sell it, etc.
> All those steps add up.
>
> When I worked in product design, we used to figure that retail selling
> price (w/o discounts) would be 5-10 times the raw parts (Bill of
> Materials, BOM) cost.
>
> So, based on that, the parts cost for that antenna would be somewhere
> between $25-50. . .

It makes absolutely no sense to apply one rule of thumb for pricing to all industries and situations. First, most rules of thumb are based on what it takes for a given business to make a profit on an item, and this varies tremendously on the volume, amount of R&D required for development, and a large number of other factors. What do you think the price of EZNEC is as a multiple of the cost of the CD -- or a printer ink cartridge based on its parts cost? How about a $3.00 calculator? But this doesn't have anything to do with what a product is worth, anyway. What a product is worth is what people are willing to pay for it, no more, no less. It's senseless to spend time figuring out what a vendor *should* charge based on some contrived rule based on only one of many factors determining its manufacturing cost. Vote with your pocketbook. If people find that the value of the item is worth the price, they'll pay it. Otherwise, they won't. And anyone thinking an item is overpriced should jump at the opportunity -- use the time you would have spent grousing and make it yourself and sell it for less. You'll be on your way to your first million. . . or, more likely, on your way to learning a few basic rules about business.

Roy Lewallen, W7EL

3488. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 06:03:10 UTC
From: David Lesher <wb8foz@panix.com>
Message-ID: <f7hm2unqb1@reader2.panix.com>
Source record: 38397
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

You <You@shadow.orgs> writes:

>> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
>> to-FME adapter, then to the Sierra card.

>Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
>Frequencies......

I would be more polite but would say 30 ft of RG-58 is an excellent
dummy load at 1900...

--
A host is a host from coast to coast.................wb8foz@nrk.com
& no one will talk to a host that's close........[v].(301) 56-LINUX
Unless the host (that isn't close).........................pob 1433
is busy, hung or dead....................................20915-1433

3489. Re: Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 06:13:42 UTC
From: nuttin <nuttin@nowhar.net>
Message-ID: <GoCdnQdiWoFewAHbnZ2dnUVZ_uTinZ2d@hawaiiantel.net>
Source record: 38398

Jim Lux wrote:

> nuttin wrote:
>> I am going to install one of these units at my location.
>>
>> The printed material that came with the unit says nothing should be
>> between the control box and the relay box.
> In particular, anything that is a DC short to ground, or a DC open in
> the transmission line (such as some transient suppressors)..
>
> It sends AC (actually either or both halves of rectified AC) up the wire
> to control the relays.
>
>>
>> Well, does this mean the control box will handle the 1200-1500 watts from
>> my linear? that would be the last piece of equipment in the line.
>>
>> Need some input please!
>>

I know how it works, what I want to know is if my control box - located
right after the linear can handle the power.

There is no power rating in my couple sheets of instructions

3490. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 06:27:15 UTC
From: clifto <clifot@gmail.com>
Message-ID: <334um4-1o1.ln1@remote.clifto.com>
Source record: 38399
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

jimp@specsol.spam.sux.com wrote:
>> I believe that henceforth, all electric toasters should be made from
>> polished unobtainium with "Q"-shaped dilithium heating elements,
>> as it is obvious that this results in more even toasting of the bread
>> and an undeniably higher-fidelity output. Further, the toasted bread
>> should be ejected by carefully-aligned cavorite lifters, timed by
>> observing both the thermal state of the bread (detected through
>> counts of left-hand circular polarized neutrino emissions) and the
>> state of a resublimated thiotimoline crystal being exposed to the
>> transverse-modulated IR spectrum.

I want the first copy of the screensaver with the flying units.

--
Postulate a group whose intent is to destroy the United States from within
via anarchy and bankruptcy. The actions of the United States Congress are
completely consistent with the actions one would predict from such a group.

3491. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 06:35:53 UTC
From: nm5k@wt.net
Message-ID: <1184654153.889620.30370@g12g2000prg.googlegroups.com>
Source record: 38400

On Jul 16, 7:04 am, rickn...@hotmail.com (Rick) wrote:
> On Sun, 15 Jul 2007 18:43:14 GMT, "Amerigo Vespucci" <e...@italian.res> wrote:
> >I tried pruning the antenna a couple of inches and fiddled with the feeder
> >line and manged to get mr SWR's down below two but with a tuner I'm still
> >not happy. My rig is a Kenwood TS 530S so the finals are a little more
> >forgiving
>
> Amerigo,
> Are you expecting that if you get the SWR lower your finals will run cooler?
> Because the reflected power into them will be less?
>
> (Hey Walt !! We need you)
>
> Rick K2XT

If it were solid state, I can see wanting to get below 2:1 a bit..
Gives
you more usable bandwidth. But for the hybrid kenwoods with 6146's,
it really doesn't matter. Improving his match from 2:1 will not really
make any difference at all. With those radios, as long as the load
can be matched with the "LOAD" control within it's normal setting
range, it's good nuff. I doubt a 2:1 load is off enough to hurt a pair
of those tubes as far as any extra heat. The radios have a fan.
So.. He can improve it, if he doesn't have anything else to do,
but I would not expect it to make any real difference, except
that the "LOAD" control will end up being in it's more normal
appx 1/3 to 1/2 setting rather than lower, or higher.
It will not effect his signal at all. Any difference would be
unnoticable.
MK

3492. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 07:32:36 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <uQqxz7FUCHnGFAf+@ifwtech.co.uk>
Source record: 38401

>Rick (W-A-one-R-K-T) wrote:
>> This afternoon I went down to the local tool rental place to see about
>> renting a hammer drill. They have one that's considerably larger than the
>> ones recommended here (e.g. http://tinyurl.com/33zcrr) for rent for US$60
>> per day. I showed the guy a printout of the nut driver adapter
>> (http://tinyurl.com/2bohkg) and asked where I could get one, and he looked
>> at me like I was from Mars.

The nut driver that I posted about was for SDS+ drills. Adapters
probably don't exist for the larger size of drill that you were trying
to rent.

You're still thinking too big, Rick. "A bigger hammer" is not always the
answer.

>> So, I'm looking for a nut driver adapter... went to Home Depot and
>>they
>> told me where to try and I'll call them tomorrow.
>> I'll tell you, though, even the big rental unit sure doesn't look
>>like
>> it's up to this job, to say nothing of the much smaller ones at Home
>> Depot. I'm fairly good sized (6 ft 2 in and 230 lhs) and using a standard
>> sized two-handed sledge hammer I can't move this rod more than a tenth of
>> an inch, at most, per strike. Are you guys sure that a hand-held hammer
>> drill will do the job?

Jim Lux wrote:
>yes..
>
>In the same way that a pneumatic or electric jackhammer can make short
>work of concrete that would take you hours with a single jack and a
>sledge.
>
>Many short, sharp raps that are quite forceful does the trick.
>

That's right - it isn't so much the weight of each blow, but the
enormous number of them. The hammer drill can manage 4-5 THOUSAND blows
per minute, so it's more like vibrating the rod into the ground than
hammering it in. In the right kind of ground, the rod will slide right
in.

NOTHING will drive a ground rod into solid rock, for one very simple
reason: a ground rod is not a rock drill! No matter how hard or how
often you hit the thing, it will either bend like a bow or curl up at
the point.

The whole idea of the combination hammer/rotary drill is that if plain hammering doesn't work, you can switch to a very long drill bit, and drill a pilot hole to clear the way. Then you can hammer the rod into the pilot hole. That gives you a guaranteed 3ft depth of rod into almost anything... for whatever that's going to be worth in terms of electrical performance.

(But don't tell me, long SDS+ bits have to be brought in from off-planet too...)

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3493. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 07:42:47 UTC
From: pausch@saaf.se
Message-ID: <f7hqos$1eul$1@merope.saaf.se>
Source record: 38402
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

In article <32spm4-9ck.ln1@mail.specsol.com>,
<jimp@specsol.spam.sux.com> wrote:

> search for AM modulation

You don't need to write "AM modulation", since "AM" means
"amplitude modulation". Therefore "AM modulation" becomes
"amplitude modulation modulation" ..... :-)

But perhaps you were considering adding some subcarrier to the AM? :-)))))))))

--

Paul Schlyter, Grev Turegatan 40, SE-114 38 Stockholm, SWEDEN
e-mail: pausch at stockholm dot bostream dot se
WWW: http://stjarnhimlen.se/

3494. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 08:44:30 UTC
From: LA4RT Jon Kåre Hellan <dev@null.com>
Message-ID: <1mbqeb4dxt.fsf@persaunet.uninett.no>
Source record: 38403
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

David Lesher <wb8foz@panix.com> writes:

> You <You@shadow.orgs> writes:
>
>
>>> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
>>> to-FME adapter, then to the Sierra card.
>
>>Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
>>Frequencies......
>
> I would be more polite but would say 30 ft of RG-58 is an excellent
> dummy load at 1900...

Indeed.

But nonetheless, an el cheapo yagi for 900 MHz GSM with 10 m of RG-58
boosted the indication on my phone from no bars to all 5 bars. The
yagi sees more signal because it is higher up. The yagi gain is
probably just a but more than cable + connector loss. And it looks
like the built in antenna in the phone has a significant negative
gain.

Around here, marginal areas mostly have 900 MHz. So if you need an
external antenna at all, you probably need one for 900.

OP: There has to be something wrong with your antenna system.

73
Jon

3495. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 08:58:04 UTC
From: Jeff <jeff@local.host>
Message-ID: <469c8578$0$1339$834e42db@reader.greatnowhere.com>
Source record: 38404

```
"> The nut driver that I posted about was for SDS+ drills. Adapters
> probably don't exist for the larger size of drill that you were trying to
> rent.
>
> You're still thinking too big, Rick. "A bigger hammer" is not always the
> answer.
>

Another solution may be hiring a small compressor and an air chisel, or go
the whole hog and hire a Kango hammer.

73
Jeff
```

3496. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 09:23:12 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <Wdvvg6MAqInGFAoz@ifwtech.co.uk>
Source record: 38405

Jeff wrote:
>
>"> The nut driver that I posted about was for SDS+ drills. Adapters
>> probably don't exist for the larger size of drill that you were trying to
>> rent.
>>
>> You're still thinking too big, Rick. "A bigger hammer" is not always the
>> answer.
>>
>
>Another solution may be hiring a small compressor and an air chisel, or go
>the whole hog and hire a Kango hammer.

Nope, we're still missing the point. Pounding everything into rubble is
NOT the answer to this problem.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3497. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 10:25:17 UTC
From: Androcles <Engineer@hogwarts.physics>
Message-ID: <hO0ni.37684$jY5.3583@fe1.news.blueyonder.co.uk>
Source record: 38406
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

"Paul Schlyter" <pausch@saaf.se> wrote in message
news:f7hqos$1eul$1@merope.saaf.se...
: In article <32spm4-9ck.ln1@mail.specsol.com>,
: <jimp@specsol.spam.sux.com> wrote:
:
: > search for AM modulation
:
: You don't need to write "AM modulation", since "AM" means
: "amplitude modulation". Therefore "AM modulation" becomes
: "amplitude modulation modulation" ..... :-)
:
: But perhaps you were considering adding some subcarrier to the AM?
:-)))))))))

Alabama is a US state. :-)

3498. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 10:25:48 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <1184667948.033602.291290@g12g2000prg.googlegroups.com>
Source record: 38407
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless
Body handling: HTML body converted to readable text

On Jul 16, 11:30 pm, isw wrote:
> In article <1184626829.678755.104...@q75g2000hsh.googlegroups.com>,
> Keith Dysart wrote:
> > No, that was indeed the claim. As a demonstration, I've
> > attached a variant of your original LTspice simulation.
> > Plot Vprod and Vsum. They are on top of each other.
> > Plot the FFT for each. They are indistinguishable.
>
> -- lots o' snipping goin' on --
>
> OK. I haven't been (had the patience to keep on) following this
> discussion, so I apologize if this is totally inappropriate, but
>
> If the statements above refer to creating that set of signals by using a
> bunch of signal generators, or alternately by using some sort of actual
> "modulation", the answer is, there is a very significant difference.
>
> In the case where the set is created by modulating the "carrier" with
> the low frequency, there is a very specific phase relationship between
> the signals which would be essentially impossible to achieve if the
> signals were to be generated independently.

All true. The simulation offered previously achieves the
required phase relationship (and more, so that the sum and
product versions can be directly compared).

> In fact, the only difference
> between AM and FM/PM is that the phase relationship between the carrier
> and the sideband set differs by 90 degrees between the two.

I am not convinced. Can you explain? AM modulation with a single
frequency produces a single sum and difference for the sidebands
while FM has an infinite number of frequencies in the sidebands.
This does not seem like a simple phase difference.

...Keith

3499. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 10:54:15 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.17.10.54.13.872967@from.qrz.com>
Source record: 38408

On Tue, 17 Jul 2007 08:32:36 +0100, Ian White GM3SEK wrote:

> The nut driver that I posted about was for SDS+ drills. Adapters
> probably don't exist for the larger size of drill that you were trying
> to rent.

I'm pretty sure this one is SDS+. I tried to call them back to find out
for sure but they were closed. I'm going to find out today.

> You're still thinking too big, Rick. "A bigger hammer" is not always the
> answer.

Right, but this is the only one I've found available for rent, so far.

> NOTHING will drive a ground rod into solid rock, for one very simple
> reason: a ground rod is not a rock drill! No matter how hard or how
> often you hit the thing, it will either bend like a bow or curl up at
> the point.

Bending like a bow is OK with me. I knew up front that there was no way
to drive it in straight down, so I drove it in at about a 45 degree angle.
If it hits a rock and bends, that's OK, at least it will all be in contact
with the earth.

If I can find the socket adapter I'll rent this one and see how it goes,
like I said the worst that can happen is I'm out $60 plus the cost of the
adapter.

3500. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 11:17:21 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.17.11.17.19.201775@from.qrz.com>
Source record: 38409

On Tue, 17 Jul 2007 03:29:55 +0000, Owen Duffy wrote:

> If you did not install a lightning protection system, but only connected
> antennas at a time of low risk, then you might be much better off than
> trusting an inadequate protection scheme.

Ah, I see your point.

My main objective in all this is keeping the house from burning down. I have a very low level of confidence that ANYTHING I do will prevent the radio from receiving damage if the tower gets a direct lightning hit while the antenna is connected to the radio. So, I'll continue to disconnect antennas, ground feedlines, etc. when a storm is near or we're going to be away for a while.

Maybe I'll get lucky and end up with a ground system that will protect everything so I can continue to merrily yak or tap away during the worst thunderstorm, but I'll be satisfied if I can just be confident that any hit on the tower will go to ground and not to the house. If I have to replace lengths of coax after a hit, I can live with that.

We aren't exactly in a high-occurrence area, here. In 22 years of living here we have only had one lightning hit on our property, which hit (and utterly destroyed) a tree in our backyard, damaged my Internet router, tripped the main house circuit breaker, and blew out the timer and display on the microwave oven. The tower was 10 feet shorter then and wasn't hit. Now the tower is 10 feet taller AND will have a 25-foot-high VHF antenna and mast on it, so it's time to do something to improve protection.

3501. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 11:48:48 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184672928.021687.240220@i38g2000prf.googlegroups.com>
Source record: 38410

I use 4 foot to 8 foot long, half inch dia., copper pipe put into the ground with the use of a water hose clamped to the top of the pipe and a pump - this hydraulically drills the pipe into the soil... They are laid out in a grid around the towers and along the back side of the shack with 16 feet separation... They are all interconnected with bare copper #2 gauge, stranded ground wire (mostly) which is slit into the ground an inch or so to keep it away from the mower blades... All of this creates a large area of metal in contact with the soil..

All of this agonizing over contact of hydraulically driven pipe versus pounded stakes, etc., etc., amounts to counting the number of angels dancing on the head of a pin... Just get in as many ground pipes/ stakes as you can on 16 foot centers, interconnect them in a grid with bare wire slit into the soil, run heavy gauge wire from the stake just outside of wall of the house/shack to the buss bar behind the radio, and be happy...

I also competely isolate the radios and amps when they are not in use...

denny / k8do

3502. Re: AM electromagnetic waves: 20 KHz modulation frequencyonanastronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 12:10:26 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <tm2o93p333am27g2cc8m10gii2tob2obe3@4ax.com>
Source record: 38411
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Mon, 16 Jul 2007 16:00:29 -0700, Keith Dysart
<Keith.Dysart@gmail.com> wrote:

>On Jul 16, 11:31 am, John Fields <jfie...@austininstruments.com>
>wrote:
>> On Sun, 15 Jul 2007 14:57:17 -0700, Keith Dysart
>> <Keith.Dys...@gmail.com> wrote:
>> >I thought the experiment being discussed was one where the
>> >modulation was 1e5, the carrier 1e6 and the resulting
>> >spectrum .9e6, 1e6 and 1.1e6.
>>
>> ---
>> That was my understanding, and is why I was surprised when you made
>> the claim, above:
>>
>> "It does not matter how the .9e6, 1.0e6 and 1.1e6 are put into
>> the resulting signal. One can multiply 1e6 by 1e5 with a DC
>> offset, or one can add .9e6, 1.0e6 and 1.1e6. The resulting
>> signal is identical."
>>
>> which I interpret to mean that three unrelated signals occupying
>> those spectral positions were identical to three signals occupying
>> the same spectral locations, but which were created by heterodyning.
>>
>> Are you now saying that wasn't your claim?
>> ---
>
>No, that was indeed the claim. As a demonstration, I've
>attached a variant of your original LTspice simulation.
>Plot Vprod and Vsum. They are on top of each other.
>Plot the FFT for each. They are indistinguishable.
>
>> >Read my comments in that context, or just ignore them if
>> >that context is not of interst.
>>
>> ---
>> What I'd prefer to do is point out that if your comments were based
>> on the concept that the signals obtained by mixing are identical to
>> those obtained by adding, then the concept is flawed.
>
>See the simulation results.
>

>> >I did not write clearly enough. The three resistors I had
>> >in mind were: one to each voltage source and one to ground.
>>
>> >To get there from your latest schematic, discard the op-amp
>> >and tie the right end of R3 to ground.
>>
>> That really doesn't change anything, since no real addition will be
>> occurring. Consider:
>>
>> f1>---[1000R]--+-->E2
>> |
>> f2>---[1000R]--+
>> |
>> f3>---[1000R]--+
>> |
>> [1000R]
>> |
>> GND>-----------+
><snip>
>>
>> Note that 0.75V is not equal to 1V + 1V + 1V. ;)
>
>E2 = (V1+V2+V3)/4 -- a scaled sum
>
>Except for scaling, the result is the sum of the inputs.

LOL... Except for scaling, Mr. President, the mirror on the Hubble
would have worked the first time out.

>> >To get an AM signal that can be decoded with an envelope
>> >detector, V5 needs to have an amplitude of at least 2 volts.
>>
>> ---
>> Ever heard of galena? Or selenium? Or a precision rectifier?
>
>Oh, yes. And cat whiskers too.
>
>But that was not my point. Because the carrier level was not
>high enough, the envelope was no longer a replica of the signal
>so an envelope detector would not be able to recover the signal
>(no matter how sensitive it was).

That's easy enough to make happen, but that's not what this is
about; it's about the out signal from a 3 input adder being
identical to the output signal from a mixer.

It seems, you want to try to prove that multiplication is tha same
as addition, with:

```
>Version 4
>SHEET 1 980 680
>WIRE -1312 -512 -1552 -512
>WIRE -1200 -512 -1232 -512
>WIRE -1552 -496 -1552 -512
>WIRE -1312 -400 -1440 -400
>WIRE -1200 -400 -1200 -512
>WIRE -1200 -400 -1232 -400
>WIRE -768 -384 -976 -384
>WIRE -976 -368 -976 -384
>WIRE -1440 -352 -1440 -400
>WIRE -544 -352 -624 -352
>WIRE -1200 -336 -1200 -400
>WIRE -1136 -336 -1200 -336
>WIRE -544 -336 -544 -352
>WIRE -768 -320 -912 -320
>WIRE -1312 -304 -1344 -304
>WIRE -1200 -304 -1200 -336
>WIRE -1200 -304 -1232 -304
>WIRE -1200 -288 -1200 -304
>WIRE -1344 -256 -1344 -304
>WIRE -912 -256 -912 -320
>WIRE -544 -240 -544 -256
>WIRE -464 -240 -544 -240
>WIRE -544 -224 -544 -240
>WIRE -1552 -144 -1552 -416
>WIRE -1440 -144 -1440 -272
>WIRE -1440 -144 -1552 -144
>WIRE -1344 -144 -1344 -176
>WIRE -1344 -144 -1440 -144
>WIRE -1200 -144 -1200 -208
>WIRE -1200 -144 -1344 -144
>WIRE -1552 -128 -1552 -144
>WIRE -912 -128 -912 -176
>WIRE -544 -128 -544 -144
>FLAG -1552 -128 0
>FLAG -1136 -336 Vsum
>FLAG -976 -368 0
>FLAG -912 -128 0
>FLAG -544 -128 0
>FLAG -464 -240 Vprod
>SYMBOL voltage -1552 -512 R0
>WINDOW 3 -216 102 Left 0
>WINDOW 123 0 0 Left 0
>WINDOW 39 0 0 Left 0
>SYMATTR Value SINE(0 .5 900 0 0 90)
>SYMATTR InstName Vs1
>SYMBOL voltage -1344 -272 R0
>WINDOW 3 -228 104 Left 0
>WINDOW 123 0 0 Left 0
>WINDOW 39 0 0 Left 0
```

```
>SYMATTR Value SINE(0 .5 1100 0 0 -90)
>SYMATTR InstName Vs3
>SYMBOL res -1216 -320 R90
>WINDOW 0 -26 57 VBottom 0
>WINDOW 3 -25 58 VTop 0
>SYMATTR InstName Rs3
>SYMATTR Value 1000
>SYMBOL res -1184 -192 R180
>WINDOW 0 -48 76 Left 0
>WINDOW 3 -52 34 Left 0
>SYMATTR InstName Rs4
>SYMATTR Value 1000
>SYMBOL res -1216 -416 R90
>WINDOW 0 -28 61 VBottom 0
>WINDOW 3 -30 62 VTop 0
>SYMATTR InstName Rs2
>SYMATTR Value 1000
>SYMBOL res -1216 -528 R90
>WINDOW 0 -32 59 VBottom 0
>WINDOW 3 -30 62 VTop 0
>SYMATTR InstName Rs1
>SYMATTR Value 1000
>SYMBOL voltage -1440 -368 R0
>WINDOW 3 -210 108 Left 0
>WINDOW 123 0 0 Left 0
>WINDOW 39 0 0 Left 0
>SYMATTR Value SINE(0 1 1000 0 0 0)
>SYMATTR InstName Vs2
>SYMBOL SpecialFunctions\\modulate -768 -384 R0
>WINDOW 3 -66 -80 Left 0
>SYMATTR InstName A1
>SYMATTR Value space=1000 mark=1000
>SYMBOL voltage -912 -272 R0
>WINDOW 3 14 106 Left 0
>WINDOW 123 0 0 Left 0
>WINDOW 39 0 0 Left 0
>SYMATTR InstName Vp1
>SYMATTR Value SINE(1 1 100)
>SYMBOL res -560 -240 R0
>SYMATTR InstName Rp2
>SYMATTR Value 1000
>SYMBOL res -560 -352 R0
>SYMATTR InstName Rp1
>SYMATTR Value 3000
>TEXT -1592 -560 Left 0 !.tran 0 .02 0 .3e-7
```

But, using the adder, if you change the amplitude and/or the frequency of any input what happens to the output? The spectral line corresponding to the changed input will change, but the lines

corresponding to the other inputs will not.

Use the multiplier and what happens if you change either the carrier or the LO? The output lines will _all_ change even though only one input has been changed.

On top of that, even if the output spectrum of the adder is made to look like the output spectrum of the mixer, the phase relationship between the outputs of the two will be different unless extraordinary care is taken to make them the same and, even then, if information is impressed on the adder's center frequency it will not convey to the "sidebands".

--
JF

3503. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:07:21 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7ilv9rrn1@usenet01.boi.hp.com>
Source record: 38412
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:71en93d85p78a605q7thhn0k2n2ivjuhu2@4ax.com...

> Have you ever attended a meeting or event about something you really
> don't care about? The lady friend has dragged me to horse shows, dog
> shows, cat shows, and various cultural events, where it was a major
> accomplishment for me to stay awake. Yet to her, it was the highlight
> of excitement and of great interest. In other words, science and
> technology may be interesting to you and I, but to many, it's just a
> big boring waste of their time.

Oh, sure, and I couldn't agree more. I place the blame for
that squarely on our education system, which - unless you
have amazingly good luck in getting the right teacher - will
present "science" as an incredibly dull collection of arcane
facts and formulas to be memorized, and not an interesting,
exciting process full of wonders. The root of that, of course,
is just that the "science" teachers most often don't really know
what "science" is all about in the first place.

> Wrong. Science fiction has mutated into social adventure, space
> opera, and historical fantasy. I haven't seen any really technical
> science fiction in many years.

Spider Robinson. Joe Haldeman. Larry Niven. Jerry
Pournelle. Ben Bova. Greg Egan. Stephen Baxter.
Arthur C. Clarke, who, thank the FSM, is still with us and writing.
Sure, there's an AWFUL lot of crap out there - SF, like everything else,
obey's Sturgeon's Law - but the good stuff is still being written.
You just have to look for it.

Bob M.

3504. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:09:37 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7im3h$s2v$1@usenet01.boi.hp.com>
Source record: 38413
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1184636558.435909.96110@e9g2000prf.googlegroups.com...

> OTOH, AM video is boring. FM video is better. As I said before, the Y
> [luminance] signal should be carried on an FM wave rather than an AM
> wave.

OK, but then, you're quite ignorant of anything remotely related
to this field, aren't you?

Bob M.

3505. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:10:17 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7im4p$s3j$1@usenet01.boi.hp.com>
Source record: 38414
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1184637169.012774.214960@i13g2000prf.googlegroups.com...
>
> One thing that I do like are the sharp sawtooth wave patterns that
> show up on FM video receivers whenever lightning strikes.

When, pray tell, have you ever seen an "FM video receiver"?

Bob M.

3506. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jl3vm4-s7d.ln1@mail.specsol.com>
Source record: 38415
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

In rec.radio.amateur.antenna Paul Schlyter <pausch@saaf.se> wrote:
> In article <32spm4-9ck.ln1@mail.specsol.com>,
> <jimp@specsol.spam.sux.com> wrote:

> > search for AM modulation

> You don't need to write "AM modulation", since "AM" means
> "amplitude modulation". Therefore "AM modulation" becomes
> "amplitude modulation modulation" ..... :-)

> But perhaps you were considering adding some subcarrier to the AM? :-)))))))))

No, I was considering the fact that "am" is a common english word and
adding "modulation" to the search disambiguates the search.

Google AM:

1,680,000,000 hits starting with "I Am Bored - Sites for when you're bored."

Google AM modulation

16,200,000 hits

Google AM modulation equation

1,940,000 hits

It's called narrowing the search.

Or didn't you bother to read the part about "done a Google for" before
you started spouting?

--
Jim Pennino

Remove .spam.sux to reply.

3507. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:35:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <4t3vm4-s7d.ln1@mail.specsol.com>
Source record: 38416
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Bob Myers <nospamplease@address.invalid> wrote:

> "Radium" <glucegen1@gmail.com> wrote in message
> news:1184637169.012774.214960@i13g2000prf.googlegroups.com...
> >
> > One thing that I do like are the sharp sawtooth wave patterns that
> > show up on FM video receivers whenever lightning strikes.

> When, pray tell, have you ever seen an "FM video receiver"?

> Bob M.

Where he gets the rest of his "technology"; drug dreams.

--
Jim Pennino

Remove .spam.sux to reply.

3508. Re: Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 15:56:19 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7ior2$95e$1@nntp1.jpl.nasa.gov>
Source record: 38418

nuttin wrote:
> Jim Lux wrote:
>
>
>>nuttin wrote:
>>
>>>I am going to install one of these units at my location.
>>>
>>>The printed material that came with the unit says nothing should be
>>>between the control box and the relay box.
>>
>>In particular, anything that is a DC short to ground, or a DC open in
>>the transmission line (such as some transient suppressors)..
>>
>>It sends AC (actually either or both halves of rectified AC) up the wire
>>to control the relays.
>>
>>
>>>Well, does this mean the control box will handle the 1200-1500 watts from
>>>my linear? that would be the last piece of equipment in the line.
>>>
>>>Need some input please!
>>>
>
>
>
> I know how it works, what I want to know is if my control box - located
> right after the linear can handle the power.
>
> There is no power rating in my couple sheets of instructions

We use a couple of them here at JPL (W6VIO) with a kilowatt with no
problem. The power limiting device is the series blocking capacitor (a
couple disk ceramics in parallel, I think) which would have to carry the
full RF current (say, 5-10 Amps). I don't know that we've run full
power in a 100% duty factor application like RTTY or SSTV, but
certainly, it's stood up to CW contesting.

3509. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 16:50:24 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <kr6ni.22621$Rw1.22192@newssvr25.news.prodigy.net>
Source record: 38417
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> One thing that I do like are the sharp sawtooth wave patterns that
> show up on FM video receivers whenever lightning strikes. FM video
> receivers receive Y [luminance] signals present on FM radio waves.
> Electrical disturbances affect the FM video receiver causing those
> beautifaul zapping and buzzing sawtooth patterns on the screen.

You may also enjoy listening to the dial tone while standing in a glass payphone booth.

3510. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 16:54:54 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <7tsp9318p334fuhit0n94kf2kt0pfqfsvd@4ax.com>
Source record: 38419
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>
>"Radium" <glucegen1@gmail.com> wrote in message
>news:1184637169.012774.214960@i13g2000prf.googlegroups.com...
>>
>> One thing that I do like are the sharp sawtooth wave patterns that
>> show up on FM video receivers whenever lightning strikes.
>
>When, pray tell, have you ever seen an "FM video receiver"?
>Bob M.

I have one of those FM video receivers. It's my (ancient) Wavetek
3000b communications service monitor, which displays all kinds of
nifty light shows and patterns for FM. I often tune it to the WX
channel and watch the modulation on the scope display. It's kinda
hypnotic without the accompanying audio and sometimes an improvement
over what's available on TV. I guess it's TV for radio geeks.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3511. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 16:59:32 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7ishkbom1@nntp1.jpl.nasa.gov>
Source record: 38423

Roy Lewallen wrote:
> Jim Lux wrote:
>
>> Bob John wrote:
>>
>>> Is Tarheel pricing their products out of the market? I had
>>> consideration purchasing a little Tarheel II during our local Hamfest
>>> last weekend in Aurora, IL. The dealer informed me the price had once
>>> again gone up and they are now $289.99.
>>
>>
>> Seems a reasonable price for a retail thing. Someone has to buy the
>> parts, someone has to pay someone to assemble it, someone has to store
>> it in a warehouse, someone has to sit in a store to sell it, etc.
>> All those steps add up.
>>
>> When I worked in product design, we used to figure that retail selling
>> price (w/o discounts) would be 5-10 times the raw parts (Bill of
>> Materials, BOM) cost.
>>
>> So, based on that, the parts cost for that antenna would be somewhere
>> between $25-50. . .
>
>
> It makes absolutely no sense to apply one rule of thumb for pricing to
> all industries and situations.

This is true, but I figure that building small quantities of antennas is
comparable to what we did in my former employer, which made small
quantities of special effects equipment.

First, most rules of thumb are based on
> what it takes for a given business to make a profit on an item, and this
> varies tremendously on the volume, amount of R&D required for
> development, and a large number of other factors. What do you think the
> price of EZNEC is as a multiple of the cost of the CD -- or a printer
> ink cartridge based on its parts cost? How about a $3.00 calculator? But
> this doesn't have anything to do with what a product is worth, anyway.
> What a product is worth is what people are willing to pay for it, no
> more, no less.

This is generally true.

It's senseless to spend time figuring out what a vendor
> *should* charge based on some contrived rule based on only one of many

> factors determining its manufacturing cost. Vote with your pocketbook.
> If people find that the value of the item is worth the price, they'll
> pay it. Otherwise, they won't. And anyone thinking an item is overpriced
> should jump at the opportunity -- use the time you would have spent
> grousing and make it yourself and sell it for less. You'll be on your
> way to your first million. . . or, more likely, on your way to learning
> a few basic rules about business.

which is why the 5-10x sorts of rules work.. they're based on the realities of small scale manufacturing and retailing. If you had some really nifty device that is in great demand AND nobody else can make it (due to trade secrets needed (e.g. Coke) or patents) then you can charge substantially more, and people willlingly pay for it, because it has value. However, in the case of something like a screwdriver antenna, where there's no "special sauce" nor patent protection, that would leave the field open for a competitor to sell essentially the same item at a cost closer to the basic cost of manufacture and sales. So, in that sense, it's easier to figure out what a "fair" price might be.

In the software business, one has a great advantage (and a curse too, in some ways) because one can price it at what people perceive it's worth, independent of the manufacturing cost (although, presumably, one prices it at least high enough to recover the original development cost). This, of course, fits in the "you can't build it yourself cheaper" category (at least if you abide by copyright laws, etc.), and, most good software has some unique "value added" that is non-trivial to do in some competing software.

>
> Roy Lewallen, W7EL

3512. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 17:03:48 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7ispkbvn1@nntp1.jpl.nasa.gov>
Source record: 38424

Owen Duffy wrote:
> ...
>
> Jim, a lot of interesting stuff with which I generally agree.
>
> The approach that my reference took to rating the conductor for a
> lightning discharge includes a safety factor (as you might expect), and
> so will rate the conductor at lower I^2*t than finding the conditions to
> melt the wire. In real life, you would want the conductor to withstand a
> second strike or fault soon after, and you would want to allow some
> tolerance for other variables, hence the safety factor. The approach is
> to find the I^2*t that raises the conductor one third of the way from
> ambient (323K) to melting point. The calculator you used might assume
> resistivity is at 0ï¿½C , ambient is 0ï¿½C, and the material is raised to
> melting point with no heat loss, and that would give a fusing current
> close to double of the approach that I used.
>
> BTW, we have half inch copper water pipe over here (we still do but it
> has a nominal metric size) and it is half in od... whereas half inch
> galvanised steel pipe is half inch nominal bore... actually about 5/8"
> id. Don't you like consistency in the same field!
But they're not the same field.. the stuff made of copper is actually
"tubing" and the stuff made of steel is "pipe", and historically,
they've been measured differently.

Tubing is usually soldered/sweated/brazed into fittings with a
receptacle, so the OD is important, because even with different wall
thicknesses, the fittings are all the same.

Pipe is based on something else (King John's toe diameter or something)
>
> Some years ago I did extensive modelling of a double exponential
> excitation of structures and facilities (not lightning, faster than
> lightning) and it was interesting how much the circuit configuration
> affected the transformation of the excitation waveform to structure
> current, including ringing. The same software could run a lightning
> scenario, but that wasn't the main goal of the analysis so my experience
> with the lightning scenario is more limited. So, as I said, the nature of
> the current waveform is the big uncertainty and so measures are usually
> quite conservative to cover that uncertainty.

There's some fascinating papers out there that use NEC to model response
to a nearby lightning stroke (a much more common occurance than a direct
hit). It's actually quite involved, since they model the traveling
impulse of the stroke.

>
>
> Owen

3513. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 17:48:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <36tp93p6m6o661o62pk7koavcdks6u5k6r@4ax.com>
Source record: 38421
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>> Wrong. Science fiction has mutated into social adventure, space
>> opera, and historical fantasy. I haven't seen any really technical
>> science fiction in many years.

>Spider Robinson. Joe Haldeman. Larry Niven. Jerry
>Pournelle. Ben Bova. Greg Egan. Stephen Baxter.

In the interest of brevity, I won't rattle off examples of how most of those authors started out with hard technical science fiction, and ended up recently writing what amounts to "future social problems" type of sci-fi. At age 74, Ben Bova still cranks out excellent stories but seems to be very light on the technology in the last few years. Stephen Baxter is a scientist and really does well speculating on where technology is sending us. Greg Egan is a mathemagician with a rather creative view of artificial intelligence. Haldeman puts me to sleep, Niven is just plain weird, and Pournelle is too militarist for my liking. They've all done "hard" sci-fi writing, but as time progresses, seem to be writing for a much different audience, such as writing for TV or movies. That's where the space opera, social adventure (chase scenes, crash and burn, and explosions) are coming from. I still read Stephen Baxter, but none of the others. This is the first I've heard of Spider Robinson, but will give his stuff a look.

>Arthur C. Clarke, who, thank the FSM, is still with us and writing.

Yeah, but he can certainly beat the "2001 Space Odyssey" theme to death. At 89, I'm really impressed that he's still working. However, his last few books have been co-authored by Stephen Baxter and read more like Baxter's complex writing, than Clarke's neatly clipped short lines.

Ok, I'll concede the hard sci-fi hasn't gone down the tubes completely and that there are still authors catering to a technically astute audience. However, even the best of these (as you've itemized) tend to drift toward the popular media, mass market, and general audience market, which deals primarily in entertainment. This entertainment is invariably devoid of technology, lacking in a basis on physical reality, and is dominated by space opera and general idiocy. For every sci-fi author that knows his science, there are perhaps 50 that

are lacking. Little wonder that space opera predominates as it
requires very little technical expertise to write.

Maybe that's why I like reading Mr. Radium's muddled tech rants. It's
the closest approximation to science fiction I can easily find.

>Sure, there's an AWFUL lot of crap out there - SF, like everything else,
>obey's Sturgeon's Law - but the good stuff is still being written.
>You just have to look for it.

These daze, I have to do more than look. I have to dig, excavate, and
filter to find it. However, I found a suitable replacement about 10
years ago. I was reading dot com business plans. Not only was I
being paid to rip them apart, but the products and services were some
of the best science fiction I had ever read. The authors of some of
those business plans really should be writing sci-fi stories. I
really miss the passing of the dot com era and the tremendous
technical imagination that helped make it happen.

Reminder: None of the sci-fi authors up to about 1970, ever predicted
the rise of personal computah. It was always the giant mainframe
(Multivac). Some came close with remote terminals, but even those had
a mainframe behind them. Oh well, can't get it right every time.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3514. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 17:55:27 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1184694927.798404.201630@e16g2000pri.googlegroups.com>
Source record: 38422
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

On Jul 17, 4:44 am, LA4RT Jon Kåre Hellan <d...@null.com> wrote:
> David Lesher <wb8...@panix.com> writes:
> > You <Y...@shadow.orgs> writes:
>
> >>> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
> >>> to-FME adapter, then to the Sierra card.
>
> >>Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
> >>Frequencies......
>
> > I would be more polite but would say 30 ft of RG-58 is an excellent
> > dummy load at 1900...
>
> Indeed.
>
> But nonetheless, an el cheapo yagi for 900 MHz GSM with 10 m of RG-58
> boosted the indication on my phone from no bars to all 5 bars. The
> yagi sees more signal because it is higher up. The yagi gain is
> probably just a but more than cable + connector loss. And it looks
> like the built in antenna in the phone has a significant negative
> gain.
>
> Around here, marginal areas mostly have 900 MHz. So if you need an
> external antenna at all, you probably need one for 900.
>
> OP: There has to be something wrong with your antenna system.
>
> 73
> Jon

Thanks for the reply. When you say 900 MHz, what frequency range
should I look for, for an antenna? For instance, the one I have now
claims it covers 824-896Mhz, so apparently it doesn't cover 900?

Thank you!
--
Chris

3515. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 17:57:00 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7ivtc$4pl$1@usenet01.boi.hp.com>
Source record: 38425
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:7tsp9318p334fuhit0n94kf2kt0pfqfsvd@4ax.com...

>>When, pray tell, have you ever seen an "FM video receiver"?
>>Bob M.
>
> I have one of those FM video receivers. It's my (ancient) Wavetek
> 3000b communications service monitor, which displays all kinds of
> nifty light shows and patterns for FM. I often tune it to the WX
> channel and watch the modulation on the scope display. It's kinda
> hypnotic without the accompanying audio and sometimes an improvement
> over what's available on TV. I guess it's TV for radio geeks.

Somehow, though, I don't think that's quite what
our boy Radium was talking about...

Bob M.

3516. Odd problem with 6/2/70 triband vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 18:06:14 UTC
From: Diogel <Diogel@DontExist.com>
Message-ID: <9ovp93tg648mln1e46jh72goshbgvrctgt@4ax.com>
Source record: 38426

Hi

I have not had much success with a commercial tri band 6M/2M/70cm vertical. I hope you know the type I am refering to, 2.5M high with three radials, looks like two for 70cm and one loaded radial for 6M/2M.

I have never had any success with this antenna in the attic so did some experiments with the antenna on a 8 foot glass fibre pole in the garden. SWR and radiation were perfect until I rotated the antenna with the loaded radial facing the house about 20 feet away, then SWR climbs to 10:1 on 2M but is still perfect on 70cm ???. Not tried 6M yet.

Any idears whats happening ?.

Tia

Dio

3517. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 18:11:09 UTC
From: Bob Myers <nospamplease@address.invalid>
Message-ID: <f7j0nu$5ks$1@usenet01.boi.hp.com>
Source record: 38427
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:36tp93p6m6o661o62pk7koavcdks6u5k6r@4ax.com...
> This is
> the first I've heard of Spider Robinson, but will give his stuff a
> look.

Spider's not as "hard tech" as some of the others have
been, but has been compared with Robert Heinlein in
overall style. (A comparison which I am very sure he
wouldn't claim himself, as RAH is a longtime hero of
Spider's.) But his stuff is just an amazing amount of plain,
unadulterated FUN. Try, especially, the "Callahan's
Saloon" stories.

>
>>Arthur C. Clarke, who, thank the FSM, is still with us and writing.
>
> Yeah, but he can certainly beat the "2001 Space Odyssey" theme to
> death. At 89, I'm really impressed that he's still working. However,
> his last few books have been co-authored by Stephen Baxter and read
> more like Baxter's complex writing, than Clarke's neatly clipped short
> lines.

In my book, Clarke's earned the right to do whatever he damn well
pleases at this point. And he certainly has done quite a bit besides
the "2001" stuff; there's the "Rama" stories, "The Fountains of
Paradise," etc...and I don't think the work with Baxter has been all
that bad - you didn't like "The Light of Other Days"?

>
> Ok, I'll concede the hard sci-fi hasn't gone down the tubes completely
> and that there are still authors catering to a technically astute
> audience. However, even the best of these (as you've itemized) tend
> to drift toward the popular media, mass market, and general audience
> market, which deals primarily in entertainment.

Well, as the Grand Old Man himself once noted, "Writing is like
prostitution - first you do it for love, and then for a few close friends,
and then for money." A writer who doesn't - or can't - write what
sells won't stay around long enough to write the Important Stuff,
should he or she care to do so.

> invariably devoid of technology, lacking in a basis on physical
> reality, and is dominated by space opera and general idiocy. For
> every sci-fi author that knows his science, there are perhaps 50 that
> are lacking. Little wonder that space opera predominates as it
> requires very little technical expertise to write.

Again, though - Sturgeon's Law applies to EVERYTHING. No
exceptions.

> Maybe that's why I like reading Mr. Radium's muddled tech rants. It's
> the closest approximation to science fiction I can easily find.

But they sure don't seem to be grounded in anything even resembling
reality. If you want hard SF, and not the sort of fantasy that makes
"Star Wars" look like a physics text, you'd really have to look
elsewhere.

> Reminder: None of the sci-fi authors up to about 1970, ever predicted
> the rise of personal computah.

To be sure, but then, neither did anyone else. One of the nicest
things about the future is that it always is full of surprises for
everyone.

Bob M.

3518. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 18:14:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ps0q931dd7ffs99smb4i6moqhkmc2bjdf3@4ax.com>
Source record: 38429
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Bob Myers" <nospamplease@address.invalid> hath wroth:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:7tsp9318p334fuhit0n94kf2kt0pfqfsvd@4ax.com...
>
>>>When, pray tell, have you ever seen an "FM video receiver"?
>>>Bob M.
>>
>> I have one of those FM video receivers. It's my (ancient) Wavetek
>> 3000b communications service monitor, which displays all kinds of
>> nifty light shows and patterns for FM. I often tune it to the WX
>> channel and watch the modulation on the scope display. It's kinda
>> hypnotic without the accompanying audio and sometimes an improvement
>> over what's available on TV. I guess it's TV for radio geeks.
>
>Somehow, though, I don't think that's quite what
>our boy Radium was talking about...
>Bob M.

If it's not what Mr Radium is using, it's close. Haven't you watched the typical pre-1971 science fiction movie? The arrival of any alien object or visitor is initially detected and displayed on a large CRT, usually with an unstable Lissajous pattern or trivialized radar simulation plus the requisite shrill noises and sound effects. After seeing that demonstration, I concluded that if I was going to personally greet the Galactic Ambassador from AlGore, I would need a similar alien detector or communicator. The closest approximation I could find was a communications service monitor. In order to monitor it continuously, I decided that a 15 year career in land mobile communications was required. I would leave it running continuously, waiting for the voices from outer space. Unfortunately, the ambassador is apparently distracted and I have moved on to other professions. I still own a service monitor and still turn it on waiting for the display to mark the arrival of the alien visitors.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3519. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 18:15:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <h5dvm4-mj9.ln1@mail.specsol.com>
Source record: 38428
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Jeff Liebermann <jeffl@cruzio.com> wrote:

<snip>

> These daze, I have to do more than look. I have to dig, excavate, and
> filter to find it. However, I found a suitable replacement about 10
> years ago. I was reading dot com business plans. Not only was I
> being paid to rip them apart, but the products and services were some
> of the best science fiction I had ever read. The authors of some of
> those business plans really should be writing sci-fi stories. I
> really miss the passing of the dot com era and the tremendous
> technical imagination that helped make it happen.

Reminds me of a meeting held at a large, prominent aerospace company
some years back where the marketing weenie was touting the latest
air-to-air missle idea that would completely dominate the market.

He was a bit taken aback (but not deterred, which is another story) when
one of the engineers in the audience pointed out that they needed to
come up with a communications system that operated about 3 times the
speed of light to make it work.

<snip remaining>

--
Jim Pennino

Remove .spam.sux to reply.

3520. Re: Odd problem with 6/2/70 triband vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 18:58:58 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <Ki8ni.34$KG5.18@bignews9.bellsouth.net>
Source record: 38430

"Diogel" <Diogel@DontExist.com> wrote in message
news:9ovp93tg648mln1e46jh72goshbgvrctgt@4ax.com...
> Hi
>
> I have not had much success with a commercial tri band 6M/2M/70cm
> vertical. I hope you know the type I am refering to, 2.5M high with
> three radials, looks like two for 70cm and one loaded radial for
> 6M/2M.
>
> I have never had any success with this antenna in the attic so did
> some experiments with the antenna on a 8 foot glass fibre pole in the
> garden. SWR and radiation were perfect until I rotated the antenna
> with the loaded radial facing the house about 20 feet away, then SWR
> climbs to 10:1 on 2M but is still perfect on 70cm ???. Not tried 6M
> yet.
>
> Any idears whats happening ?.
>
> Tia
>
> Dio

Your antenna sounds as though it is a Diamond V2000, or Comet equivalent. If so, those are not radials, but decoupling stubs. Furthermore, the antenna was designed to be mounted on a metal mast, not a non conducting mast. I suppose you could run a length of wire alongside the non conducting mast to give it the metal that it needs.

I suspect that your high swr situation has more to do with a loose connector than with the decoupling stub pointing at the house (coincidence).

I used to operate with a Diamond V2000 some years ago and it did need to have the mounting mast capable of electric conduction, IIRC.

Ed, NM2K

I have a bad case of vascular demensia, so take what I say with a grain of salt.

3521. Re: Odd problem with 6/2/70 triband vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 19:54:19 UTC
From: Diogel <Diogel@DontExist.com>
Message-ID: <ua7q93tqagp0jdueactjl91hr9v53a3r95@4ax.com>
Source record: 38431

On Tue, 17 Jul 2007 14:58:58 -0400, "Ed Cregger"
<ecregger@bellsouff.net> wrote:

>
>"Diogel" <Diogel@DontExist.com> wrote in message
>news:9ovp93tg648mln1e46jh72goshbgvrctgt@4ax.com...
>> Hi
>>
>> I have not had much success with a commercial tri band 6M/2M/70cm
>> vertical. I hope you know the type I am refering to, 2.5M high with
>> three radials, looks like two for 70cm and one loaded radial for
>> 6M/2M.
>>
>> I have never had any success with this antenna in the attic so did
>> some experiments with the antenna on a 8 foot glass fibre pole in the
>> garden. SWR and radiation were perfect until I rotated the antenna
>> with the loaded radial facing the house about 20 feet away, then SWR
>> climbs to 10:1 on 2M but is still perfect on 70cm ???. Not tried 6M
>> yet.
>>
>> Any idears whats happening ?.
>>
>> Tia
>>
>> Dio
>
>
>Your antenna sounds as though it is a Diamond V2000, or Comet equivalent. If
>so, those are not radials, but decoupling stubs. Furthermore, the antenna
>was designed to be mounted on a metal mast, not a non conducting mast. I
>suppose you could run a length of wire alongside the non conducting mast to
>give it the metal that it needs.
>
>I suspect that your high swr situation has more to do with a loose connector
>than with the decoupling stub pointing at the house (coincidence).
>
>I used to operate with a Diamond V2000 some years ago and it did need to
>have the mounting mast capable of electric conduction, IIRC.
>
>Ed, NM2K
>
>I have a bad case of vascular demensia, so take what I say with a grain of
>salt.
>

Thanks Ed

I did'nt know they were decoupling stubs, I will try using a metal mast tomorrow to see if there is any difference. Its odd that the 2M part of the antenna is affected ?. I have just cleaned and reassembled the antenna so am pretty sure all connections are solid.

Thanks for the info.

Paul

3522. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 20:05:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <139q87fi7hbog05@corp.supernews.com>
Source record: 38332
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> . . .
> Maybe that's why I like reading Mr. Radium's muddled tech rants. It's
> the closest approximation to science fiction I can easily find.
> . . .

Try U.S. patents. The prose style is deadly, but the descriptions of operation are very often entertainingly fictional. For a warm-up, I recommend "Hyper-Light-Speed Antenna" by David L. Strom, #6,025,810. There are many more creative ones and ones based on better pseudo-science, but that one is surely worth a read.

Roy Lewallen, W7EL

3523. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:46:20 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469d3998$0$339$e4fe514c@news.xs4all.nl>
Source record: 38333
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Ron Baker, Pluralitas! wrote:
> "isw" wrote:
>>
>> After you get done talking about modulation and sidebands, somebody
>> might want to take a stab at explaining why, if you tune a receiver to
>> the second harmonic (or any other harmonic) of a modulated carrier (AM
>> or FM; makes no difference), the audio comes out sounding exactly as it
>> does if you tune to the fundamental? That is, while the second harmonic
>> of the carrier is twice the frequency of the fundamental, the sidebands
>> of the second harmonic are *not* located at twice the frequencies of the
>> sidebands of the fundamental, but rather precisely as far from the
>> second harmonic of the carrier as they are from the fundamental.
>>
>> Isaac
>
> Whoa. I thought you were smoking something but
> my curiosity is piqued.
> I tried shortwave stations and heard no harmonics.
> But that could be blamed on propagation.
> There is an AM station here at 1.21 MHz that is s9+20dB.
> Tuned to 2.42 MHz. Nothing. Generally the lowest
> harmonics should be strongest. Then I remembered
> that many types of non-linearity favor odd harmonics.
> Tuned to 3.63 MHz. Holy harmonics, batman.
> There it was and the modulation was not multiplied!
> Voices sounded normal pitch. When music was
> played the pitch was the same on the original and
> the harmonic.
>
> One clue is that the effect comes and goes rather
> abruptly. It seems to switch in and out rather
> than fade in an out. Maybe the coming and going
> is from switching the audio material source?
>
> This is strange. If a signal is multiplied then the sidebands
> should be multiplied too.
> Maybe the carrier generator is generating a
> harmonic and the harmonic is also being modulated
> with the normal audio in the modulator.
> But then that signal would have to make it through
> the power amp and the antenna. Possible, but
> why would it come and go?

> Strange.

I've once listened to the first five harmonics of a
powerful medium wave transmitter (400 kW) at
a distance of some 300 m.
All harmonics gave normal audio; no strange
switching effects (Sony ICF-7600D).

What I'd like to know is if in such an 'experiment'
it can be excluded that (some of) these signals are
generated by the receiver itself.

gr, Hein

3524. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:46:47 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469d3998$1$339$e4fe514c@news.xs4all.nl>
Source record: 38334
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw wrote:
> "Ron Baker, Pluralitas!" wrote:
>>
>> Then you understand Fourier transforms and convolution.
>
> I suppose so; I've spent over fifteen years poking around in the
> entrails of MPEG...

Ever learned, unfortunately seldom used.
What can radio hobbyists do with Fourier transforms
nowadays? (Nowadays, for aids and appliances like
software and spectrum analysers take over some work.)
If somebody could provide some examples I'd be grateful.
Thanks.

gr, Hein

3525. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:47:16 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469d3998$2$339$e4fe514c@news.xs4all.nl>
Source record: 38335
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:
> Hein ten Horn wrote:
>> John Fields wrote:
>
>>> And what does it look like, then?
>>
>> Roughly like the ones in your Excel(lent) plots. :)
>
> I've posted nothing like that, so if you have graphics which support
> your position I'm sure we'd all be happy to see them.

Oops, I'm sorry Keith!
http://keith.dysart.googlepages.com/radio5

>>>> Mathematical terms like linear, logarithmic, etc. are familiar
>>>> to me, but the guys here use linear and nonlinear in another
>>>> sense.

Retrospectively viewed: not the term "linear".

gr, Hein

3526. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:47:35 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469d3998$3$339$e4fe514c@news.xs4all.nl>
Source record: 38336
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Ron Baker, Pluralitas!" <this@aint.me> wrote in message
news:469aafbf$0$16607$4c368faf@roadrunner.com...
>
> "Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
> news:469a9790$1$339$e4fe514c@news.xs4all.nl...
>> Ron Baker, Pluralitas! wrote:
>>> "Hein ten Horn" wrote:
>>>> Ron Baker, Pluralitas! wrote:
>>>>> Hein ten Horn wrote:
>>>>>> Ron Baker, Pluralitas! wrote:
>>>>>>> Hein ten Horn wrote:
>>>>
>>>>>>>> As a matter of fact the resulting force (the resultant) is
>>>>>>>> fully determining the change of the velocity (vector) of
>>>>>>>> the element.
>>>>>>>> The resulting force on our element is changing at the
>>>>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>>>>> one and only 222 Hz.
>>>>>>>
>>>>>>> Your idea of frequency is informal and leaves out
>>>>>>> essential aspects of how physical systems work.
>>>>>>
>>>>>> Nonsense. Mechanical oscillations are fully determined by
>>>>>> forces acting on the vibrating mass. Both mass and resulting force
>>>>>> determine the frequency. It's just a matter of applying the laws of
>>>>>> physics.
>>>>>
>>>>> You don't know the laws of physics or how to apply them.
>>>>
>>>> I'm not understood. So, back to basics.
>>>> Take a simple harmonic oscillation of a mass m, then
>>>> x(t) = A*sin(2*pi*f*t)
>>>> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
>>>> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
>>>> hence
>>>> a(t) = -(2*pi*f)^2*x(t)
>>>
>>> Only for a single sinusoid.
>>>
>>>> and, applying Newton's second law,
>>>> Fres(t) = -m*(2*pi*f)^2*x(t)
>>>> or
```

>>>> f = (-Fres(t) / m / x(t))^0.5 / (2pi).
>>>
>>> Only for a single sinusoid.
>>> What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)
>>
>> In the following passage I wrote "a relatively
>> slow varying amplitude", which relates to the
>> 4 Hz beat in the case under discussion (f1 =
>> 220 Hz and f2 = 224 Hz) where your
>> expression evaluates to
>> x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t),
>> indicating the matter is vibrating at 222 Hz.
>
> So where did you apply the laws of physics?
> You said, "It's just a matter of applying the laws of
> physics." Then you did that for the single sine case. Where
> is your physics calculation for the two sine case?
> Where is the expression for 'f' as in your first
> example? Put x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t)
> in your calculations and tell me what you get
> for 'f'.
>
> And how do you get 222 Hz out of
> cos(2pi 2 t) * sin(2pi 222 t)
> Why don't you say it is 2 Hz? What is your
> law of physics here? Always pick the bigger
> number? Always pick the frequency of the
> second term? Always pick the frequency of
> the sine?
> What is "the frequency" of
> cos(2pi 410 t) * cos(2pi 400 t)
>
>
> What is "the frequency" of
> cos(2pi 200 t) + cos(2pi 210 t) + cos(2pi 1200 t) + cos(2pi 1207 t)
>
>
>>
>>>> So my statements above, in which we have
>>>> a relatively slow varying amplitude (4 Hz),
>
> How do you determine amplitude?
> What's the math (or physics) to derive
> amplitude?
>
>>>> are fundamentally spoken valid.
>>>> Calling someone an idiot is a weak scientific argument.
>>>
>>> Yes.
>>> And so is "Nonsense." And so is your idea of

>>> "the frequency".
>>
>> Note the piquant difference: nonsense points
>> to content and we're not discussing idiots
>> (despite a passing by of some very strange
>> postings. :)).
>>
>>>> Hard words break no bones, yet deflate creditability.
>>
>> gr, Hein
>>
>>
>
>
Well, I think I've had it. A 'never' ending story.
Too much to straighten out. Too much comment
needed. Questions moving away from the subject.
No more indistinguishable close frequencies.
No audible beat, no slow changing envelopes.

Take a plot, use a high speed camera or whatever
else and see for yourself the particle is vibrating at a
period in accordance with 222 Hz. In my view I've
sufficiently underpinned the 222 Hz frequency.
If you disagree, then do the job. Show your
frequencies and elucidate them. (No hint needed,
I guess.)

gr, Hein

3527. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:49:42 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7jdhm$m45$1@nntp1.jpl.nasa.gov>
Source record: 38338

Roy Lewallen wrote:
> Jeff Liebermann wrote:
>
>> . . .
>> Maybe that's why I like reading Mr. Radium's muddled tech rants. It's
>> the closest approximation to science fiction I can easily find.
>
> > . . .
>
> Try U.S. patents. The prose style is deadly, but the descriptions of
> operation are very often entertainingly fictional. For a warm-up, I
> recommend "Hyper-Light-Speed Antenna" by David L. Strom, #6,025,810.

But that one, according to the disclosure, in combination with light,
enhances plant growth. (and I suppose, if one were growing mushrooms,
one wouldn't even need the light..)

> There are many more creative ones and ones based on better
> pseudo-science, but that one is surely worth a read.
>
> Roy Lewallen, W7EL

3528. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 21:54:22 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns997097AEB81D1doldridgsprintca@64.59.135.159>
Source record: 38337

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:f7ishkbom1@nntp1.jpl.nasa.gov:

> Roy Lewallen wrote:
>> Jim Lux wrote:
>>
>>> Bob John wrote:
>>>
>>>> Is Tarheel pricing their products out of the market? I had
>>>> consideration purchasing a little Tarheel II during our local
>>>> Hamfest last weekend in Aurora, IL. The dealer informed me the
>>>> price had once again gone up and they are now $289.99.
>>>
>>>
>>> Seems a reasonable price for a retail thing. Someone has to buy the
>>> parts, someone has to pay someone to assemble it, someone has to
>>> store it in a warehouse, someone has to sit in a store to sell it,
>>> etc. All those steps add up.
>>>
>>> When I worked in product design, we used to figure that retail
>>> selling price (w/o discounts) would be 5-10 times the raw parts
>>> (Bill of Materials, BOM) cost.
>>>
>>> So, based on that, the parts cost for that antenna would be
>>> somewhere between $25-50. . .
>>
>>
>> It makes absolutely no sense to apply one rule of thumb for pricing
>> to all industries and situations.
>
> This is true, but I figure that building small quantities of antennas
> is comparable to what we did in my former employer, which made small
> quantities of special effects equipment.
>
>
>
> First, most rules of thumb are based on
>> what it takes for a given business to make a profit on an item, and
>> this varies tremendously on the volume, amount of R&D required for
>> development, and a large number of other factors. What do you think
>> the price of EZNEC is as a multiple of the cost of the CD -- or a
>> printer ink cartridge based on its parts cost? How about a $3.00
>> calculator? But this doesn't have anything to do with what a product
>> is worth, anyway. What a product is worth is what people are willing

>> to pay for it, no more, no less.
>
> This is generally true.
>
> It's senseless to spend time figuring out what a vendor
>> *should* charge based on some contrived rule based on only one of
>> many factors determining its manufacturing cost. Vote with your
>> pocketbook. If people find that the value of the item is worth the
>> price, they'll pay it. Otherwise, they won't. And anyone thinking an
>> item is overpriced should jump at the opportunity -- use the time you
>> would have spent grousing and make it yourself and sell it for less.
>> You'll be on your way to your first million. . . or, more likely, on
>> your way to learning a few basic rules about business.
>
> which is why the 5-10x sorts of rules work.. they're based on the
> realities of small scale manufacturing and retailing. If you had some
> really nifty device that is in great demand AND nobody else can make
> it (due to trade secrets needed (e.g. Coke) or patents) then you can
> charge substantially more, and people willlingly pay for it, because
> it has value. However, in the case of something like a screwdriver
> antenna, where there's no "special sauce" nor patent protection, that
> would leave the field open for a competitor to sell essentially the
> same item at a cost closer to the basic cost of manufacture and sales.
> So, in that sense, it's easier to figure out what a "fair" price
> might be.
>
> In the software business, one has a great advantage (and a curse too,
> in some ways) because one can price it at what people perceive it's
> worth, independent of the manufacturing cost (although, presumably,
> one prices it at least high enough to recover the original development
> cost). This, of course, fits in the "you can't build it yourself
> cheaper" category (at least if you abide by copyright laws, etc.),
> and, most good software has some unique "value added" that is
> non-trivial to do in some competing software.

While we are on the subject, could someone post a comparison of the
Little Tarheel II vs. the High Sierra Sidekick?

I'm thinking of getting one or the other of these for my visegrip mount
out on the balcony, but could sure use some experienced advice.

--
Dave Oldridge+
ICQ 1800667

3529. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 23:12:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <84eq93donnjtemd1e1jjame5m7454bqsu9@4ax.com>
Source record: 38339
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Roy Lewallen <w7el@eznec.com> hath wroth:

>Jeff Liebermann wrote:
>> . . .
>> Maybe that's why I like reading Mr. Radium's muddled tech rants. It's
>> the closest approximation to science fiction I can easily find.
> > . . .

>Try U.S. patents. The prose style is deadly, but the descriptions of
>operation are very often entertainingly fictional. For a warm-up, I
>recommend "Hyper-Light-Speed Antenna" by David L. Strom, #6,025,810.

<http://www.google.com/patents?id=csYDAAAAEBAJ&dq=6,025,810>
Cute. Apply DC and heat, and it goes faster than light.

Here's my candidate for the RF hype award:
"Magnetic field based power transmission line communication method and
system"
<http://www.google.com/patents?id=N_sEAAAAEBAJ&dq=5982276>
Uses a MASER with no visible means of coupling it to the power line to
move 2GBits/sec. Of course, it eventually went to litigation:
<http://dallas.bizjournals.com/dallas/stories/2004/03/22/story5.html>
6 Pages from Wired Magazine:
<http://www.wired.com/wired/archive/9.11/media.html>
The list of suckers, er.... investors, it truely impressive.

I'll pretend not to mention commercial antennas that are sold without
any useful specifications, patterns, or simulations. That's one
reason I've often considered going into the antenna business. The
more they resemble a gold plated metallic scrap heap, the better they
sell. Few customers can see how they operate. Product comparisons
are difficult or impossible. Magic is everywhere. Yeah, the antenna
biz looks good.

>There are many more creative ones and ones based on better
>pseudo-science, but that one is surely worth a read.
>Roy Lewallen, W7EL

Yes, but patents aren't made to be read by humans. They're made to be
read and fought over by attorneys.

I've also derived some entertainment from patents. For a while, I was
collecting what I considered to be patented impossibilities from

companies that exist mostly as a stock scam. However, I got into
legal hot water when I started to publicly suggest that their patented
technology was closer to science fiction than science. To avoid
litigation, I've had to keep my big mouth shut. I've run into some
real howlers that I would just love to offer as entertainment, but
don't need or want to risk an infestation of attorneys.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3530. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 23:32:16 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <139qkbv7limdh30@corp.supernews.com>
Source record: 38340
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Thank you Jim. You did good, it will come around full circle, allways does!

Butch KF5DE
<jimp@specsol.spam.sux.com> wrote in message
news:vhdqm4-am8.ln1@mail.specsol.com...
> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>> :
>
>> > how would u like to change the cell phone industry?
>
>> Analog cells phones should stop using FM and should start using AM
>> with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
> Analog cell phones are going away.
>
> Cell phones already use frequencies in the 3 GHz region.
>
> You are an idiot.
>
> <snip crap>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

3531. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-17 23:46:08 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <a5lq93pugkrq2oqlo3p4k06ll60ide4c0j@4ax.com>
Source record: 38341
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
<vhdqm4-am8.ln1@mail.specsol.com>:

>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>> :
>
>> > how would u like to change the cell phone industry?
>
>> Analog cells phones should stop using FM and should start using AM
>> with SHF frequencies - at least 3 GHz and at most 30 GHz.
>
>Analog cell phones are going away.

True.

>Cell phones already use frequencies in the 3 GHz region.

False.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3532. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:05:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <nn10n4-h67.ln1@mail.specsol.com>
Source record: 38342
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
> <vhdqm4-am8.ln1@mail.specsol.com>:

> >In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> >> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> >> :
> >
> >> > how would u like to change the cell phone industry?
> >
> >> Analog cells phones should stop using FM and should start using AM
> >> with SHF frequencies - at least 3 GHz and at most 30 GHz.
> >
> >Analog cell phones are going away.

> True.

> >Cell phones already use frequencies in the 3 GHz region.

> False.

1.9 GHz is in the ->region>- of 3 GHz.

.8 GHz is not in the ->region<- of 3 GHz.

--
Jim Pennino

Remove .spam.sux to reply.

3533. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:05:34 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184717134.816167.227910@m37g2000prh.googlegroups.com>
Source record: 38343
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 16, 7:36 pm, "Brenda Ann" <bren...@shinbiro.com> wrote:

> Analog satellite still uses FM, but there is very little of that left. 30MHz
> wide channels. Think there used to be one version of SECAM (in France, IIRC)
> that used FM video. That's gone now, too.

Actually SECAM also uses AM for the luminance signal. However, it uses
FM for the color [chroma] signal.

3534. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:06:15 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184717175.648101.114090@e9g2000prf.googlegroups.com>
Source record: 38344
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 16, 6:07 pm, "NotMe" <m...@privacy.net> wrote:

> The only FM on standard TV is the audio. Video is vestigial sideband AM.

I want it to be the opposite.

3535. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:13:33 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <wYcni.11207$rL1.7107@newssvr19.news.prodigy.net>
Source record: 38345
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> I still own a service monitor and still turn it on
> waiting for the display to mark the arrival of the alien visitors.

No doubt waiting for the Navasites from the Shirley Maclean alternative
universe...with their Extended GSM communicators.

3536. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:36:28 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <l3oq93pspa68h3pbf46c7ubm7u353mss1v@4ax.com>
Source record: 38346
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Tue, 17 Jul 2007 19:13:33 -0500, DTC <no_spam@move_along_folks.foob>
wrote in <wYcni.11207$rL1.7107@newssvr19.news.prodigy.net>:

>Jeff Liebermann wrote:
>> I still own a service monitor and still turn it on
>> waiting for the display to mark the arrival of the alien visitors.
>
>No doubt waiting for the Navasites from the Shirley Maclean alternative
>universe...with their Extended GSM communicators.

Hint: Extended GSM is a tower feature, not a handset feature.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3537. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:37:14 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <75oq9314t5sc5sd2g0dsgci2rn127ms353@4ax.com>
Source record: 38347
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Wed, 18 Jul 2007 00:05:01 GMT, jimp@specsol.spam.sux.com wrote in
<nn10n4-h67.ln1@mail.specsol.com>:

>In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
>> On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
>> >Cell phones already use frequencies in the 3 GHz region.
>
>> False.
>
>1.9 GHz is in the ->region>- of 3 GHz.

False.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3538. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:45:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <b040n4-vid.ln1@mail.specsol.com>
Source record: 38348
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jul 16, 6:07 pm, "NotMe" <m...@privacy.net> wrote:

> > The only FM on standard TV is the audio. Video is vestigial sideband AM.

> I want it to be the opposite.

I want you to go away until you at least have a high school education
in science and techology and learn how to use Google.

I don't think either is going to happen.

--
Jim Pennino

Remove .spam.sux to reply.

3539. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 00:55:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hv40n4-p4g.ln1@mail.specsol.com>
Source record: 38349
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> On Wed, 18 Jul 2007 00:05:01 GMT, jimp@specsol.spam.sux.com wrote in
> <nn10n4-h67.ln1@mail.specsol.com>:

> >In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> >> On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
> >> >Cell phones already use frequencies in the 3 GHz region.
> >
> >> False.
> >
> >1.9 GHz is in the ->region>- of 3 GHz.

> False.

It certainly is within about 20%.

--
Jim Pennino

Remove .spam.sux to reply.

3540. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 01:08:23 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <pvpq93pai7i9q57845eeufvq7ip743ce8l@4ax.com>
Source record: 38350
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On Wed, 18 Jul 2007 00:55:01 GMT, jimp@specsol.spam.sux.com wrote in
<hv40n4-p4g.ln1@mail.specsol.com>:

>In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
>> On Wed, 18 Jul 2007 00:05:01 GMT, jimp@specsol.spam.sux.com wrote in
>> <nn10n4-h67.ln1@mail.specsol.com>:
>
>> >In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
>> >> On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
>> >> >Cell phones already use frequencies in the 3 GHz region.
>> >
>> >> False.
>> >
>> >1.9 GHz is in the ->region>- of 3 GHz.
>
>> False.
>
>It certainly is within about 20%.

No radio engineer would agree.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>
```

3541. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 01:09:50 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <e2qq935o2igeburdkrklsq7mpkit7ggllb@4ax.com>
Source record: 38351
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Wed, 18 Jul 2007 00:45:00 GMT, jimp@specsol.spam.sux.com wrote in
<b040n4-vid.ln1@mail.specsol.com>:

>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>> On Jul 16, 6:07 pm, "NotMe" <m...@privacy.net> wrote:
>
>> > The only FM on standard TV is the audio. Video is vestigial sideband AM.
>
>> I want it to be the opposite.
>
>I want you to go away until you at least have a high school education
>in science and techology and learn how to use Google.
>
>I don't think either is going to happen.

Probably not, but that's Usenet. ;)

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3542. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 01:55:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <9a80n4-a0o.ln1@mail.specsol.com>
Source record: 38352
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> On Wed, 18 Jul 2007 00:55:01 GMT, jimp@specsol.spam.sux.com wrote in
> <hv40n4-p4g.ln1@mail.specsol.com>:

> >In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> >> On Wed, 18 Jul 2007 00:05:01 GMT, jimp@specsol.spam.sux.com wrote in
> >> <nn10n4-h67.ln1@mail.specsol.com>:
> >
> >> >In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> >> >> On Sun, 15 Jul 2007 20:45:02 GMT, jimp@specsol.spam.sux.com wrote in
> >> >> >Cell phones already use frequencies in the 3 GHz region.
> >> >
> >> >> False.
> >> >
> >> >1.9 GHz is in the ->region>- of 3 GHz.
> >
> >> False.
> >
> >It certainly is within about 20%.

> No radio engineer would agree.

That should have been about 30%, but in any case, I am an engineer
and there isn't a whole hell of a lot of anything different between
1.9 GHz and 3 GHz.

What? Some trivial differences in path losses? Antennas a bit different
in size by what, 4 mm unless I slipped a decimal point in my head?

--
Jim Pennino

Remove .spam.sux to reply.

3543. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 02:21:35 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <3soq93p7gb0jokceaf73shc2n2jpjtahqo@4ax.com>
Source record: 38353
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Mon, 16 Jul 2007 12:28:07 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>John Fields wrote:
>
>> On Fri, 06 Jul 2007 19:04:00 -0000, Jim Kelley <jwkelley@uci.edu>
>> wrote:
>
>> In your example, with 300Hz and 400Hz as the carriers, the sidebands
>> would be located at:
>>
>> f3 = f1 + f2 = 300Hz + 400Hz = 700Hz
>>
>> and
>>
>> f4 = f2 - f1 = 400Hz - 300Hz = 100Hz
>>
>>
>> both of which are clearly within the range of frequencies to which
>> the human ear responds.
>
>Indeed. We would hear f3 and f4 if they were in fact there.
>
>> Your use of the term "beat frequency" is confusing since it's
>> usually used to describe the products of heterodyning, not the
>> audible warble caused by the vector addition of signals close to
>> unison.
>
>The term is commonly used in describing the results of interference in
>time, as well as for mixing.
>
>> Since the response of the ear is non-linear in amplitude it has no
>> choice _but_ to be a mixer and create sidebands.
>
>Perhaps you're confusing log(sin(a)+sin(b)) with
>log(sin(a))+log(sin(b)).

Perhaps, but I don't think either of those is correct, since for
mixing to occur (AIUI, for sidebands to be generated) the sine waves
themselves must be multiplied at the lowest level of the equation
instead of added.

That is, the solution of

log(sin(a)+sin(b))

will describe the numerical value of the logarithm of the vector sum
of two sine waves, and since the addition created no sidebands, the
output of the circuitry providing the logarithmic transfer function
will only be the instantaneous value of the logarithm of the vector
sum of the amplitudes of both signals.

Similarly,

log(sin(a))+log(sin(b))

describes the addition of the logarithm of the amplitude of sin(a)
to the logarithm of the amplitude of sin(b), which still produces
only a sum.

That is, no sidebands.

>If you don't mind me asking, where did you get this notion about the
>ears creating sidebands?

Well, whether I mind or not it seems you've asked anyway, so your
concern for my sensitivity is feigned.

That, coupled with your relegating it to being a "notion", seems to
be designed to discredit the hypothesis, offhandedly, and make me
work against a headwind in order to prove it valid, with you being
the negative authoritarian blowhard detractor.

If you're really interested in the subject I'll be happy to discuss
it with you if you can keep your end of the discussion objective and
free from pejorative comments.

Otherwise, piss off. ;^) <-- Note tongue-in-cheek smiley, :-)

--
JF

3544. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 02:36:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <djuq939v56jed9de988tflb1cd2cu247cj@4ax.com>
Source record: 38354
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

jimp@specsol.spam.sux.com hath wroth:

>John Navas <spamfilter1@navasgroup.com> wrote:
>> No radio engineer would agree.

I are an radio/RF/wireless/communications/whatever engineer and I
agree with John Navas that cellular is nowhere near 3GHz.

>That should have been about 30%, but in any case, I am an engineer
>and there isn't a whole hell of a lot of anything different between
>1.9 GHz and 3 GHz.

Baloney. See:
<http://www.ntia.doc.gov/osmhome/allochrt.pdf>
<http://www.fcc.gov/oet/spectrum/table/fcctable.pdf>
Zoom in to the area between 1.9GHz and 3.0GHz. There's a huge amount
of point to point, wi-fi, WiMax, satellite, XM/Serius, radar,
military, etc, stuff in that area. That's also where Sprint and
others have recently purchased bandwidth for advanced data services.

>What? Some trivial differences in path losses? Antennas a bit different
>in size by what, 4 mm unless I slipped a decimal point in my head?

There's no disgrace in admiting that you've made a misake. There's
plenty in trying to bluster your way out of admitting it followed by
trying to trivialize your mistake.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3545. Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 03:16:53 UTC
From: Harry7 <cpa599@gmail.com>
Message-ID: <1184728613.748533.117320@g12g2000prg.googlegroups.com>
Source record: 38355

Has anyone modeled a 4 or 5 wire cage dipole vs a single wire dipole -
same height, same freq.

I'm curious as to broaside gain comparison & 2:1 bandwidth. Also horz
& vert. beamwidth between -3 DB points.

I do not have modeling software.

Terry
W8EJO

3546. Re: Ameritron RCS-4 Remote Coax Switch Question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 04:01:05 UTC
From: nuttin <nuttin@nowhar.net>
Message-ID: <xbednTADCcnjDQDbnZ2dnUVZ_vjinZ2d@hawaiiantel.net>
Source record: 38356

Jim Lux wrote:

> nuttin wrote:
>> Jim Lux wrote:
>>
>>
>>>nuttin wrote:
>>>
>>>>I am going to install one of these units at my location.
>>>>
>>>>The printed material that came with the unit says nothing should be
>>>>between the control box and the relay box.
>>>
>>>In particular, anything that is a DC short to ground, or a DC open in
>>>the transmission line (such as some transient suppressors)..
>>>
>>>It sends AC (actually either or both halves of rectified AC) up the wire
>>>to control the relays.
>>>
>>>
>>>>Well, does this mean the control box will handle the 1200-1500 watts
>>>>from my linear? that would be the last piece of equipment in the line.
>>>>
>>>>Need some input please!
>>>>
>>
>>
>>
>> I know how it works, what I want to know is if my control box - located
>> right after the linear can handle the power.
>>
>> There is no power rating in my couple sheets of instructions
>
> We use a couple of them here at JPL (W6VIO) with a kilowatt with no
> problem. The power limiting device is the series blocking capacitor (a
> couple disk ceramics in parallel, I think) which would have to carry the
> full RF current (say, 5-10 Amps). I don't know that we've run full
> power in a 100% duty factor application like RTTY or SSTV, but
> certainly, it's stood up to CW contesting.

thanks, thats exactly what I needed to know.

3547. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 04:05:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <2mf0n4-gie.ln1@mail.specsol.com>
Source record: 38357
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Jeff Liebermann <jeffl@cruzio.com> wrote:
> jimp@specsol.spam.sux.com hath wroth:

> >John Navas <spamfilter1@navasgroup.com> wrote:
> >> No radio engineer would agree.

> I are an radio/RF/wireless/communications/whatever engineer and I
> agree with John Navas that cellular is nowhere near 3GHz.

> >That should have been about 30%, but in any case, I am an engineer
> >and there isn't a whole hell of a lot of anything different between
> >1.9 GHz and 3 GHz.

> Baloney. See:
> <http://www.ntia.doc.gov/osmhome/allochrt.pdf>
> <http://www.fcc.gov/oet/spectrum/table/fcctable.pdf>
> Zoom in to the area between 1.9GHz and 3.0GHz. There's a huge amount
> of point to point, wi-fi, WiMax, satellite, XM/Serius, radar,
> military, etc, stuff in that area. That's also where Sprint and
> others have recently purchased bandwidth for advanced data services.

> >What? Some trivial differences in path losses? Antennas a bit different
> >in size by what, 4 mm unless I slipped a decimal point in my head?

> There's no disgrace in admiting that you've made a misake. There's
> plenty in trying to bluster your way out of admitting it followed by
> trying to trivialize your mistake.

I agree there is a lot of stuff allocated between 1.9 GHz and 3 GHz,
but FCC regulations wasn't the point.

Lemme try again.

Put up two transmitters with everything identical in terms of lambda,
one on 1.9 GHz, one on 3 GHz.

Run around all you want with a field strength meter.

There isn't going to be spit worth of difference.

Antenna sizes? A matter of millimeters.

Equipment construction techniques, part availability, etc? Negligable
differences.

There isn't much difference between 2 GHz radio and 3 GHz radio.

Do the above with 800 MHz and 3 GHz. Now you start seeing some
differences.

--
Jim Pennino

Remove .spam.sux to reply.

3548. Re: Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 04:19:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <iu4r93lepamthcc6l3gi0v3m5osbhscd7c@4ax.com>
Source record: 38358

On Wed, 18 Jul 2007 03:16:53 -0000, Harry7 <cpa599@gmail.com> wrote:

>Has anyone modeled a 4 or 5 wire cage dipole vs a single wire dipole -
>same height, same freq.

Hi Terry,

Frequently. However, there is no particular reason to build one for
just one frequency - that isn't its best application.

>I'm curious as to broaside gain comparison & 2:1 bandwidth. Also horz
>& vert. beamwidth between -3 DB points.

It is not a "gain" antenna, so no surprises to be found.

>I do not have modeling software.

Try this link:
http://home.comcast.net/~kb7qhc/antennas/verticals/Cage/cage.htm

Not a dipole, but it exhibits the chief characteristic of wide band
design, and relative gain that is roughly equivalent to any thin wire.

73's
Richard Clark, KB7QHC

3549. Re: Odd problem with 6/2/70 triband vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 04:22:50 UTC
From: "Bob D." <bobmgtd@insightbb.com>
Message-ID: <3v6dnRkjHOgbCADbnZ2dnUVZ_j6dnZ2d@insightbb.com>
Source record: 38359

I have a 6m/2m/70cm Diamond V2000 and a 2m/70cm Workman (that looks a lot like the V2000). I'm getting 2:1 @ 2m on both of these antennas. (1:1 @ 6m on the V2000, I don't have an SWR bridge for 70cm).

My 2:1 sounds high, certainly 10:1 is too high.

Is anyone getting better than 2:1 @ 2m with the V2000?

--
Bob D. ND9B

"Ed Cregger" <ecregger@bellsouff.net> wrote in message
news:Ki8ni.34$KG5.18@bignews9.bellsouth.net...
>
> "Diogel" <Diogel@DontExist.com> wrote in message
> news:9ovp93tg648mln1e46jh72goshbgvrctgt@4ax.com...
>> Hi
>>
>> I have not had much success with a commercial tri band 6M/2M/70cm
>> vertical. I hope you know the type I am refering to, 2.5M high with
>> three radials, looks like two for 70cm and one loaded radial for
>> 6M/2M.
>>
>> I have never had any success with this antenna in the attic so did
>> some experiments with the antenna on a 8 foot glass fibre pole in the
>> garden. SWR and radiation were perfect until I rotated the antenna
>> with the loaded radial facing the house about 20 feet away, then SWR
>> climbs to 10:1 on 2M but is still perfect on 70cm ???. Not tried 6M
>> yet.
>>
>> Any idears whats happening ?.
>>
>> Tia
>>
>> Dio
>
>
> Your antenna sounds as though it is a Diamond V2000, or Comet equivalent.
> If so, those are not radials, but decoupling stubs. Furthermore, the
> antenna was designed to be mounted on a metal mast, not a non conducting
> mast. I suppose you could run a length of wire alongside the non
> conducting mast to give it the metal that it needs.
>
> I suspect that your high swr situation has more to do with a loose
> connector than with the decoupling stub pointing at the house

> (coincidence).
>
> I used to operate with a Diamond V2000 some years ago and it did need to
> have the mounting mast capable of electric conduction, IIRC.
>
> Ed, NM2K
>
> I have a bad case of vascular demensia, so take what I say with a grain of
> salt.
>

3550. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 04:53:10 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <469D9CB6.1A35A5C5@earthlink.net>
Source record: 38360
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:
>
> I've once listened to the first five harmonics of a
> powerful medium wave transmitter (400 kW) at
> a distance of some 300 m.
> All harmonics gave normal audio; no strange
> switching effects (Sony ICF-7600D).
>
> What I'd like to know is if in such an 'experiment'
> it can be excluded that (some of) these signals are
> generated by the receiver itself.

That much power that close to the receiver? Its a wonder you didn't
destroy the receiver's frontend.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3551. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 06:09:37 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469dae6f$0$20533$4c368faf@roadrunner.com>
Source record: 38361
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Fields" <jfields@austininstruments.com> wrote in message
news:qf9h93du5q10e0d34nl147615fk88452sg@4ax.com...
> On Fri, 06 Jul 2007 19:04:00 -0000, Jim Kelley <jwkelley@uci.edu>
> wrote:

<snip>

>
> ---
> Well, I'm just back from the Panama Canal Society's 75th reunion and
> I haven't read through the rest of the thread, but it case someone
> else hasn't already pointed it out to you, it seems you've missed
> the point that a non-linear detector, (the human ear, for example)
> when presented with two sinusoidal carriers, will pass the two
> carrier frequencies through, as outputs, as well as two frequencies
> (sidebands) which are the sum and difference of the carriers.

The human auditory system has many components,
some linear and some not. One must consider which
component is in play when considering whether there
is mixing.
As a first order approximation: the cochlea is a continous
array of resonators that separates the frequency components
the incoming signal. That is pretty linear.
Then the system assesses the amplitudes of the
various separated components. Assessing amplitude
is a nonlinear process.

The cochlea's ability to separate frequencies is not perfect.
If two frequency components are too close the
cochlea is not able to separate them before determining
amplitude. In which case intermodulation occurs in
detecting amplitude and thus there is a 'beat'.

If a 300 Hz tone and a 400 Hz tone are coming in then
the cochlea can separate them into independent areas
and assess their amplitudes independently. No beat.
If the two tones are too close, say 400 Hz and 410
Hz the cochlea can't separate them into separate
areas and assesses the amplitude of the sum of the
two tones. Since amplitude detection is nonlinear
there is intermodulation in that case and thus a beat.

To do amplitude detection the ear does something
like take only the positive half of the
signal, or take the positive absolute value of the
signal or square the signal. Then it
averages it (or otherwise lowpass it).
The first step is nonlinear. It produces intermodulation
if there is more than one frequency component
present in the band of interest.

With a single sine wave input the nonlinear
part of the amplitude detection gives a DC term and
various harmonics of the sine wave. The averaging
filter filters out all the harmonics and leaves
the DC 'amplitude' value.

If there are two frequencies close enough that they
both get into the same amplitude detector
then the nonlinearity of amplitude detection
results in intermodulation.
That gives a DC and a sum and a difference
frequency and harmonics. The averaging lets only
the DC and the difference frequency through. The
difference frequency is the beat.

Thus two tones separated sufficiently in frequency
produce no beat. Two tones within 20 Hz or
so produce a difference frequency beat but no
sum frequency tone.

<snip>

>
> ---
> No, it doesn't.
>
> Since the response of the ear is non-linear in amplitude it has no
> choice _but_ to be a mixer and create sidebands.

Only if the tones are not separated in frequency
by the cochlea first.

>
> What you see on an oscilloscope are the time-varying amplitude
> variations caused by the linear vector summation of two signals
> walking through each other in time, and what you see on a spectrum
> analyzer is the two spectral lines caused by two signals adding, not
> mixing. If you want to see what happens when the two signals hit
> the ear, run them through a non-linear amp before they get to the
> spectrum analyzer and you'll see at least the two original signals
> plus their two sidebands.

Actually the nonlinear part is in the amplitude detection
which is present toward the end of the chain in both human
hearing and in spectrum analyzers.

<snip>

3552. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 06:37:58 UTC
From: "Roger (K8RI)" <validaddress@my.com>
Message-ID: <dqcr93durc03lunm8u7ert8jul1qjaeho8@4ax.com>
Source record: 38362

On Tue, 17 Jul 2007 04:48:48 -0700, Denny <k8do@mailblocks.com> wrote:

>I use 4 foot to 8 foot long, half inch dia., copper pipe put into the
>ground with the use of a water hose clamped to the top of the pipe and
>a pump - this hydraulically drills the pipe into the soil... They are
>laid out in a grid around the towers and along the back side of the
>shack with 16 feet separation... They are all interconnected with bare
>copper #2 gauge, stranded ground wire (mostly) which is slit into the
>ground an inch or so to keep it away from the mower blades... All of
>this creates a large area of metal in contact with the soil..
>
>All of this agonizing over contact of hydraulically driven pipe versus
>pounded stakes, etc., etc., amounts to counting the number of angels
>dancing on the head of a pin... Just get in as many ground pipes/
>stakes as you can on 16 foot centers, interconnect them in a grid with
>bare wire slit into the soil, run heavy gauge wire from the stake just
>outside of wall of the house/shack to the buss bar behind the radio,
>and be happy...

Like Denny I have a lot of ground rods (32 or 33) in a network
CadWelded (TM) to over 600 feet of bare #2 copper wire that ties into
the station forming a single point ground or as near to it as I can
get. The coax shields are grounded at the top and bottom of the tower
as well as to a ground plate where they enter the house.
>
>I also competely isolate the radios and amps when they are not in
>use...
>
Unlike him I rarely disconnect anything for several reasons. The
first is the stuff is just too difficult to get to. The second is, I'm
lazy and although I could disconcert the station when not in use it
takes a good 10 to 15 minutes to get things hooked back up. Typically
I want to turn it on, listen, and then operate if the bands are open
or shut down if not. In addition, nature threw me a curve a bit over 3
months ago making it very difficult for me to get into places like
behind the rigs to disconnect things although I hope to be able to get
back in there and up the tower again before long.
One other thing and it may be, and probably is due to luck, but with
an average of three verified direct hits on the tower per year I've
had no damage to any rig since finishing up the ground system.

Roger (K8RI)

>denny / k8do

3553. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 06:52:07 UTC
From: "Ron Baker, Pluralitas!" <this@aint.me>
Message-ID: <469db833$0$20583$4c368faf@roadrunner.com>
Source record: 38363
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
news:469d3998$3$339$e4fe514c@news.xs4all.nl...
>
> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
> news:469aafbf$0$16607$4c368faf@roadrunner.com...
>>
>> "Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
>> news:469a9790$1$339$e4fe514c@news.xs4all.nl...
>>> Ron Baker, Pluralitas! wrote:
>>>> "Hein ten Horn" wrote:
>>>>> Ron Baker, Pluralitas! wrote:
>>>>>> Hein ten Horn wrote:
>>>>>>> Ron Baker, Pluralitas! wrote:
>>>>>>>> Hein ten Horn wrote:
>>>>>
>>>>>>>>> As a matter of fact the resulting force (the resultant) is
>>>>>>>>> fully determining the change of the velocity (vector) of
>>>>>>>>> the element.
>>>>>>>>> The resulting force on our element is changing at the
>>>>>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>>>>>> one and only 222 Hz.
>>>>>>>>
>>>>>>>> Your idea of frequency is informal and leaves out
>>>>>>>> essential aspects of how physical systems work.
>>>>>>>
>>>>>>> Nonsense. Mechanical oscillations are fully determined by
>>>>>>> forces acting on the vibrating mass. Both mass and resulting force
>>>>>>> determine the frequency. It's just a matter of applying the laws of
>>>>>>> physics.
>>>>>>
>>>>>> You don't know the laws of physics or how to apply them.
>>>>>
>>>>> I'm not understood. So, back to basics.
>>>>> Take a simple harmonic oscillation of a mass m, then
>>>>> x(t) = A*sin(2*pi*f*t)
>>>>> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
>>>>> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
>>>>> hence
>>>>> a(t) = -(2*pi*f)^2*x(t)
>>>>
>>>> Only for a single sinusoid.
>>>>
```

>>>>> and, applying Newton's second law,
>>>>> Fres(t) = -m*(2*pi*f)^2*x(t)
>>>>> or
>>>>> f = (-Fres(t) / m / x(t))^0.5 / (2pi).
>>>>
>>>> Only for a single sinusoid.
>>>> What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)
>>>
>>> In the following passage I wrote "a relatively
>>> slow varying amplitude", which relates to the
>>> 4 Hz beat in the case under discussion (f1 =
>>> 220 Hz and f2 = 224 Hz) where your
>>> expression evaluates to
>>> x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t),
>>> indicating the matter is vibrating at 222 Hz.
>>
>> So where did you apply the laws of physics?
>> You said, "It's just a matter of applying the laws of
>> physics." Then you did that for the single sine case. Where
>> is your physics calculation for the two sine case?
>> Where is the expression for 'f' as in your first
>> example? Put x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t)
>> in your calculations and tell me what you get
>> for 'f'.
>>
>> And how do you get 222 Hz out of
>> cos(2pi 2 t) * sin(2pi 222 t)
>> Why don't you say it is 2 Hz? What is your
>> law of physics here? Always pick the bigger
>> number? Always pick the frequency of the
>> second term? Always pick the frequency of
>> the sine?
>> What is "the frequency" of
>> cos(2pi 410 t) * cos(2pi 400 t)
>>
>>
>> What is "the frequency" of
>> cos(2pi 200 t) + cos(2pi 210 t) + cos(2pi 1200 t) + cos(2pi 1207 t)
>>
>>
>>>
>>>>> So my statements above, in which we have
>>>>> a relatively slow varying amplitude (4 Hz),
>>
>> How do you determine amplitude?
>> What's the math (or physics) to derive
>> amplitude?
>>
>>>>> are fundamentally spoken valid.
>>>>> Calling someone an idiot is a weak scientific argument.

>>>>
>>>> Yes.
>>>> And so is "Nonsense." And so is your idea of
>>>> "the frequency".
>>>
>>> Note the piquant difference: nonsense points
>>> to content and we're not discussing idiots
>>> (despite a passing by of some very strange
>>> postings. :)).
>>>
>>>>> Hard words break no bones, yet deflate creditability.
>>>
>>> gr, Hein
>>>
>>>
>>
>>
> Well, I think I've had it. A 'never' ending story.
> Too much to straighten out. Too much comment
> needed. Questions moving away from the subject.
> No more indistinguishable close frequencies.
> No audible beat, no slow changing envelopes.
>
> Take a plot, use a high speed camera or whatever
> else and see for yourself the particle is vibrating at a
> period in accordance with 222 Hz. In my view I've
> sufficiently underpinned the 222 Hz frequency.
> If you disagree, then do the job. Show your
> frequencies and elucidate them. (No hint needed,
> I guess.)
>
> gr, Hein
>
>

Bravo. Well done. What an impressive
display of applying the laws of physics.
Newton, Euler, Gauss, and Fourier have nothing
on you.

3554. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 08:42:12 UTC
From: LA4RT Jon Kåre Hellan <dev@null.com>
Message-ID: <1m7ioy3xy3.fsf@persaunet.uninett.no>
Source record: 38364
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

szilagyic <chris@groupinfo.com> writes:

> On Jul 17, 4:44 am, LA4RT Jon Kåre Hellan <d...@null.com> wrote:
>> Around here, marginal areas mostly have 900 MHz. So if you need an
>> external antenna at all, you probably need one for 900.
>>
>> OP: There has to be something wrong with your antenna system.
>>
>> 73
>> Jon
>
> Thanks for the reply. When you say 900 MHz, what frequency range
> should I look for, for an antenna? For instance, the one I have now
> claims it covers 824-896Mhz, so apparently it doesn't cover 900?

Sorry, I wasn't clear enough. And come to think of it, I probably made some unwarranted assumptions. I'm in Europe. Cell phones here use the 900 MHz band and the 1800 MHz band. All phones are GSM. I believe you are in the U.S., where there's both GSM, CDMA and some analog, and frequencies are different. In the U.S., GSM uses the 800 MHz and 1900 MHz bands, and I would expect CDMA to use the same bands.

In the U.S., rural areas are typically covered by 800 MHz networks, as you want lower frequencies for larger cells. But you'll have to check if this is actually the case for you. If it is, your antenna is cut for the right frequency, but there seems to be something wrong with it.

Good luck
Jon

3555. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 12:25:30 UTC
From: goog49@cox.net
Message-ID: <1184761530.737391.92050@i13g2000prf.googlegroups.com>
Source record: 38365
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

On Jul 14, 10:57 pm, Radium <gluceg...@gmail.com> wrote:
> George Dishman says Karl Uppiano is wrong about AM radio, carrier-
> frequencies, and aliasing. Who should I believe and why?
>
> On Jul 14, 4:11 pm, "George Dishman" <geo...@briar.demon.co.uk> wrote
> inhttp://groups.google.com/group/sci.astro.amateur/msg/1d3b52bbf05843c0...
> :
>
>
>
>
>
> > "Radium" <gluceg...@gmail.com> wrote in message
>
> >news:1184446739.705444.308660@i38g2000prf.googlegroups.com...
>
> > > On Jul 14, 1:17 am, "George Dishman" <geo...@briar.demon.co.uk> wrote:
> > >> "Radium" <gluceg...@gmail.com> wrote in message
>
> > >>news:1184373407.506861.132200@m37g2000prh.googlegroups.com...
> > >> ..
>
> > >> > Isn't it true that the carrier-frequency must be at least 2x the
> > >> > highest intended frequency of the modulator signal?
>
> > >> No.
>
> > > Karl Uppiano sharply disagrees.
>
> > > Karl Uppiano explained in
> > >http://groups.google.com/group/sci.energy/msg/a74d4d8ddcea47a5?hl=en&
>
> > He is wrong. The basis of AM is that the sine wave
> > carrier is multiplied by another signal which can be
> > treated as a sum of sines. The relevant maths is:
>
> > http://www.sosmath.com/trig/prodform/prodform.html
>
> > If the carrier frequency if fc and the modulation has
> > frequencies up to fm then you get sidebands like
> > this:
>

> > http://en.wikipedia.org/wiki/Image:Am-sidebands.png
>
> > If you multiply 44.1kHz by a band from 20Hz to 20kHz,
> > you get an upper sideband given 44.12kHz to 64.1kHz
> > and a lower sideband from 44.08kHz down to 24.1kHz
>
> > >> The highest modulating frequency for AM must be less than 1/2 the carrier
> > >> frequency. Conversely, the lowest carrier frequency must be twice the
> > >> highest modulating frequency. Period. I don't care what specific
> > >> frequencies
> > >> and/or energies and/or colors you propose.
>
> > >> If you want to modulate at 20KHz, the carrier must be at least 40KHz. It
> > >> is
> > >> no coincidence that CD audio uses a 44.1KHz sample rate. It is
> > >> essentially
> > >> the same principle. If you exceed the Nyquist criterion, the sidebands
> > >> overlap the baseband (i.e., aliasing occurs) and you cannot unambiguously
> > >> decode the original modulation.
>
> > Nyquist applies to sampling.
>
> > > So who is right and who is wrong?
>
> > Look at the maths, it is never wrong. Modulating fc
> > with fm gives a lowest frequency of fc-fm so as long
> > as fc > fm, you don't get aliasing.
>
> > George
>
> So is it possible for me to receive a 10 KHz audio sine-wave tone on a
> 1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
> Shannon. Right?- Hide quoted text -
>
> - Show quoted text -

Depends on what you mean by a "10 KHz audio sine-wave", a "1 Hz AM
radio", and on what you mean by "receive".

3556. Re: Surface dust on the orbiting Universe

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 15:46:13 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7lck4$1k5s$1@f04n12.cac.psu.edu>
Source record: 38366

Mike Coslo wrote:
>
> I could just hug myself! ;^)
>
> In the end, we shall all see that indeed it is turtles all the way
> down....
>
> Let us now sing
>
> The turtles are ancient and they are justified,
>
> The source of all matter and wit.
>
> The dust of the cosmos proper is naught but turtle.....
>
>
> Let this be a warning to everyone, don't mix Alka-Seltzer plus and
> Starbucks coffee.......

Yay! I killed the thread!

3557. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 16:32:29 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1184776349.707836.63460@i13g2000prf.googlegroups.com>
Source record: 38367
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

On Jul 17, 4:44 am, LA4RT Jon Kåre Hellan <d...@null.com> wrote:
> David Lesher <wb8...@panix.com> writes:
> > You <Y...@shadow.orgs> writes:
>
> >>> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
> >>> to-FME adapter, then to the Sierra card.
>
> >>Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
> >>Frequencies......
>
> > I would be more polite but would say 30 ft of RG-58 is an excellent
> > dummy load at 1900...
>
> Indeed.
>
> But nonetheless, an el cheapo yagi for 900 MHz GSM with 10 m of RG-58
> boosted the indication on my phone from no bars to all 5 bars. The
> yagi sees more signal because it is higher up. The yagi gain is
> probably just a but more than cable + connector loss. And it looks
> like the built in antenna in the phone has a significant negative
> gain.
>
> Around here, marginal areas mostly have 900 MHz. So if you need an
> external antenna at all, you probably need one for 900.
>
> OP: There has to be something wrong with your antenna system.
>
> 73
> Jon

Hello and thank you for the reply. I had asked around in the groups
originally

(http://groups.google.com/group/alt.cellular.cingular/browse_frm/
thread/3f05f40902745b5/a91191a5bd3d3eb1?lnk=st&q=chris%40groupinfo.com
+frequencies&rnum=12#a91191a5bd3d3eb1)

and was told the frequencies were 800 MHz and 1900 MHz, so this is why
I chose this antenna. For 900 MHz, what frequency range should an
antenna cover to make sure it would work? I will do some more
checking to see if this might be our problem.

Thank you!

3558. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 17:44:02 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7ljh1$1lhk$1@f04n12.cac.psu.edu>
Source record: 38368

Denny wrote:

> All of this agonizing over contact of hydraulically driven pipe versus
> pounded stakes, etc., etc., amounts to counting the number of angels
> dancing on the head of a pin

Amen Brother!

-73 de Mike KB3EIA -

3559. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 17:59:17 UTC
From: isw <isw@witzend.com>
Message-ID: <isw-F5C128.10591218072007@newsgroups.comcast.net>
Source record: 38369
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <469D9CB6.1A35A5C5@earthlink.net>,
"Michael A. Terrell" <mike.terrell@earthlink.net> wrote:

> Hein ten Horn wrote:
> >
> > I've once listened to the first five harmonics of a
> > powerful medium wave transmitter (400 kW) at
> > a distance of some 300 m.
> > All harmonics gave normal audio; no strange
> > switching effects (Sony ICF-7600D).
> >
> > What I'd like to know is if in such an 'experiment'
> > it can be excluded that (some of) these signals are
> > generated by the receiver itself.
>
>
> That much power that close to the receiver? Its a wonder you didn't
> destroy the receiver's frontend.

That particular receiver doesn't have much of a "front end"; diodes
(with protection) and straight into the first mixer. No RF stage, tuned
or otherwise.

Isaac

3560. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 18:44:45 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <469E5F9D.7134626E@earthlink.net>
Source record: 38370
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

isw wrote:
>
> That particular receiver doesn't have much of a "front end"; diodes
> (with protection) and straight into the first mixer. No RF stage, tuned
> or otherwise.

It can exceed the PIV of the protection diodes and cause them to
short, or explode. That crappy Sony design is where the harmonics came
from. The diodes, (or any other semiconductor) with enough RF can
generate a lot of spurious signals. It can even come from a rusty joint
in the area.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3561. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 18:57:40 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f7lnra$o9m$1@f04n12.cac.psu.edu>
Source record: 38371

jimp@specsol.spam.sux.com wrote:

>
> Try this one:
>
> http://www.rfcafe.com/references/electrical/amplitude_modulation.htm
>

Well, what do ya know! I've been avoiding any threads with Mr Radium in
them, but for some reason opened your post.

Handy site, this RF-Cafe. Thanks for the link Jim!

- 73 de Mike KB3EIA -

3562. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 19:59:01 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <5g79o6F3dotp4U1@mid.individual.net>
Source record: 38372
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

<goog49@cox.net> wrote ...
> Depends on what you mean by a "10 KHz audio sine-wave",
> a "1 Hz AM radio", and on what you mean by "receive".

He doesn't mean *anything* by them. He is a troll.
He apparently threads technical terms together with some sort
of random-phrase generator and gullible people fall for it.

3563. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 19:59:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f7lri6$i39$1@news.service.uci.edu>
Source record: 38373
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Fields wrote:

> log(sin(a))+log(sin(b))
>
>
> describes the addition of the logarithm of the amplitude of sin(a)
> to the logarithm of the amplitude of sin(b), which still produces
> only a sum.
>
> That is, no sidebands.

log(x)+log(y)=log(x*y)

jk

3564. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 20:42:49 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469e7dee$1$330$e4fe514c@news.xs4all.nl>
Source record: 38374
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Michael A. Terrell wrote:
> isw wrote:
>>
>> That particular receiver doesn't have much of a "front end"; diodes
>> (with protection) and straight into the first mixer. No RF stage, tuned
>> or otherwise.
>
> It can exceed the PIV of the protection diodes and cause them to
> short, or explode. That crappy Sony design is where the harmonics came
> from. The diodes, (or any other semiconductor) with enough RF can
> generate a lot of spurious signals. It can even come from a rusty joint
> in the area.

Is the ICF-SW7600GR significantly better performing
than the ICF-7600D on this?

gr, Hein

3565. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 20:43:28 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469e7dee$2$330$e4fe514c@news.xs4all.nl>
Source record: 38375
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
"Ron Baker, Pluralitas!" <this@aint.me> wrote in message news:469db833$0$20583
> "Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
>> "Ron Baker, Pluralitas!" <this@aint.me> wrote in message
>>> "Hein ten Horn" <tenhornRemovE@ThiSraketnet.nl> wrote in message
>>>> Ron Baker, Pluralitas! wrote:
>>>>> "Hein ten Horn" wrote:
>>>>>> Ron Baker, Pluralitas! wrote:
>>>>>>> Hein ten Horn wrote:
>>>>>>>> Ron Baker, Pluralitas! wrote:
>>>>>>>>> Hein ten Horn wrote:
>>>>>>
>>>>>>>>> As a matter of fact the resulting force (the resultant) is
>>>>>>>>> fully determining the change of the velocity (vector) of
>>>>>>>>> the element.
>>>>>>>>> The resulting force on our element is changing at the
>>>>>>>>> frequency of 222 Hz, so the matter is vibrating at the
>>>>>>>>> one and only 222 Hz.
>>>>>>>>>
>>>>>>>>> Your idea of frequency is informal and leaves out
>>>>>>>>> essential aspects of how physical systems work.
>>>>>>>>
>>>>>>>> Nonsense. Mechanical oscillations are fully determined by
>>>>>>>> forces acting on the vibrating mass. Both mass and resulting force
>>>>>>>> determine the frequency. It's just a matter of applying the laws of
>>>>>>>> physics.
>>>>>>>
>>>>>>> You don't know the laws of physics or how to apply them.
>>>>>>
>>>>>> I'm not understood. So, back to basics.
>>>>>> Take a simple harmonic oscillation of a mass m, then
>>>>>> x(t) = A*sin(2*pi*f*t)
>>>>>> v(t) = d(x(t))/dt = 2*pi*f*A*cos(2*pi*f*t)
>>>>>> a(t) = d(v(t))/dt = -(2*pi*f)^2*A*sin(2*pi*f*t)
>>>>>> hence
>>>>>> a(t) = -(2*pi*f)^2*x(t)
>>>>>
>>>>> Only for a single sinusoid.
>>>>>
>>>>>> and, applying Newton's second law,
>>>>>> Fres(t) = -m*(2*pi*f)^2*x(t)
>>>>>> or
>>>>>> f = ( -Fres(t) / m / x(t) )^0.5 / (2pi).
```

>>>>>
>>>>> Only for a single sinusoid.
>>>>> What if x(t) = sin(2pi f1 t) + sin(2pi f2 t)
>>>>
>>>> In the following passage I wrote "a relatively
>>>> slow varying amplitude", which relates to the
>>>> 4 Hz beat in the case under discussion (f1 =
>>>> 220 Hz and f2 = 224 Hz) where your
>>>> expression evaluates to
>>>> x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t),
>>>> indicating the matter is vibrating at 222 Hz.
>>>
>>> So where did you apply the laws of physics?
>>> You said, "It's just a matter of applying the laws of
>>> physics." Then you did that for the single sine case. Where
>>> is your physics calculation for the two sine case?
>>> Where is the expression for 'f' as in your first
>>> example? Put x(t) = 2 * cos(2pi 2 t) * sin(2pi 222 t)
>>> in your calculations and tell me what you get
>>> for 'f'.
>>>
>>> And how do you get 222 Hz out of
>>> cos(2pi 2 t) * sin(2pi 222 t)
>>> Why don't you say it is 2 Hz? What is your
>>> law of physics here? Always pick the bigger
>>> number? Always pick the frequency of the
>>> second term? Always pick the frequency of
>>> the sine?
>>> What is "the frequency" of
>>> cos(2pi 410 t) * cos(2pi 400 t)
>>>
>>>
>>> What is "the frequency" of
>>> cos(2pi 200 t) + cos(2pi 210 t) + cos(2pi 1200 t) + cos(2pi 1207 t)
>>>
>>>
>>>>
>>>>>> So my statements above, in which we have
>>>>>> a relatively slow varying amplitude (4 Hz),
>>>
>>> How do you determine amplitude?
>>> What's the math (or physics) to derive
>>> amplitude?
>>>
>>>>>> are fundamentally spoken valid.
>>>>>> Calling someone an idiot is a weak scientific argument.
>>>>>
>>>>> Yes.
>>>>> And so is "Nonsense." And so is your idea of
>>>>> "the frequency".

>>>>
>>>> Note the piquant difference: nonsense points
>>>> to content and we're not discussing idiots
>>>> (despite a passing by of some very strange
>>>> postings. :)).
>>>>
>>>>>> Hard words break no bones, yet deflate creditability.
>>>
>> Well, I think I've had it. A 'never' ending story.
>> Too much to straighten out. Too much comment
>> needed. Questions moving away from the subject.
>> No more indistinguishable close frequencies.
>> No audible beat, no slow changing envelopes.
>>
>> Take a plot, use a high speed camera or whatever
>> else and see for yourself the particle is vibrating at a
>> period in accordance with 222 Hz. In my view I've
>> sufficiently underpinned the 222 Hz frequency.
>> If you disagree, then do the job. Show your
>> frequencies and elucidate them. (No hint needed,
>> I guess.)
>
> Bravo. Well done. What an impressive
> display of applying the laws of physics.
> Newton, Euler, Gauss, and Fourier have nothing
> on you.

Thanks for your constructive contributions.

gr, Hein

3566. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 20:44:07 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <469e7def$0$330$e4fe514c@news.xs4all.nl>
Source record: 38376
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote
> Hein ten Horn wrote:
>
>> That's a misunderstanding.
>> A vibrating element here (such as a cubic micrometre
>> of matter) experiences different changing forces. Yet
>> the element cannot follow all of them at the same time.
>> As a matter of fact the resulting force (the resultant) is
>> fully determining the change of the velocity (vector) of
>> the element.
>
>> The resulting force on our element is changing at the
>> frequency of 222 Hz, so the matter is vibrating at the
>> one and only 222 Hz.
>
> Under the stated conditions there is no sine wave oscillating at 222 Hz.
> The wave has a complex shape and contains spectral components at two
> distinct frequencies (neither of which is 222Hz).

Not a pure sine oscillation (rather than wave), but a near sine
oscillation at an exact period of 1/222 s. The closer the source
frequenties, the better the sine fits a pure sine. Thus if you
wish to get a sufficient near harmonic oscillation, conditions like
"slow changing envelope" are essential.

>>>It might be correct to say that matter is vibrating at an
>>>average, or effective frequency of 222 Hz.
>>
>>
>> No, it is correct. A particle cannot follow two different
>> harmonic oscillations (220 Hz and 224 Hz) at the same
>> time.
>
> The particle also does not average the two frequencies.

Hmm, let's examine this.
From the two composing oscillations you get the overall
displacement:
y(t) = sin(2 pi 220 t) + sin(2 pi 224 t)
From the points of intersection of y(t) at the time-axes you
can find the period of the function, so examine when y(t) = 0.
sin(2 pi 220 t) + sin(2 pi 224 t) = 0
(..)

(Assuming you can do the math.)
(..)
The solutions are:
t = k/(220+224) with k = 0, 1, 2, 3, etc.
so the time between two successive intersections is
Dt = 1/(220+224) s.
With two intersections per period, the period is
twice as large, thus
T = 2/(220+224) s,
hence the frequency is
f = (220+224)/2 = 222 Hz,
which is the arithmetic average of both composing
frequencies.

> The waveform which results from the sum of two pure sine waves is not a pure
> sine wave, and therefore cannot be accurately described at any single
> frequency.

As seen above, the particle oscillates (or vibrates) at 222 Hz.
Since the oscillation is non-harmonic (not a pure sine),
it needs several harmonic oscillations (frequencies,
here 220 Hz and 224 Hz) to compose the oscillation at 222 Hz.

>>>Obviously. It's a very simple matter to verify this by experiment.
>>
>> Indeed, it is. But watch out for misinterpretations of
>> the measuring results! For example, if a spectrum
>> analyzer, being fed with the 222 Hz signal, shows
>> that the signal can be composed from a 220 Hz and
>> a 224 Hz signal, then that won't mean the matter is
>> actually vibrating at those frequencies.
>
> :-) Matter would move in the same way the sound pressure wave does,

To be precise, this is nonsense, but I suspect you're trying
to state somewhat else, and since I'm not able to read your
mind today, I skip that part. :)

> the amplitude of which is easily plotted versus time using Mathematica,
> Mathcad, Sigma Plot, and even Excel. I think you should still give that a
> try.

No peculiarities found.

gr, Hein

3567. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 21:23:37 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <f7m0h6$m5m$1@news.service.uci.edu>
Source record: 38377
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:

> Hmm, let's examine this.
> From the two composing oscillations you get the overall
> displacement:
> y(t) = sin(2 pi 220 t) + sin(2 pi 224 t)
> From the points of intersection of y(t) at the time-axes you
> can find the period of the function, so examine when y(t) = 0.
> sin(2 pi 220 t) + sin(2 pi 224 t) = 0
> (..)
> (Assuming you can do the math.)
> (..)
> The solutions are:
> t = k/(220+224) with k = 0, 1, 2, 3, etc.
> so the time between two successive intersections is
> Dt = 1/(220+224) s.
> With two intersections per period, the period is
> twice as large, thus
> T = 2/(220+224) s,
> hence the frequency is
> f = (220+224)/2 = 222 Hz,
> which is the arithmetic average of both composing
> frequencies.

As I said before, it might be correct to say that the average, or
effective frequency is 222 Hz. But the actual period varies from
cycle to cycle over a period of 1/(224-220).

>>the amplitude of which is easily plotted versus time using Mathematica,
>>Mathcad, Sigma Plot, and even Excel. I think you should still give that a
>>try.
>
>
> No peculiarities found.

Perhaps you would agree that a change in period of less than 2% might
be difficult to observe - especially when you're not expecting to see
it. To more easily find the 'peculiarities' I suggest that you try
using more widely spaced frequencies.

> gr, Hein

gr right back at ya,

jk

3568. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 21:31:55 UTC
From: "Bob F." <bob@N0ZPAMfurtaw.com>
Message-ID: <96udnfDa3sgFGwPbnZ2dnUVZ_gidnZ2d@comcast.com>
Source record: 38378
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
>>>>
>>>> How do you determine amplitude?
>>>> What's the math (or physics) to derive
>>>> amplitude?

The fundamental formular Acos(B) + C is all you need to describe angular
modulation.
Changing the value of A over time determines the amplitude of an AM
modulated carrier.
Changing the value of B over time determines the amplitude of an FM
modulated carrier.
The rate of change of A or B changes the modulation frequency respectively.
C is DC, Y axis offset and has not been discussed here.

r, Bob F.
```

3569. Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-18 23:45:54 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.18.23.45.52.976854@from.qrz.com>
Source record: 38379

Anybody know where I can order some Polyphaser lightning arrestors over the web?

I tried their website and they have a very lame "request quote" page where you have to read what's on a very hard-to-decipher graphic, then copy that into a text box, before it will even accept your request. It took me seven (7) tries to type it in in a way the page would accept (and a few of those times I KNOW I did it correctly), and now a week later no one has responded.

I tried W. R. Block and (apparently) no way to order over the web.

I try to reserve the business day for business, and it is often difficult for me to try to call these places during business hours to place orders, and anyway, doesn't just about everybody know how to use the web to take orders, by now?

Tried Google and didn't get anything workable in the first two pages.

Are there any Polyphaser vendors with decent websites that will take online orders?

Thanks...

3570. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 00:12:49 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <4-ydnZ8sBaQcMQPbnZ2dnUVZ_h_inZ2d@bright.net>
Source record: 38380

Try http://www.aesham.com/

Scott
N0EDV

Rick (W-A-one-R-K-T) wrote:

> Anybody know where I can order some Polyphaser lightning arrestors over
> the web?
>
> I tried their website and they have a very lame "request quote" page where
> you have to read what's on a very hard-to-decipher graphic, then copy that
> into a text box, before it will even accept your request. It took me
> seven (7) tries to type it in in a way the page would accept (and a few of
> those times I KNOW I did it correctly), and now a week later no one has
> responded.
>
> I tried W. R. Block and (apparently) no way to order over the web.
>
> I try to reserve the business day for business, and it is often difficult
> for me to try to call these places during business hours to place orders,
> and anyway, doesn't just about everybody know how to use the web to take
> orders, by now?
>
> Tried Google and didn't get anything workable in the first two pages.
>
> Are there any Polyphaser vendors with decent websites that will take
> online orders?
>
> Thanks...
>

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

3571. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 00:23:39 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <iayni.12761$xK1.7576@newsfe16.phx>
Source record: 38381

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.18.23.45.52.976854@from.qrz.com...
>
> Anybody know where I can order some Polyphaser lightning arrestors over
> the web?
>
> I tried their website and they have a very lame "request quote" page where
> you have to read what's on a very hard-to-decipher graphic, then copy that
> into a text box, before it will even accept your request. It took me
> seven (7) tries to type it in in a way the page would accept (and a few of
> those times I KNOW I did it correctly), and now a week later no one has
> responded.
>
> I tried W. R. Block and (apparently) no way to order over the web.
>
> I try to reserve the business day for business, and it is often difficult
> for me to try to call these places during business hours to place orders,
> and anyway, doesn't just about everybody know how to use the web to take
> orders, by now?
>
> Tried Google and didn't get anything workable in the first two pages.
>
> Are there any Polyphaser vendors with decent websites that will take
> online orders?
>
> Thanks...
>
Try
http://www.dxengineering.com/products.asp?ID=98

http://www.hamradio.com/

http://www.universal-radio.com/catalog/protect/4640.html

Lamont

3572. Re: Where to order Polyphaser lightning arrestors? - THANKS

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 01:14:16 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.19.01.14.16.863526@from.qrz.com>
Source record: 38282

Thanks for the help on getting the Polyphase lightning arrestors.

I had previously tried Ham Radio Outlet, otherwise affectionately known around here as The Candy Store or The Toy Store (there's one down in Salem, NH, not far from here) with no luck finding anything on their website, then I contacted a friend of mine who works there and he assured me they have them or their equivalent.

3573. Connecting coax shield to tower near top

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 01:19:09 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.19.01.19.08.947822@from.qrz.com>
Source record: 38283

Many have advised connecting the shield of the coax to the tower up near the top.

Doesn't the connection to the antenna take care of that, assuming that the shield connection at the antenna connector is grounded (some aren't, I think that most are)?

Also, one is supposed to connect the coax shield to the tower again near the bottom, where the coax leaves the tower.

What is the best way to do that without damaging the coax or leaving its innards open to the elements?

3574. Re: Connecting coax shield to tower near top

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 01:28:15 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9971DA86961F5mcoslocomcastnet@216.196.97.136>
Source record: 38284

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in
news:pan.2007.07.19.01.19.08.947822@from.qrz.com:

>
> Many have advised connecting the shield of the coax to the tower up
> near the top.
>
> Doesn't the connection to the antenna take care of that, assuming that
> the shield connection at the antenna connector is grounded (some
> aren't, I think that most are)?
>
> Also, one is supposed to connect the coax shield to the tower again
> near the bottom, where the coax leaves the tower.
>
> What is the best way to do that without damaging the coax or leaving
> its innards open to the elements?

At our tower site, we just connect the coax to the antenna. Put up by a
pro, and works just fine.

- 73 de Mike KB3EIA -

3575. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 01:40:55 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <469EC128.E80CE850@earthlink.net>
Source record: 38285
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Hein ten Horn wrote:
>
> Michael A. Terrell wrote:
> > isw wrote:
> >>
> >> That particular receiver doesn't have much of a "front end"; diodes
> >> (with protection) and straight into the first mixer. No RF stage, tuned
> >> or otherwise.
> >
> > It can exceed the PIV of the protection diodes and cause them to
> > short, or explode. That crappy Sony design is where the harmonics came
> > from. The diodes, (or any other semiconductor) with enough RF can
> > generate a lot of spurious signals. It can even come from a rusty joint
> > in the area.
>
> Is the ICF-SW7600GR significantly better performing
> than the ICF-7600D on this?
>
> gr, Hein

I haven't seen the schematics of either model, but most portable SW recievers suffer from no filtering on the front end, so are susceptible to overload. A properly designed front end is expensive. Most manufacturers would rather spend the money on eye candy to make it attractive to those who don't know what they really need. This is crossposted to: news:rec.radio.shortwave where the relative merits of different SW radios are discussed.

I tend to use older, rack mounted equipment that I've restored and when I have the time, I like to design my own equipment. I only have one portable receiver, the RS DX-375, which is kept in my hurricane emergency kit. It was bought on price, alone when it was discontinued for $50, about eight or nine years ago. The power line and ignition noise is so high around here that a portable is almost useless. After the last hurricane, the nearest electricity was over 5 miles away for about two weeks, and I was picking up stations from all over the world. It reminded me of visits to my grandparent's farm back in the early '60s, when their farm was the last one on their road with electricity. They had nothing that generated noise, other that a few light switches, when they were flipped on or off. I didn't have a shortwave radio, but I could pick up AM DX from all over the country, late at night.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3576. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 04:14:31 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <U8OdnRbMxZUSeAPbnZ2dnUVZ_g2dnZ2d@giganews.com>
Source record: 38286

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.18.23.45.52.976854@from.qrz.com...
>
> Anybody know where I can order some Polyphaser lightning arrestors over
> the web?
>
> I tried their website and they have a very lame "request quote" page where
> you have to read what's on a very hard-to-decipher graphic, then copy that
> into a text box, before it will even accept your request. It took me
> seven (7) tries to type it in in a way the page would accept (and a few of
> those times I KNOW I did it correctly), and now a week later no one has
> responded.
>
> I tried W. R. Block and (apparently) no way to order over the web.
>
> I try to reserve the business day for business, and it is often difficult
> for me to try to call these places during business hours to place orders,
> and anyway, doesn't just about everybody know how to use the web to take
> orders, by now?
>
> Tried Google and didn't get anything workable in the first two pages.
>
> Are there any Polyphaser vendors with decent websites that will take
> online orders?
>
> Thanks...

I can attest to Davis RF (http://www.davisrf.com/) being good folks to deal
with. In addition to the Polyphaser lightning arrestors, they also carry a
good selection of coaxial cable & wire antenna parts (all at competitive
prices).

Bryan WA7PRC

3577. Re: Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 04:27:24 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <dMednZdOFMgIdQPbnZ2dnUVZ_rSinZ2d@giganews.com>
Source record: 38287

Terry wrote:
> Has anyone modeled a 4 or 5 wire cage dipole vs a single wire dipole -
> same height, same freq.
>
> I'm curious as to broaside gain comparison & 2:1 bandwidth. Also horz
> & vert. beamwidth between -3 DB points.
>
> I do not have modeling software.
>
> Terry
> W8EJO

I use one for 80m my Field Day antenna: (http://tinyurl.com/38v9wn/).
Bandwidth (where the rigs's VSWR protection drops Ic to -3dB) seems to be
approximately 400KHz for a 4-wire cage w/ spreaders made from 1/2"x24" PVC.
OAL length worked out a bit shorter than a single wire dipole cut for the
same center frequency. 116' length worked well from around 4000 down to
3600 KHz (using a choke balun wound on a ferrite core). We had it strung up
as an inverted vee w/ the apex at 35' and the ends at 15'. That's very low
but it still worked well enough to work up and down the east coast from the
Pacific NW w/ 100W.

Bryan WA7PRC

3578. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 04:51:14 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.19.04.51.12.563520@from.qrz.com>
Source record: 38288

On Wed, 18 Jul 2007 21:14:31 -0700, Bryan wrote:

> I can attest to Davis RF (http://www.davisrf.com/) being good folks to
> deal with.

Good evening, Bryan.

Yes, unfortunately their website is something with which they may as well not even have bothered. Some of the prices are absent, some are stated as ranges like "$60-$80", and some like the Cadwelds they advertise as "average cost". So, you need to call them up and jump through hoops to get something as basic as a price. And there appears to be no way to order anything on their website.

I much prefer to support and patronize companies that make an effort to make the buying experience as convenient for their customers as they can, for example DX Engineering has done a much better job. If I find that Ham Radio Outlet in Salem, NH doesn't have anything like that in stock, I'll no doubt order some from DX Engineering.

(Thanks, Shadow, for the pointer to DX Engineering.)

3579. Re: Connecting coax shield to tower near top

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 04:57:59 UTC
From: Bill Otten <harpman54@tampabay.rr.com>
Message-ID: <469eef80$0$4674$4c368faf@roadrunner.com>
Source record: 38289

"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote in message
news:pan.2007.07.19.01.19.08.947822@from.qrz.com...
>
> Many have advised connecting the shield of the coax to the tower up near
> the top.
>
> Doesn't the connection to the antenna take care of that, assuming that the
> shield connection at the antenna connector is grounded (some aren't, I
> think that most are)?
>
> Also, one is supposed to connect the coax shield to the tower again near
> the bottom, where the coax leaves the tower.
>
> What is the best way to do that without damaging the coax or leaving its
> innards open to the elements?
>

Go to my website...http://home1.gte.net/res0958z/ and you'll see how mine
have been done. This method is even on the ARRL pages in a Power Point
presentation on Lightning Protection for the Radio Amateur at
http://www.arrl-al.org/LtgProt-2006.ppt
You want to ground the shield at the tower top, again at the tower bottom,
(see the photos) and then at an entrance panel outside the shack entrance.
Barrel connectors will do, seal them with Coax-Seal.

73,
Bill
KC9CS

3580. A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 05:53:24 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184824404.424117.289400@e9g2000prf.googlegroups.com>
Source record: 38290
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
:

> how would u like to change the cell phone industry?

Analog cell phones should stop using FM and should start using AM at
whatever practical radio frequencies available.

Digital cell phones should stop using the compression they use and
start using monaural WMA compression with a CBR of 20 kbps or less and
a sample rate of at least 44.1 KHz. In addition, the following must
also apply:

1. In its uncompressed form, the audio must have a bit-resolution of
at least 16-bit

2. The sample-rate of the compressed and the uncompressed version of
the audio must be the same.

3581. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 07:06:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <122u931qe1hnvcvp6t6dvbfm5v18sia2br@4ax.com>
Source record: 38291
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium <glucegen1@gmail.com> hath wroth:

>On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>> how would u like to change the cell phone industry?

>Analog cell phones should stop using FM and should start using AM at
>whatever practical radio frequencies available.

Why bother? Analog cell phones are going away on Valentine's Day
2008.
<http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>
I won't be sending you a valentine card. You're not my type.
Are you also working on whale oil products and sealing wax?

>Digital cell phones should stop using the compression they use and
>start using monaural WMA compression with a CBR of 20 kbps or less and
>a sample rate of at least 44.1 KHz.

Oh, you want music over your cell phone? Of course that means fewer
users per MHz. Very roughly, the current 8Kbits/sec encoding rate,
compared to your 44Kbit/sec, will only handle about 1/5th the number
of users. So, your cell phone bill goes up about 5 times. Of course
you don't mind because you'll have hi-fi oozing out of your phone. You
might want to research variable rate codecs, such as EVRC.

>1. In its uncompressed form, the audio must have a bit-resolution of
>at least 16-bit

The encoding resolution is not changed by compression. If you encode
something with 16 bit resolution, and compress it, you still have 16
bit data coming out. It's the data rate or thruput that changes with
compression.

>2. The sample-rate of the compressed and the uncompressed version of
>the audio must be the same.

Not possible. If the rate in and rate out are identical, then there's
no compression happening.

At least you're consistent. You got everything wrong, again.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com

Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3582. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 07:22:37 UTC
From: ���@���.���
Message-ID: <20070719032242.398$9H@newsreader.com>
Source record: 38292
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff,

He typed the message on his Commodore 64 with an Atari floppy drive!

Jeff Liebermann <jeffl@cruzio.com> wrote:
> Radium <glucegen1@gmail.com> hath wroth:
>
> >On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed
> >13?hl=en&
> >> how would u like to change the cell phone industry?
>
> >Analog cell phones should stop using FM and should start using AM at
> >whatever practical radio frequencies available.
>
> Why bother? Analog cell phones are going away on Valentine's Day
> 2008.
> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-aft
> er.html> I won't be sending you a valentine card. You're not my type.
> Are you also working on whale oil products and sealing wax?
>
> >Digital cell phones should stop using the compression they use and
> >start using monaural WMA compression with a CBR of 20 kbps or less and
> >a sample rate of at least 44.1 KHz.
>
> Oh, you want music over your cell phone? Of course that means fewer
> users per MHz. Very roughly, the current 8Kbits/sec encoding rate,
> compared to your 44Kbit/sec, will only handle about 1/5th the number
> of users. So, your cell phone bill goes up about 5 times. Of course
> you don't mind because you'll have hi-fi oozing out of your phone. You
> might want to research variable rate codecs, such as EVRC.
>
> >1. In its uncompressed form, the audio must have a bit-resolution of
> >at least 16-bit
>
> The encoding resolution is not changed by compression. If you encode
> something with 16 bit resolution, and compress it, you still have 16
> bit data coming out. It's the data rate or thruput that changes with
> compression.
>
> >2. The sample-rate of the compressed and the uncompressed version of
> >the audio must be the same.
>

> Not possible. If the rate in and rate out are identical, then there's
> no compression happening.
>
> At least you're consistent. You got everything wrong, again.

--
-

3583. Re: Odd problem with 6/2/70 triband vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 08:02:27 UTC
From: Diogel <Diogel@DontExist.com>
Message-ID: <sb6u93l1m135754tvbin42a4l95hc9b4t3@4ax.com>
Source record: 38293

On Tue, 17 Jul 2007 20:57:27 -0700, Bart Bailey <me2@privacy.net>
wrote:

>In Message-ID:<ua7q93tqagp0jdueactjl91hr9v53a3r95@4ax.com> posted on
>Tue, 17 Jul 2007 20:54:19 +0100, Diogel wrote: Begin
>
>>I did'nt know they were decoupling stubs, I will try using a metal
>>mast tomorrow to see if there is any difference. Its odd that the 2M
>>part of the antenna is affected ?. I have just cleaned and reassembled
>>the antenna so am pretty sure all connections are solid.
>
>If the antenna had an acceptable SWR one time but now hasn't, you might
>check the small capacitor located near the junction. That's what burn't
>out in mine recently when overpowered. If you can see what value it is I
>would appreciate knowing in order to get a replacement, mine's scorched
>and shattered. I bought a new antenna and used the old 6m counterpoise
>to have two of the three operable on 6m, wish I had a third for
>symmetry.
I checked the antenna again, it consists of two steel rods coupled
together with a block of white insulating material which is bridged
with a coil. I can see no capacitor.
I tried mouning the antenna on an aluminium pole which made matters
worse. I notice that the antenna mountings are plastic so the antenna
base would be insulated from any mounting pole anyway.

3584. Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 10:35:43 UTC
From: John <susan48@aapt.net.au>
Message-ID: <f7nepr$bl7$1@news-01.bur.connect.com.au>
Source record: 38294

Gents,
Bit of a "ring in" question here but I cant think of
anywhere/anyone else who may know. I,ve put up a yagi TV antenna with from
memory about 19 elements plus reflector. It seems to be too directional so I
can get one signal source perfectly and one poorly because they are in
slightly different directions. Question is, if I remove some of the
elements (the way the thing is made I can unscrew the front seven or so)
will that make the antenna less directional?. Or if not, is it able to be
done?
Cheers
John

3585. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 11:00:59 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <LvHni.9031$Od7.2923@newsread1.news.pas.earthlink.net>
Source record: 38295

John wrote:
> Gents,
> Bit of a "ring in" question here but I cant think of
> anywhere/anyone else who may know. I,ve put up a yagi TV antenna with from
> memory about 19 elements plus reflector. It seems to be too directional so I
> can get one signal source perfectly and one poorly because they are in
> slightly different directions. Question is, if I remove some of the
> elements (the way the thing is made I can unscrew the front seven or so)
> will that make the antenna less directional?. Or if not, is it able to be
> done?
> Cheers
> John
>
>

If your using the antenna for HDTV, you need only the UHF elements,
which for many TV antennas are the shorter elements at the front end of
the antenna. The VHF elements will not be needed when all OTA TV
stations go to HDTV. If you longer elements at the back end of the
antenna first, you may notice that the antenna is more able to capture
UHF signal sources that are aftward of the antenna structure.

Duane

3586. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 11:04:42 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <ezHni.9033$Od7.274@newsread1.news.pas.earthlink.net>
Source record: 38296

John wrote:
> Gents,
> Bit of a "ring in" question here but I cant think of
> anywhere/anyone else who may know. I,ve put up a yagi TV antenna with from
> memory about 19 elements plus reflector. It seems to be too directional so I
> can get one signal source perfectly and one poorly because they are in
> slightly different directions. Question is, if I remove some of the
> elements (the way the thing is made I can unscrew the front seven or so)
> will that make the antenna less directional?. Or if not, is it able to be
> done?
> Cheers
> John
>
>

If your using the antenna for HDTV, you need only the UHF elements, which for many TV antennas are the shorter elements at the front end of the antenna. The VHF elements will not be needed when all OTA TV stations go to HDTV. If you remove the longer elements at the back end of the antenna first, you may notice that the antenna is more able to capture UHF signal sources that are aftward of the antenna structure.

Duane

3587. Re: Using a copper water pipe in place of a ground rod?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 11:42:10 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1184845330.377801.109720@n2g2000hse.googlegroups.com>
Source record: 38297

We had a near by lightning strike last night... All my radios and antennas survived... My son's Dish Network receiver did not... He's quite bummed out...

denny

3588. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 11:48:06 UTC
From: Brian Kelly <kelly@dvol.com>
Message-ID: <1184845686.274826.44900@d55g2000hsg.googlegroups.com>
Source record: 38298

On Jul 16, 8:26 pm, "Rick (W-A-one-R-K-T)" <get.my.em...@from.qrz.com>
wrote:
> This afternoon I went down to the local tool rental place to see about
> renting a hammer drill. They have one that's considerably larger than the
> ones recommended here (e.g.http://tinyurl.com/33zcrr) for rent for US$60
> per day. I showed the guy a printout of the nut driver adapter
> (http://tinyurl.com/2bohkg) and asked where I could get one, and he looked
> at me like I was from Mars.
>
> So, I'm looking for a nut driver adapter... went to Home Depot and they
> told me where to try and I'll call them tomorrow.
>
> I'll tell you, though, even the big rental unit sure doesn't look like
> it's up to this job, to say nothing of the much smaller ones at Home
> Depot. I'm fairly good sized (6 ft 2 in and 230 lhs) and using a standard
> sized two-handed sledge hammer I can't move this rod more than a tenth of
> an inch, at most, per strike. Are you guys sure that a hand-held hammer
> drill will do the job?
>
> I guess it's worth $60 plus the cost of the nut driver adapter (if I can
> find one) to find out...

There's a hassle-free & cheaper "ground rod driver" available. Home
Depot sells fence post drivers (garden & landscaping dept.) for twenty
bucks apiece and they work well. I'm a 160 pound geezer and I can
drive an eight foot rod six feet with just 8-12 strokes in the heavy
loam and clay soil we have here in eastern PA. I drive the final two
feet of rod with a hand sledge. No 110 vac or tool rentals needed.

Brian w3rv

3589. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 12:25:17 UTC
From: K Isham <kisham@attglobal.net>
Message-ID: <469f5830@kcnews01>
Source record: 38299
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cell phones should stop using FM and should start using AM at
> whatever practical radio frequencies available.
>
> Digital cell phones should stop using the compression they use and
> start using monaural WMA compression with a CBR of 20 kbps or less and
> a sample rate of at least 44.1 KHz. In addition, the following must
> also apply:
>
> 1. In its uncompressed form, the audio must have a bit-resolution of
> at least 16-bit
>
> 2. The sample-rate of the compressed and the uncompressed version of
> the audio must be the same.
>
Darn:
I was just getting used to your purposed long-wave cell phone.
The approximately mile long antennas would drastically cut down on
people trying to drive and talk at the same time, just think how many
lives that could be saved.
Oh well, I just wait for it to appear along with my Matel Hover board
and "Mr Fusion" reactor for my Delorean.
Ken

3590. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 12:29:35 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <xQIni.11818$rL1.6496@newssvr19.news.prodigy.net>
Source record: 38300
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Radium wrote:
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cell phones should stop using FM and should start using AM at
> whatever practical radio frequencies available.

That idea was touted and attempted over twenty years ago. Back when
cellphone handsets were better described as concrete blocks instead of bricks.

Gosh...I miss my 70 watt Micors and darn near crystal clear audio on IMTS
systems with 30 mile range. But that was thirty years ago.

3591. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 14:35:11 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <62326$469f768b$944e306e$2077@STARBAND.NET>
Source record: 38301
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Radium" <glucegen1@gmail.com> wrote in message
news:1184824404.424117.289400@e9g2000prf.googlegroups.com...
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :
>
>> how would u like to change the cell phone industry?
>
> Analog cell phones should stop using FM and should start using AM at
> whatever practical radio frequencies available.

You are still a clueless idiot

3592. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 14:38:21 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <f1d3e$469f7749$944e306e$3149@STARBAND.NET>
Source record: 38302
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:122u931qe1hnvcvp6t6dvbfm5v18sia2br@4ax.com...
> Radium <glucegen1@gmail.com> hath wroth:
>
>>On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>>http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>>> how would u like to change the cell phone industry?
>
>>Analog cell phones should stop using FM and should start using AM at
>>whatever practical radio frequencies available.
>
> Why bother? Analog cell phones are going away on Valentine's Day
> 2008.
> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>
> I won't be sending you a valentine card. You're not my type.
> Are you also working on whale oil products and sealing wax?

The FCC does not require that analog service be turned off. Only that
carriers are not required to continue analog service past that date.
A good number of rural areas will probably continue to use Analog cellualr
service for a few years after that.
>
>>Digital cell phones should stop using the compression they use and
>>start using monaural WMA compression with a CBR of 20 kbps or less and
>>a sample rate of at least 44.1 KHz.
>
> Oh, you want music over your cell phone? Of course that means fewer
> users per MHz. Very roughly, the current 8Kbits/sec encoding rate,
> compared to your 44Kbit/sec, will only handle about 1/5th the number
> of users. So, your cell phone bill goes up about 5 times. Of course
> you don't mind because you'll have hi-fi oozing out of your phone. You
> might want to research variable rate codecs, such as EVRC.
>
>>1. In its uncompressed form, the audio must have a bit-resolution of
>>at least 16-bit
>
> The encoding resolution is not changed by compression. If you encode
> something with 16 bit resolution, and compress it, you still have 16
> bit data coming out. It's the data rate or thruput that changes with
> compression.
>
>>2. The sample-rate of the compressed and the uncompressed version of

>>the audio must be the same.
>
> Not possible. If the rate in and rate out are identical, then there's
> no compression happening.
>
> At least you're consistent. You got everything wrong, again.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

3593. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 14:45:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <tp94n4-17l.ln1@mail.specsol.com>
Source record: 38303
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
> :

> > how would u like to change the cell phone industry?

> Analog cell phones should stop using FM and should start using AM at
> whatever practical radio frequencies available.

As you've been told before, analog cell phones are going away.

What part of "going away" are you too blazingly stupid to understand?

> Digital cell phones should stop using the compression they use and
> start using monaural WMA compression with a CBR of 20 kbps or less and
> a sample rate of at least 44.1 KHz. In addition, the following must
> also apply:

The audio bandwidth of the phone system is about 3 KHz.

You are an idiot.

<snip remaining crap>

--
Jim Pennino

Remove .spam.sux to reply.

3594. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 14:55:08 UTC
From: Bob <warthog9@pacbell.net>
Message-ID: <N1Lni.2718$Dx2.2095@newssvr17.news.prodigy.net>
Source record: 38305

They show up on Ebay all the time for as little as $8 to $10 new.
Bob

Rick (W-A-one-R-K-T) wrote:
> Anybody know where I can order some Polyphaser lightning arrestors over
> the web?
>
> I tried their website and they have a very lame "request quote" page where
> you have to read what's on a very hard-to-decipher graphic, then copy that
> into a text box, before it will even accept your request. It took me
> seven (7) tries to type it in in a way the page would accept (and a few of
> those times I KNOW I did it correctly), and now a week later no one has
> responded.
>
> I tried W. R. Block and (apparently) no way to order over the web.
>
> I try to reserve the business day for business, and it is often difficult
> for me to try to call these places during business hours to place orders,
> and anyway, doesn't just about everybody know how to use the web to take
> orders, by now?
>
> Tried Google and didn't get anything workable in the first two pages.
>
> Are there any Polyphaser vendors with decent websites that will take
> online orders?
>
> Thanks...
>

3595. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 14:56:57 UTC
From: karlkrandall@sbcglobal.net
Message-ID: <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>
Source record: 38304
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote:

>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>> :
>
>> > how would u like to change the cell phone industry?
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>> Analog cell phones should stop using FM and should start using AM at
>> whatever practical radio frequencies available.
>
>As you've been told before, analog cell phones are going away.
>
>What part of "going away" are you too blazingly stupid to understand?
>
>> Digital cell phones should stop using the compression they use and
>> start using monaural WMA compression with a CBR of 20 kbps or less and
>> a sample rate of at least 44.1 KHz. In addition, the following must
>> also apply:
>
>The audio bandwidth of the phone system is about 3 KHz.
>
>You are an idiot.
>
><snip remaining crap>

How about just national enforcing Californias proposed Consumer code
for cell phone companies.

3596. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 15:21:11 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C4CF77.6FED7%dbowey@comcast.net>
Source record: 38306
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/19/07 7:56 AM, in article psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com,
"karlkrandall@sbcglobal.net" <karlkrandall@sbcglobal.net> wrote:

> On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote:
>
>> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?h
>>> l=en&
>>> :
>>
>>>> how would u like to change the cell phone industry?
>>
>>> Analog cell phones should stop using FM and should start using AM at
>>> whatever practical radio frequencies available.
>>
>> As you've been told before, analog cell phones are going away.
>>
>> What part of "going away" are you too blazingly stupid to understand?
>>
>>> Digital cell phones should stop using the compression they use and
>>> start using monaural WMA compression with a CBR of 20 kbps or less and
>>> a sample rate of at least 44.1 KHz. In addition, the following must
>>> also apply:
>>
>> The audio bandwidth of the phone system is about 3 KHz.
>>
>> You are an idiot.
>>
>> <snip remaining crap>
>
>
> How about just national enforcing Californias proposed Consumer code
> for cell phone companies.

How about telling the state of California to go to hell?

If they want a change in National status there is a place to propose it.

3597. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 15:25:19 UTC
From: dplatt@radagast.org
Message-ID: <vbc4n4-a4d.ln1@radagast.org>
Source record: 38307

In article <LvHni.9031$Od7.2923@newsread1.news.pas.earthlink.net>,
Duane Allen <computeruser@sprintmail.com> wrote:

>If your using the antenna for HDTV, you need only the UHF elements,
>which for many TV antennas are the shorter elements at the front end of
>the antenna. The VHF elements will not be needed when all OTA TV
>stations go to HDTV.

I believe that this statement is untrue, or is at least of somewhat
limited (regional) truth.

Although most TV stations have chosen to use UHF-band for their
digital signals, that is not universally true. Some stations whose
primary (NTSC analog) transmitters are in the VHF high-band (channels
7 through 13) have decided to use their VHF channels to carry ATSC
digital, after the Big Switchover occurs. In a very few areas of the
country, there's even a station or two which will be using its VHF
low-band frequency slot (channel 2 through 5) for ATSC. The FCC has
recommended against using VHF lowband channel 6 for ATSC, in order to
prevent interference with the bottom of the FM broadcast band.

I believe that these stations are electing VHF for ATSC, rather than
using their "interim" UHF channel assignment, because they'll be able
to get better ATSC signal coverage that way. They can operate at
higher power on the VHF band than they could on UHF (likely because
their interim UHF frequency assignment has co- or adjacent-channel
users not all that far away).

In most areas of the country, a good UHF antenna will suffice for ATSC
digital. In a few (e.g. SF bay area) you'll still need to have an
antenna capable of both UHF, and VHF high-band, to get all of the
local stations... and in one or two areas you'll still need a
full-range VHF-lowband/VHF-highband/UHF antenna such as is used today.
Some people who have bought "digital TV" or "HDTV" antennas (UHF-only)
are likely to be annoyed, when they lose a channel or two on The Big
Day.

A nationwide table of the ATSC frequency assignments can be found at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-150A1.pdf

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3598. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 16:27:14 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <r42v93p7iuloqg050clp9cf7mi9b92m8r5@4ax.com>
Source record: 38308
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>Radium wrote:
>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>>> how would u like to change the cell phone industry?
>>
>> Analog cell phones should stop using FM and should start using AM at
>> whatever practical radio frequencies available.

>That idea was touted and attempted over twenty years ago. Back when
>cellphone handsets were better described as concrete blocks instead of bricks.
>
>Gosh...I miss my 70 watt Micors and darn near crystal clear audio on IMTS
>systems with 30 mile range. But that was thirty years ago.

Who said they were gone? Fire up your scanner or service monitor on
the old IMTS frequencies and you'll hear the idle tones or sometimes
idle chatter.
<http://en.wikipedia.org/wiki/IMTS_Frequencies>
There's still some IMTS phone systems running in "rural" areas.
<http://en.wikipedia.org/wiki/Improved_Mobile_Telephone_Service>
Brings back fond memories of the "RCC wars" (radio common carrier).

However, you're right. I really miss my Motorola T1234 mobile
telephone and giant Secode control head. It really impressed the
various ladyfriends in college.
<http://www.privateline.com/PCS/mobilephonepictures.htm>
Too bad (for Mr Radium) it was FM.

I did work on an AM/SSB mobile telephone system in about 1974. I
never saw it but as I vaguely recall, it operated on various HF
frequencies in some part of Africa. Operation was similar to operator
assisted MTS (mobile telephone service) but on HF. It was basically a
phone patch hung on an HF base station. We were trying to add
signaling so that users would not have to listen to the channel noise
all day in order to receive a phone call. Our scheme sorta worked on
SSB, but the tones drove those that didn't have muted receivers nuts,
so it was eventually abandoned. I think the system was up until about
1990, when something blew up and the operator couldn't find parts or
something.

Of course, there's always the HF marine radio telephone service, which
still operates on various HF frequencies with real live human

operators. They're all currently using SSB, although that wasn't always the case. In the 1960's and 70's, almost everyone was using AM.

I got a great name for Mr Radius's system. Reactionary Radio.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3599. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 17:48:13 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1184867293.060428.80530@m3g2000hsh.googlegroups.com>
Source record: 38309
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

On Jul 17, 4:44 am, LA4RT Jon Kåre Hellan <d...@null.com> wrote:
> David Lesher <wb8...@panix.com> writes:
> > You <Y...@shadow.orgs> writes:
>
> >>> It is attached to a 30 ft RG58U coax cable that runs back to a TNC-
> >>> to-FME adapter, then to the Sierra card.
>
> >>Only a Dufus, would expect to get ANY signal down 30Ft of RG-58U at those
> >>Frequencies......
>
> > I would be more polite but would say 30 ft of RG-58 is an excellent
> > dummy load at 1900...
>
> Indeed.
>
> But nonetheless, an el cheapo yagi for 900 MHz GSM with 10 m of RG-58
> boosted the indication on my phone from no bars to all 5 bars. The
> yagi sees more signal because it is higher up. The yagi gain is
> probably just a but more than cable + connector loss. And it looks
> like the built in antenna in the phone has a significant negative
> gain.
>
> Around here, marginal areas mostly have 900 MHz. So if you need an
> external antenna at all, you probably need one for 900.
>
> OP: There has to be something wrong with your antenna system.
>
> 73
> Jon

Thanks for the reply. I did not realize that RG-58 has that much
loss. I have read up and see that LMR-400 is a good alternative. I
will be trying that soon and will post the results.

Thank you!!
--
Chris

3600. Re: Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 18:48:54 UTC
From: Harry7 <cpa599@gmail.com>
Message-ID: <1184870934.262966.174320@d55g2000hsg.googlegroups.com>
Source record: 38310

Richard

I am aware of practical considerations of a cage dipole (i.e.,
broadband & length characteristics). My question was specific to
broadside gain relative to a single wire dipole. Is it (the broadside
gain at a given elevation angle) equal to, less than, or greater than
a single wire dipole. If not equal, what is differential in dBi +/-?

I speculate slighly less due to loss in multiple wires vs loss in
single wire but I want to see proof.

Terry

On Jul 18, 12:19 am, Richard Clark <kb7...@comcast.net> wrote:
> On Wed, 18 Jul 2007 03:16:53 -0000, Harry7 <cpa...@gmail.com> wrote:
> >Has anyone modeled a 4 or 5 wire cage dipole vs a single wire dipole -
> >same height, same freq.
>
> Hi Terry,
>
> Frequently. However, there is no particular reason to build one for
> just one frequency - that isn't its best application.
>
> >I'm curious as to broaside gain comparison & 2:1 bandwidth. Also horz
> >& vert. beamwidth between -3 DB points.
>
> It is not a "gain" antenna, so no surprises to be found.
>
> >I do not have modeling software.
>
> Try this link:http://home.comcast.net/~kb7qhc/antennas/verticals/Cage/cage.htm
>
> Not a dipole, but it exhibits the chief characteristic of wide band
> design, and relative gain that is roughly equivalent to any thin wire.
>
> 73's
> Richard Clark, KB7QHC

3601. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 21:33:43 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <falv93l0usf0nf7k1kf43psdefcnqp1otd@4ax.com>
Source record: 38311
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 10:38:21 -0400, "Dana" <raff242@yahoo.com> wrote:

>> Why bother? Analog cell phones are going away on Valentine's Day
>> 2008.
>> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>

>The FCC does not require that analog service be turned off. Only that
>carriers are not required to continue analog service past that date.
>A good number of rural areas will probably continue to use Analog cellualr
>service for a few years after that.

True. Analog will probably dribble along for quite a while. The only plans that I've heard or read are Verizon's. They're going to (or already have) change the PRL (preferred roaming list) to not include analog roaming. I know a local die hard who was informed in writing that analog will be "going away" in Feb 2008 and that they will not renew his contract for analog after that date. I haven't seen the actual letter so I don't know if there are any details such as the date they'll pull the plug on him. I had the same issue with Verizon and a non-GPS enabled cell phone, where they refused to renew the contract with the old phone. That means that all analog phones might be gone by the time the current contracts expire, which would a maximum of 2 years (probably much less).

at&t will probably do the same thing. The only analog systems they still operate are the 800MHz TDMA systems they inherited from Dobson, Cell One, and others. You'll probably get a Valentine greeting card from at&t announcing the demise of analog.

Incidentally, at&t discontinued its CDPD (cellular digital packet data) service in mid 2004. Verizon did the same a year later. Yet, I still am getting sync and carrier for CDPD on my Novatel(?) CDPD modem. As I mentioned in another thread, there are still IMTS tones on the air. I guess old services never seem to die completely.

--
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http://www.LearnByDestroying.com AE6KS

3602. Re: Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 21:37:36 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f7olj0$a82$1@nntp1.jpl.nasa.gov>
Source record: 38313

Harry7 wrote:
>
> Richard
>
> I am aware of practical considerations of a cage dipole (i.e.,
> broadband & length characteristics). My question was specific to
> broadside gain relative to a single wire dipole. Is it (the broadside
> gain at a given elevation angle) equal to, less than, or greater than
> a single wire dipole. If not equal, what is differential in dBi +/-?
>
> I speculate slighly less due to loss in multiple wires vs loss in
> single wire but I want to see proof.
>
> Terry

The pattern and hence the directivity should be exactly the same, so the only difference would be from resistive losses. This would depend on the frequency and size of the wire(s), but would be small in most cases.

Consider a dipole of AWG12 wire at 7.25 MHz (the overall length at resonance is about 20m). if the wire were made of copper, and 100W were applied to it, the radiated power would be 99.36W, (i.e. 0.642 W lost in heating the wire).

use, say, 5 or 6 wires in parallel in a cage, and you'll essentially reduce the resistance by the same factor, so, now, you'll lose 0.1% or 0.2%, instead of 0.6%.

Where the tradeoff might be interesting is if you want to optimize for a given quantity of copper. Are you better off using 10 AWG20 wires or one AWG10 wire?

I suspect that it would depend on the skin depth at your frequency of interest. Most of that AWG10 wire isn't actually there, as far as the RF is concerned, so the AC resistance of the AWG10 is actually not 1/10th of the AC resistance of the AWG20 wire. It's probably somewhere around 1/5 or 1/4th.

3603. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 21:46:24 UTC
From: Jeff Liebermann <jeffl@comix.santa-cruz.ca.us>
Message-ID: <29mv93htdoqbmnq995o92f50ka7tiaf359@4ax.com>
Source record: 38312
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 07:29:35 -0500, DTC
<no_spam@move_along_folks.foob> wrote:

>That idea was touted and attempted over twenty years ago. Back when
>cellphone handsets were better described as concrete blocks instead of bricks.

<http://802.11junk.com/jeffl/pics/office/slides/radio-mess.html>
The phone with half the buttons red and the rest white, is a G.E.
"brick" phone. Not only did it look like a brick, but it also weighed
about the same as one. Behind it, against the wall is an Audiovox
TCT-100 "Tranportable" phone, another heavy weight. Just to the left
of the Audiovox but halfway covered is the original Nextel handset.

Someone is sure to ask why I have all that garbage. I sometimes give
talks on the history of mobile phones and like to drag in the
antiques. I drew the line on some of the old trunk mounted MTS, IMTS,
and AMPS phones, as they're just too big and ugly to bring to
meetings.

>Gosh...I miss my 70 watt Micors and darn near crystal clear audio on IMTS
>systems with 30 mile range. But that was thirty years ago.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558 jeffl@comix.santa-cruz.ca.us
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3604. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 22:15:50 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <A_6dnRQUptALfwLbnZ2dnUVZ_vfinZ2d@bright.net>
Source record: 38314

Yup...only used once! :)

Scott
N0EDV

Bob wrote:
> They show up on Ebay all the time for as little as $8 to $10 new.
> Bob
>
> Rick (W-A-one-R-K-T) wrote:
>
>> Anybody know where I can order some Polyphaser lightning arrestors over
>> the web?
>

3605. Re: Modeling a cage dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 22:52:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <meqv931d33agfnh4vm0dfpukv7ra6t4k3o@4ax.com>
Source record: 38315

On Thu, 19 Jul 2007 18:48:54 -0000, Harry7 <cpa599@gmail.com> wrote:

>Is it (the broadside
>gain at a given elevation angle) equal to, less than, or greater than
>a single wire dipole. If not equal, what is differential in dBi +/-?

Hi Terry,

The same.

You would have to do some deliberately unfavorable comparisons to find
a difference like using toaster wire for one and then comparing it to
copper tubing for the other.

>I speculate slighly less due to loss in multiple wires vs loss in
>single wire but I want to see proof.

Less/more could be proven on paper, but never experienced or measured
to the accuracy suggested by a mathematical solution.

Gain is more a product of length in proportion to wavelength.
Bandwidth is more a product of diameter in proportion to wavelength.

73's
Richard Clark, KB7QHC

3606. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:20:11 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnf9vsdb.15ck.bit-bucket@shell.config.com>
Source record: 38316

On Thu, 19 Jul 2007 08:25:19 -0700, Dave Platt wrote:
>
> Although most TV stations have chosen to use UHF-band for their
> digital signals, that is not universally true. Some stations whose
> primary (NTSC analog) transmitters are in the VHF high-band (channels
> 7 through 13) have decided to use their VHF channels to carry ATSC
> digital, after the Big Switchover occurs. In a very few areas of the
> country, there's even a station or two which will be using its VHF
> low-band frequency slot (channel 2 through 5) for ATSC. The FCC has
> recommended against using VHF lowband channel 6 for ATSC, in order to
> prevent interference with the bottom of the FM broadcast band.
>
> I believe that these stations are electing VHF for ATSC, rather than
> using their "interim" UHF channel assignment, because they'll be able
> to get better ATSC signal coverage that way. They can operate at
> higher power on the VHF band than they could on UHF (likely because
> their interim UHF frequency assignment has co- or adjacent-channel
> users not all that far away).
>
> In most areas of the country, a good UHF antenna will suffice for ATSC
> digital. In a few (e.g. SF bay area) you'll still need to have an
> antenna capable of both UHF, and VHF high-band, to get all of the
> local stations... and in one or two areas you'll still need a
> full-range VHF-lowband/VHF-highband/UHF antenna such as is used today.
> Some people who have bought "digital TV" or "HDTV" antennas (UHF-only)
> are likely to be annoyed, when they lose a channel or two on The Big
> Day.
>
> A nationwide table of the ATSC frequency assignments can be found at
>
> http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-150A1.pdf

So all this bu$$sh!t about freeing up spectrum, or improving reception,
or yaa-daa yaa-daa yaa-daa is just that - BU$$SH!T!

This is no better than a LandFill Utilization Project.

It is usually a disaster when the government gets involved in promoting
"technology".

I've just about had it, anyway, with the crap being pushed out over the
airwaves. They keep targeting the ever diminishing lowest common
denominator. So, I think when _their_ Big Day comes, it'll be _my_
Last Day.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

3607. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:24:06 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <iisv93tv67hl9ahtl308baj9q248hi8muq@4ax.com>
Source record: 38317
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 14:33:43 -0700, Jeff Liebermann
<jeffl@comix.santa-cruz.ca.us> wrote in
<falv93l0usf0nf7k1kf43psdefcnqp1otd@4ax.com>:

>On Thu, 19 Jul 2007 10:38:21 -0400, "Dana" <raff242@yahoo.com> wrote:
>
>>> Why bother? Analog cell phones are going away on Valentine's Day
>>> 2008.
>>> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>
>
>>The FCC does not require that analog service be turned off. Only that
>>carriers are not required to continue analog service past that date.
>>A good number of rural areas will probably continue to use Analog cellualr
>>service for a few years after that.
>
>True. Analog will probably dribble along for quite a while. ...

I seriously doubt it. All the carrier people I know are chomping at the
bit to turn it off, as noted in public statements.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3608. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:41:28 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com>
Source record: 38318
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
<psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:

>How about just national enforcing Californias proposed Consumer code
>for cell phone companies.

Really bad idea. The market works better without government
interference.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3609. Cocktail Condoms! What next?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:42:22 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <yFSni.36697$G23.12975@newsreading01.news.tds.net>
Source record: 38319

http://abcnews.go.com:80/US/story?id=3302652&page=1&CMP=OTC-RSSFeeds0312

3610. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:42:24 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <1mtv93ticddur8rq3tghsra57n9508mci0@4ax.com>
Source record: 38320
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
<tp94n4-17l.ln1@mail.specsol.com>:

>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:

>> Digital cell phones should stop using the compression they use and
>> start using monaural WMA compression with a CBR of 20 kbps or less and
>> a sample rate of at least 44.1 KHz. In addition, the following must
>> also apply:
>
>The audio bandwidth of the phone system is about 3 KHz.

Actually more like 10 KHz.

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3611. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:43:02 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <_HSni.16729$bz7.1854@newssvr22.news.prodigy.net>
Source record: 38322
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
> DTC <no_spam@move_along_folks.foob> hath wroth:
>> Gosh...I miss my 70 watt Micors and darn near crystal clear audio on IMTS
>> systems with 30 mile range. But that was thirty years ago.
>
> Who said they were gone? Fire up your scanner or service monitor on
> the old IMTS frequencies and you'll hear the idle tones or sometimes
> idle chatter.

As far as I know, all the Southwestern Bell mobiles were given to local Motorola Sales and Service (MSS) shops. I never paid attention to the defunct MTS/IMTS channels, but all the RCC channels went over to paging.

> Brings back fond memories of the "RCC wars" (radio common carrier).

In Texas, they were all pretty cooperative with reciprocal roaming. Rates in the '70s were typically $40 a month which included mobile radio rental and unlimited minutes and free roaming. Denton Texas with the two universities had like 300 users in the early/mid '70s. When the rates jumped from $20 to $50 per month (on *TWO* VHF channels), it dropped to like fifteen users.

> However, you're right. I really miss my Motorola T1234 mobile
> telephone and giant Secode control head. It really impressed the
> various ladyfriends in college.

The Secode was indeed much easier to program than the Motorola control head. I used the Secode head on my RCC radio and the Moto on my SWBell radio. In line with the Jackie Gleason and Michael Todd story of one-up-man-ship, I had both control heads mounted next to my 4WD shifter on my trucks. My local RCC would not mute the repeater when dialing 2805, so when my mobile answered the code, it ack'ed with a burst of 2805...which canceled out the four second 2805 ringing tail and my horn would only beep, so I had to disable that feature.

To get access to a busy channel in Dallas, I'd drop into manual mode and listen to the channels for a conversation about to end, then let go of the chrome hookswitch arm and slam the roam button and the appropriate channel button - forcing it to roam in IMTS mode to the only free channel. Of course I would never whistle off the connect tone of an incoming call meant for another user and grab the channel when it went back to idle.

I eventually upgraded to the all solid state Motos and smaller control heads.

3612. Re: Cocktail Condoms! What next?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:43:58 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <2HSni.36698$G23.36107@newsreading01.news.tds.net>
Source record: 38321

It was not my intent to post the listing on Cocktail Condoms to this newsgroup. Please accept my sincere apologies.

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message news:yFSni.36697$G23.12975@newsreading01.news.tds.net...
http://abcnews.go.com:80/US/story?id=3302652&page=1&CMP=OTC-RSSFeeds0312

3613. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-19 23:46:19 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <attv93pn9eu4fgnqm9t1hfeqvo99mg2lnr@4ax.com>
Source record: 38323
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 07:29:35 -0500, DTC <no_spam@move_along_folks.foob>
wrote in <xQIni.11818$rL1.6496@newssvr19.news.prodigy.net>:

>Radium wrote:
>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c8ed13?hl=en&
>> :
>>
>>> how would u like to change the cell phone industry?
>>
>> Analog cell phones should stop using FM and should start using AM at
>> whatever practical radio frequencies available.
>
>That idea was touted and attempted over twenty years ago. Back when
>cellphone handsets were better described as concrete blocks instead of bricks.
>
>Gosh...I miss my 70 watt Micors and darn near crystal clear audio on IMTS
>systems with 30 mile range. But that was thirty years ago.

Spectral efficiency be damned as long as you get yours? ;)

--
Best regards, FAQ FOR CINGULAR WIRELESS:
John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3614. Re: Where to order Polyphaser lightning arrestors?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:06:12 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <1fWdnfNYCpfUlj3bnZ2dnUVZ_rCtnZ2d@giganews.com>
Source record: 38324

Rick (W-A-one-R-K-T) wrote:
> On Wed, 18 Jul 2007 21:14:31 -0700, Bryan wrote:
>
> > I can attest to Davis RF (http://www.davisrf.com/) being good folks to
> > deal with.
>
> Good evening, Bryan.
>
> Yes, unfortunately their website is something with which they may as well
> not even have bothered. Some of the prices are absent, some are stated as
> ranges like "$60-$80", and some like the Cadwelds they advertise as
> "average cost". So, you need to call them up and jump through hoops to
> get something as basic as a price. And there appears to be no way to
> order anything on their website.
>
> I much prefer to support and patronize companies that make an effort to
> make the buying experience as convenient for their customers as they can,
> for example DX Engineering has done a much better job. If I find that Ham
> Radio Outlet in Salem, NH doesn't have anything like that in stock, I'll
> no doubt order some from DX Engineering.
>
> (Thanks, Shadow, for the pointer to DX Engineering.)

They also have a toll-free telephone number, if you need to nail-down price
& availability. I first dealt with them when I was searching for
compression insulators for a wire antenna (I didn't find them available from
other sources, including WireMan). On the items that others also handled
(antenna wire & coaxial cable) that I was looking for, they had the best
price. You can't have too many sources for parts!
Bryan WA7PRC

3615. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:25:30 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C55D1A.700AD%dbowey@comcast.net>
Source record: 38325
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/19/07 4:41 PM, in article aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
"John Navas" <spamfilter1@navasgroup.com> wrote:

> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>
>> How about just national enforcing Californias proposed Consumer code
>> for cell phone companies.
>
> Really bad idea. The market works better without government
> interference.

Brilliant stupid canned comment.

California has a government.

The US has a government.

I'd rather we work issues with our elected Federal representatives than have
California start pushing at the state level.

3616. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:35:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <e1g5n4-p25.ln1@mail.specsol.com>
Source record: 38326
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna John Navas <spamfilter1@navasgroup.com> wrote:
> On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
> <tp94n4-17l.ln1@mail.specsol.com>:

> >In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:

> >> Digital cell phones should stop using the compression they use and
> >> start using monaural WMA compression with a CBR of 20 kbps or less and
> >> a sample rate of at least 44.1 KHz. In addition, the following must
> >> also apply:
> >>
> >The audio bandwidth of the phone system is about 3 KHz.

> Actually more like 10 KHz.

Where?

Nowhere I've ever been.

--
Jim Pennino

Remove .spam.sux to reply.

3617. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:35:07 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C55F5B.700AF%dbowey@comcast.net>
Source record: 38327
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/19/07 4:24 PM, in article iisv93tv67hl9ahtl308baj9q248hi8muq@4ax.com,
"John Navas" <spamfilter1@navasgroup.com> wrote:

> On Thu, 19 Jul 2007 14:33:43 -0700, Jeff Liebermann
> <jeffl@comix.santa-cruz.ca.us> wrote in
> <falv93l0usf0nf7k1kf43psdefcnqp1otd@4ax.com>:
>
>> On Thu, 19 Jul 2007 10:38:21 -0400, "Dana" <raff242@yahoo.com> wrote:
>>
>>>> Why bother? Analog cell phones are going away on Valentine's Day
>>>> 2008.
>>>> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after
>>>> .html>
>>
>>> The FCC does not require that analog service be turned off. Only that
>>> carriers are not required to continue analog service past that date.
>>> A good number of rural areas will probably continue to use Analog cellualr
>>> service for a few years after that.
>>
>> True. Analog will probably dribble along for quite a while. ...
>
> I seriously doubt it. All the carrier people I know are chomping at the
> bit to turn it off, as noted in public statements.

On the other hand, in many smaller communities, analog may need to be
retained until digital capability is ready to take up the business.

AT&T originally gave us notice that our analog service would be terminated
on a certain date, and then modified their statement to say the analog
turn-off would be spread over a long time. They did warn that people who
retained their analog service would have roaming problems as the larger
markets where digital is available will not retain analog capability after
Fall of this year.

3618. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:43:58 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C5616E.700B1%dbowey@comcast.net>
Source record: 38328
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/19/07 4:42 PM, in article 1mtv93ticddur8rq3tghsra57n9508mci0@4ax.com,
"John Navas" <spamfilter1@navasgroup.com> wrote:

> On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
> <tp94n4-17l.ln1@mail.specsol.com>:
>
>> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>
>>> Digital cell phones should stop using the compression they use and
>>> start using monaural WMA compression with a CBR of 20 kbps or less and
>>> a sample rate of at least 44.1 KHz. In addition, the following must
>>> also apply:
>>
>> The audio bandwidth of the phone system is about 3 KHz.
>
> Actually more like 10 KHz.

If he is commenting on the bandwidth of a message network channel/circuit,
including cellular, it is about 3 kHz.

3619. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:53:54 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <86ba6$46a015b9$944e306e$5354@STARBAND.NET>
Source record: 38329
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Jeff Liebermann" <jeffl@comix.santa-cruz.ca.us> wrote in message
news:falv93l0usf0nf7k1kf43psdefcnqp1otd@4ax.com...
> On Thu, 19 Jul 2007 10:38:21 -0400, "Dana" <raff242@yahoo.com> wrote:
>
>>> Why bother? Analog cell phones are going away on Valentine's Day
>>> 2008.
>>> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>
>
>>The FCC does not require that analog service be turned off. Only that
>>carriers are not required to continue analog service past that date.
>>A good number of rural areas will probably continue to use Analog cellualr
>>service for a few years after that.
>
> True. Analog will probably dribble along for quite a while. The only
> plans that I've heard or read are Verizon's. They're going to (or
> already have) change the PRL (preferred roaming list) to not include
> analog roaming. I know a local die hard who was informed in writing
> that analog will be "going away" in Feb 2008 and that they will not
> renew his contract for analog after that date. I haven't seen the
> actual letter so I don't know if there are any details such as the
> date they'll pull the plug on him. I had the same issue with Verizon
> and a non-GPS enabled cell phone, where they refused to renew the
> contract with the old phone. That means that all analog phones might
> be gone by the time the current contracts expire, which would a
> maximum of 2 years (probably much less).
>
> at&t will probably do the same thing. The only analog systems they
> still operate are the 800MHz TDMA systems they inherited from Dobson,
> Cell One, and others. You'll probably get a Valentine greeting card
> from at&t announcing the demise of analog.
>
> Incidentally, at&t discontinued its CDPD (cellular digital packet
> data) service in mid 2004. Verizon did the same a year later. Yet, I
> still am getting sync and carrier for CDPD on my Novatel(?) CDPD
> modem. As I mentioned in another thread, there are still IMTS tones
> on the air. I guess old services never seem to die completely.

True enough, Up here in Southwestern Alaska, I am maintaining an old Novatel
that was branded up to Nortel amps system. We run an old MTX DMS 100 switch
along with these 8 Amps cell sites. We are looking at a CDMA system from
Lemko.

>
> --
> # Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
> # 831-336-2558 jeffl@comix.santa-cruz.ca.us
> # http://802.11junk.com jeffl@cruzio.com
> # http://www.LearnByDestroying.com AE6KS

3620. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:55:02 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <1662a$46a015fb$944e306e$5430@STARBAND.NET>
Source record: 38330
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Navas" <spamfilter1@navasgroup.com> wrote in message
news:iisv93tv67hl9ahtl308baj9q248hi8muq@4ax.com...
> On Thu, 19 Jul 2007 14:33:43 -0700, Jeff Liebermann
> <jeffl@comix.santa-cruz.ca.us> wrote in
> <falv93l0usf0nf7k1kf43psdefcnqp1otd@4ax.com>:
>
>>On Thu, 19 Jul 2007 10:38:21 -0400, "Dana" <raff242@yahoo.com> wrote:
>>
>>>> Why bother? Analog cell phones are going away on Valentine's Day
>>>> 2008.
>>>> <http://dialzero.blogspot.com/2007/06/analog-cellphone-service-to-end-after.html>
>>
>>>The FCC does not require that analog service be turned off. Only that
>>>carriers are not required to continue analog service past that date.
>>>A good number of rural areas will probably continue to use Analog
>>>cellualr
>>>service for a few years after that.
>>
>>True. Analog will probably dribble along for quite a while. ...
>
> I seriously doubt it. All the carrier people I know are chomping at the
> bit to turn it off, as noted in public statements.

He said dribble, and that would be true for rural areas, as there is no big
push to change much out in the rural areas.
>
> --
> Best regards, FAQ FOR CINGULAR WIRELESS:
> John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3621. Re: A more rational approach -- how I would like to change thecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 01:59:36 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <a1f3c$46a0170b$944e306e$5664@STARBAND.NET>
Source record: 38331
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2C55D1A.700AD%dbowey@comcast.net...
> On 7/19/07 4:41 PM, in article aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
> "John Navas" <spamfilter1@navasgroup.com> wrote:
>
>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
>> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>>
>>> How about just national enforcing Californias proposed Consumer code
>>> for cell phone companies.
>>
>> Really bad idea. The market works better without government
>> interference.
>
> Brilliant stupid canned comment.
>
> California has a government.
>
> The US has a government.
>
> I'd rather we work issues with our elected Federal representatives than
> have
> California start pushing at the state level.

States are more responsive than the feds, Besides we are a federal republic,
hence the states should be taking back what the feds have grabbed.
>

3622. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 02:00:42 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <12e71$46a0174e$944e306e$5773@STARBAND.NET>
Source record: 38232
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"John Navas" <spamfilter1@navasgroup.com> wrote in message
news:1mtv93ticddur8rq3tghsra57n9508mci0@4ax.com...
> On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
> <tp94n4-17l.ln1@mail.specsol.com>:
>
>>In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>
>>> Digital cell phones should stop using the compression they use and
>>> start using monaural WMA compression with a CBR of 20 kbps or less and
>>> a sample rate of at least 44.1 KHz. In addition, the following must
>>> also apply:
>>
>>The audio bandwidth of the phone system is about 3 KHz.
>
> Actually more like 10 KHz.

That is incorrect. The person that said 3khz is way closer than your wild
guess.
>
> --
> Best regards, FAQ FOR CINGULAR WIRELESS:
> John Navas <http://en.wikibooks.org/wiki/Cingular_Wireless_FAQ>

3623. Re: A more rational approach -- how I would like to change the?cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 02:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vmj5n4-o4f.ln1@mail.specsol.com>
Source record: 38233
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Don Bowey <dbowey@comcast.net> wrote:
> On 7/19/07 4:42 PM, in article 1mtv93ticddur8rq3tghsra57n9508mci0@4ax.com,
> "John Navas" <spamfilter1@navasgroup.com> wrote:

> > On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
> > <tp94n4-17l.ln1@mail.specsol.com>:
> >
> >> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> >
> >>> Digital cell phones should stop using the compression they use and
> >>> start using monaural WMA compression with a CBR of 20 kbps or less and
> >>> a sample rate of at least 44.1 KHz. In addition, the following must
> >>> also apply:
> >>
> >> The audio bandwidth of the phone system is about 3 KHz.
> >
> > Actually more like 10 KHz.

> If he is commenting on the bandwidth of a message network channel/circuit,
> including cellular, it is about 3 kHz.

Exactly.

--
Jim Pennino

Remove .spam.sux to reply.

3624. Re: A more rational approach -- how I would like to change thecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 02:52:16 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C57170.700F8%dbowey@comcast.net>
Source record: 38234
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/19/07 6:59 PM, in article a1f3c$46a0170b$944e306e$5664@STARBAND.NET,
"Dana" <raff242@yahoo.com> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2C55D1A.700AD%dbowey@comcast.net...
>> On 7/19/07 4:41 PM, in article aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
>> "John Navas" <spamfilter1@navasgroup.com> wrote:
>>
>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
>>> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>>>
>>>> How about just national enforcing Californias proposed Consumer code
>>>> for cell phone companies.
>>>
>>> Really bad idea. The market works better without government
>>> interference.
>>
>> Brilliant stupid canned comment.
>>
>> California has a government.
>>
>> The US has a government.
>>
>> I'd rather we work issues with our elected Federal representatives than
>> have
>> California start pushing at the state level.
>
> States are more responsive than the feds, Besides we are a federal republic,
> hence the states should be taking back what the feds have grabbed.
>>
>
>

Naï¿½ve point of view. The feds grabbed? Do you recall how the state's
representatives become feds?

3625. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 02:58:14 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <axVni.23455$Rw1.21793@newssvr25.news.prodigy.net>
Source record: 38235
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Navas wrote:
> Spectral efficiency be damned as long as you get yours? ;)

Damned right

3626. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 03:16:36 UTC
From: DTC <no_spam@move_along_folks.foob>
Message-ID: <oOVni.23459$Rw1.1376@newssvr25.news.prodigy.net>
Source record: 38236
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

John Navas wrote:
> On Thu, 19 Jul 2007 14:45:00 GMT, jimp@specsol.spam.sux.com wrote in
> <tp94n4-17l.ln1@mail.specsol.com>:
>
>> In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
>
>>> Digital cell phones should stop using the compression they use and
>>> start using monaural WMA compression with a CBR of 20 kbps or less and
>>> a sample rate of at least 44.1 KHz. In addition, the following must
>>> also apply:
>> The audio bandwidth of the phone system is about 3 KHz.
>
> Actually more like 10 KHz.

Ahhhhh...an answer by obsfucation! Without qualifying the signal levels at 10 KHz, his answer would be correct.

According to AT&T's "Notes on the Network", the bandwidth is actually 400 Hz to 3,200 Hz where you have specific audio levels measured in decibels.

This will it explain it on terms equatable to John's telecommunications skill set. http://communication.howstuffworks.com/telephone6.htm

3627. Re: A more rational approach -- how I would like to changethecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 03:44:40 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <7c061$46a02fab$944e306e$14881@STARBAND.NET>
Source record: 38237
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2C57170.700F8%dbowey@comcast.net...
> On 7/19/07 6:59 PM, in article a1f3c$46a0170b$944e306e$5664@STARBAND.NET,
> "Dana" <raff242@yahoo.com> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2C55D1A.700AD%dbowey@comcast.net...
>>> On 7/19/07 4:41 PM, in article
>>> aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
>>> "John Navas" <spamfilter1@navasgroup.com> wrote:
>>>
>>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
>>>> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>>>>
>>>>> How about just national enforcing Californias proposed Consumer code
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>>>>
>>>> Really bad idea. The market works better without government
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>>> Brilliant stupid canned comment.
>>>
>>> California has a government.
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>>> The US has a government.
>>>
>>> I'd rather we work issues with our elected Federal representatives than
>>> have
>>> California start pushing at the state level.
>>
>> States are more responsive than the feds, Besides we are a federal
>> republic,
>> hence the states should be taking back what the feds have grabbed.
>>>
>>
>>
>
> Na&#65533;ve point of view.

Not at all, and accurate statement reflecting current affairs with our
federal republic.

> The feds grabbed?

Yep, common knowledge

> Do you recall how the state's
> representatives become feds?

It is a mistake having popular elections for the state Senators. Kind of
destroys the purpose of the Senate.
>

3628. Re: A more rational approach -- how I would like to changethecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 04:21:37 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C58661.70110%dbowey@comcast.net>
Source record: 38238
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/19/07 8:44 PM, in article 7c061$46a02fab$944e306e$14881@STARBAND.NET,
"Dana" <raff242@yahoo.com> wrote:

>
> "Don Bowey" <dbowey@comcast.net> wrote in message
> news:C2C57170.700F8%dbowey@comcast.net...
>> On 7/19/07 6:59 PM, in article a1f3c$46a0170b$944e306e$5664@STARBAND.NET,
>> "Dana" <raff242@yahoo.com> wrote:
>>
>>>
>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>> news:C2C55D1A.700AD%dbowey@comcast.net...
>>>> On 7/19/07 4:41 PM, in article
>>>> aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
>>>> "John Navas" <spamfilter1@navasgroup.com> wrote:
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>>>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
>>>>> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>>>>>
>>>>>> How about just national enforcing Californias proposed Consumer code
>>>>>> for cell phone companies.
>>>>>
>>>>> Really bad idea. The market works better without government
>>>>> interference.
>>>>
>>>> Brilliant stupid canned comment.
>>>>
>>>> California has a government.
>>>>
>>>> The US has a government.
>>>>
>>>> I'd rather we work issues with our elected Federal representatives than
>>>> have
>>>> California start pushing at the state level.
>>>
>>> States are more responsive than the feds, Besides we are a federal
>>> republic,
>>> hence the states should be taking back what the feds have grabbed.
>>>>
>>>
>>>
>>
```

>> Naï¿½ve point of view.
>
> Not at all, and accurate statement reflecting current affairs with our
> federal republic.
>
>> The feds grabbed?
>
> Yep, common knowledge
>
>> Do you recall how the state's
>> representatives become feds?
>
> It is a mistake having popular elections for the state Senators. Kind of
> destroys the purpose of the Senate.
>>
>
>

I don't understand how you can so readily kiss-off your responsibilities as
a citizen, but there it is.....

3629. Re: A more rational approach -- how I would like to changethecellphone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 04:49:14 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <8455a$46a03ece$944e306e$31961@STARBAND.NET>
Source record: 38239
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Don Bowey" <dbowey@comcast.net> wrote in message
news:C2C58661.70110%dbowey@comcast.net...
> On 7/19/07 8:44 PM, in article 7c061$46a02fab$944e306e$14881@STARBAND.NET,
> "Dana" <raff242@yahoo.com> wrote:
>
>>
>> "Don Bowey" <dbowey@comcast.net> wrote in message
>> news:C2C57170.700F8%dbowey@comcast.net...
>>> On 7/19/07 6:59 PM, in article
>>> a1f3c$46a0170b$944e306e$5664@STARBAND.NET,
>>> "Dana" <raff242@yahoo.com> wrote:
>>>
>>>>
>>>> "Don Bowey" <dbowey@comcast.net> wrote in message
>>>> news:C2C55D1A.700AD%dbowey@comcast.net...
>>>>> On 7/19/07 4:41 PM, in article
>>>>> aktv931m1ptv25uvtv0ihgd35hqoek4v0l@4ax.com,
>>>>> "John Navas" <spamfilter1@navasgroup.com> wrote:
>>>>>
>>>>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote
>>>>>> in
>>>>>> <psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>>>>>>
>>>>>>> How about just national enforcing Californias proposed Consumer code
>>>>>>> for cell phone companies.
>>>>>>
>>>>>> Really bad idea. The market works better without government
>>>>>> interference.
>>>>>
>>>>> Brilliant stupid canned comment.
>>>>>
>>>>> California has a government.
>>>>>
>>>>> The US has a government.
>>>>>
>>>>> I'd rather we work issues with our elected Federal representatives
>>>>> than
>>>>> have
>>>>> California start pushing at the state level.
>>>>
>>>> States are more responsive than the feds, Besides we are a federal

>>>> republic,
>>>> hence the states should be taking back what the feds have grabbed.
>>>>>
>>>>
>>>>
>>>
>>> Na&#65533;ve point of view.
>>
>> Not at all, and accurate statement reflecting current affairs with our
>> federal republic.
>>
>>> The feds grabbed?
>>
>> Yep, common knowledge
>>
>>> Do you recall how the state's
>>> representatives become feds?
>>
>> It is a mistake having popular elections for the state Senators. Kind of
>> destroys the purpose of the Senate.
>>>
>>
>>
>
> I don't understand how you can so readily kiss-off your responsibilities
> as
> a citizen, but there it is.....

Actually being a citizen requires that you understand our form of
government, which is a federal republic, with a federal government that has
clearly defined powers. All other powers, are for the people and the states.
>

3630. Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 06:10:12 UTC
From: Hein ten Horn <tenhornRemovE@ThiSraketnet.nl>
Message-ID: <46a05214$1$330$e4fe514c@news.xs4all.nl>
Source record: 38240
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jim Kelley wrote:
> Hein ten Horn wrote:
>
>> Hmm, let's examine this.
>> From the two composing oscillations you get the overall
>> displacement:
>> y(t) = sin(2 pi 220 t) + sin(2 pi 224 t)
>> From the points of intersection of y(t) at the time-axes you
>> can find the period of the function, so examine when y(t) = 0.
>> sin(2 pi 220 t) + sin(2 pi 224 t) = 0
>> (..)
>> (Assuming you can do the math.)
>> (..)
>> The solutions are:
>> t = k/(220+224) with k = 0, 1, 2, 3, etc.
>> so the time between two successive intersections is
>> Dt = 1/(220+224) s.
>> With two intersections per period, the period is
>> twice as large, thus
>> T = 2/(220+224) s,
>> hence the frequency is
>> f = (220+224)/2 = 222 Hz,
>> which is the arithmetic average of both composing
>> frequencies.
>
> As I said before, it might be correct to say that the average, or effective
> frequency is 222 Hz. But the actual period varies from cycle to cycle over
> a period of 1/(224-220).
>
>>> the amplitude of which is easily plotted versus time using Mathematica,
>>> Mathcad, Sigma Plot, and even Excel. I think you should still give that a
>>> try.
>>
>>
>> No peculiarities found.
>
> Perhaps you would agree that a change in period of less than 2% might be
> difficult to observe - especially when you're not expecting to see it. To
> more easily find the 'peculiarities' I suggest that you try using more
> widely spaced frequencies.

Before we go any further I'd like to exclude
that we are talking at cross-purposes.
Are you pointing at the irregularities which
can occur when the envelope passes zero?
(That phenomenon has already been
mentioned in this thread.)

>
> gr right back at ya,

:-)
"gr" is not customary, but, when writing it satisfies
in several languages: German (gru&#65533;, gr&#65533;&#65533;e),
Dutch (groet, groeten) and English.

Adieu, Hein

3631. Re: A more rational approach -- how I would like to changethecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 06:49:45 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1184914185.054123.283210@z28g2000prd.googlegroups.com>
Source record: 38241
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 19, 8:44 pm, "Dana" <raff...@yahoo.com> wrote:
> "Don Bowey" <dbo...@comcast.net> wrote in message
>
> news:C2C57170.700F8%dbowey@comcast.net...
>
>
>
>
>
> > On 7/19/07 6:59 PM, in article a1f3c$46a0170b$944e306e$5...@STARBAND.NET,
> > "Dana" <raff...@yahoo.com> wrote:
>
> >> "Don Bowey" <dbo...@comcast.net> wrote in message
> >>news:C2C55D1A.700AD%dbowey@comcast.net...
> >>> On 7/19/07 4:41 PM, in article
> >>> aktv931m1ptv25uvtv0ihgd35hqoek4...@4ax.com,
> >>> "John Navas" <spamfilt...@navasgroup.com> wrote:
>
> >>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrand...@sbcglobal.net wrote in
> >>>> <psuu93dip5jkf4fk12jq01oo3j4f3bc...@4ax.com>:
>
> >>>>> How about just national enforcing Californias proposed Consumer code
> >>>>> for cell phone companies.
>
> >>>> Really bad idea. The market works better without government
> >>>> interference.
>
> >>> Brilliant stupid canned comment.
>
> >>> California has a government.
>
> >>> The US has a government.
>
> >>> I'd rather we work issues with our elected Federal representatives than
> >>> have
> >>> California start pushing at the state level.
>
> >> States are more responsive than the feds, Besides we are a federal
> >> republic,
> >> hence the states should be taking back what the feds have grabbed.
>
> > Naïve point of view.

>
> Not at all, and accurate statement reflecting current affairs with our
> federal republic.
>
> > The feds grabbed?
>
> Yep, common knowledge
>
> > Do you recall how the state's
> > representatives become feds?
>
> It is a mistake having popular elections for the state Senators. Kind of
> destroys the purpose of the Senate.
>
>
>
> - Hide quoted text -
>
> - Show quoted text -- Hide quoted text -
>
> - Show quoted text -

Yep - The US Senators should be 'appointed' by the
King of the State {Oops Governor} cause their should
represent the Big {Money} People.

the divine right of money & the golden rule :
those with the gold make the rules ~ RHF
.
.
. .

3632. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 10:38:17 UTC
From: John <susan48@aapt.net.au>
Message-ID: <f7q3am$6d1$1@news-01.bur.connect.com.au>
Source record: 38242

Thanks Duane/Dave/Marvin,
A lot of help. Enjoyed Marvins spray.
Usually I,m tied up in AirCooled VW newsgroups and you get exasperated souls there as well.
I have to confess the last time I was that cynical was when Dr Who opened a sliding door by using as a button a 2N3055 on a heatsink and shot an alien with a Grid Dip Oscillator.
Probably giving my age away there. I mentioned a 6X4 rectifier to a bloke at work and he hadn,t heard of it!!!!.
I,ll be more exact next time. I,m down in Australia where we use PAL and antenna is UHF only, no VHF,no FM.
Cheers
John

"Allodoxaphobia" <bit-bucket@config.com> wrote in message news:slrnf9vsdb.15ck.bit-bucket@shell.config.com...
> On Thu, 19 Jul 2007 08:25:19 -0700, Dave Platt wrote:
>>
>> Although most TV stations have chosen to use UHF-band for their
>> digital signals, that is not universally true. Some stations whose
>> primary (NTSC analog) transmitters are in the VHF high-band (channels
>> 7 through 13) have decided to use their VHF channels to carry ATSC
>> digital, after the Big Switchover occurs. In a very few areas of the
>> country, there's even a station or two which will be using its VHF
>> low-band frequency slot (channel 2 through 5) for ATSC. The FCC has
>> recommended against using VHF lowband channel 6 for ATSC, in order to
>> prevent interference with the bottom of the FM broadcast band.
>>
>> I believe that these stations are electing VHF for ATSC, rather than
>> using their "interim" UHF channel assignment, because they'll be able
>> to get better ATSC signal coverage that way. They can operate at
>> higher power on the VHF band than they could on UHF (likely because
>> their interim UHF frequency assignment has co- or adjacent-channel
>> users not all that far away).
>>
>> In most areas of the country, a good UHF antenna will suffice for ATSC
>> digital. In a few (e.g. SF bay area) you'll still need to have an
>> antenna capable of both UHF, and VHF high-band, to get all of the
>> local stations... and in one or two areas you'll still need a
>> full-range VHF-lowband/VHF-highband/UHF antenna such as is used today.
>> Some people who have bought "digital TV" or "HDTV" antennas (UHF-only)
>> are likely to be annoyed, when they lose a channel or two on The Big
>> Day.
>>

>> A nationwide table of the ATSC frequency assignments can be found at
>>
>> http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-150A1.pdf
>
> So all this bu$$sh!t about freeing up spectrum, or improving reception,
> or yaa-daa yaa-daa yaa-daa is just that - BU$$SH!T!
>
> This is no better than a LandFill Utilization Project.
>
> It is usually a disaster when the government gets involved in promoting
> "technology".
>
> I've just about had it, anyway, with the crap being pushed out over the
> airwaves. They keep targeting the ever diminishing lowest common
> denominator. So, I think when _their_ Big Day comes, it'll be _my_
> Last Day.
>
> Jonesy
> --
> Marvin L Jones | jonz | W3DHJ | linux
> 38.24N 104.55W | @ config.com | Jonesy | OS/2
> *** Killfiling google posts: <http://jonz.net/ng.htm>

3633. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 11:09:30 UTC
From: Dave <noone@nowhere.com>
Message-ID: <KJ0oi.7848$Gx5.2437@trndny02>
Source record: 38243

you have to watch out for those grid dippers, they can be deadly in the
wrong hands!

"John" <susan48@aapt.net.au> wrote in message
news:f7q3am$6d1$1@news-01.bur.connect.com.au...
> Thanks Duane/Dave/Marvin,
> A lot of help. Enjoyed Marvins spray.
> Usually I,m tied up in AirCooled VW newsgroups and you get exasperated
> souls there as well.
> I have to confess the last time I was that cynical was when Dr Who opened
> a sliding door by using as a button a 2N3055 on a heatsink and shot an
> alien with a Grid Dip Oscillator.
> Probably giving my age away there. I mentioned a 6X4 rectifier to a bloke
> at work and he hadn,t heard of it!!!!.
> I,ll be more exact next time. I,m down in Australia where we use PAL and
> antenna is UHF only, no VHF,no FM.
> Cheers
> John
>
> "Allodoxaphobia" <bit-bucket@config.com> wrote in message
> news:slrnf9vsdb.15ck.bit-bucket@shell.config.com...
>> On Thu, 19 Jul 2007 08:25:19 -0700, Dave Platt wrote:
>>>
>>> Although most TV stations have chosen to use UHF-band for their
>>> digital signals, that is not universally true. Some stations whose
>>> primary (NTSC analog) transmitters are in the VHF high-band (channels
>>> 7 through 13) have decided to use their VHF channels to carry ATSC
>>> digital, after the Big Switchover occurs. In a very few areas of the
>>> country, there's even a station or two which will be using its VHF
>>> low-band frequency slot (channel 2 through 5) for ATSC. The FCC has
>>> recommended against using VHF lowband channel 6 for ATSC, in order to
>>> prevent interference with the bottom of the FM broadcast band.
>>>
>>> I believe that these stations are electing VHF for ATSC, rather than
>>> using their "interim" UHF channel assignment, because they'll be able
>>> to get better ATSC signal coverage that way. They can operate at
>>> higher power on the VHF band than they could on UHF (likely because
>>> their interim UHF frequency assignment has co- or adjacent-channel
>>> users not all that far away).
>>>
>>> In most areas of the country, a good UHF antenna will suffice for ATSC
>>> digital. In a few (e.g. SF bay area) you'll still need to have an
>>> antenna capable of both UHF, and VHF high-band, to get all of the
>>> local stations... and in one or two areas you'll still need a

>>> full-range VHF-lowband/VHF-highband/UHF antenna such as is used today.
>>> Some people who have bought "digital TV" or "HDTV" antennas (UHF-only)
>>> are likely to be annoyed, when they lose a channel or two on The Big
>>> Day.
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>>> A nationwide table of the ATSC frequency assignments can be found at
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>>> http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-150A1.pdf
>>
>> So all this bu$$sh!t about freeing up spectrum, or improving reception,
>> or yaa-daa yaa-daa yaa-daa is just that - BU$$SH!T!
>>
>> This is no better than a LandFill Utilization Project.
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>> It is usually a disaster when the government gets involved in promoting
>> "technology".
>>
>> I've just about had it, anyway, with the crap being pushed out over the
>> airwaves. They keep targeting the ever diminishing lowest common
>> denominator. So, I think when _their_ Big Day comes, it'll be _my_
>> Last Day.
>>
>> Jonesy
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>> Marvin L Jones | jonz | W3DHJ | linux
>> 38.24N 104.55W | @ config.com | Jonesy | OS/2
>> *** Killfiling google posts: <http://jonz.net/ng.htm>
>
>

3634. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 11:58:44 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <Ur1oi.9025$tj6.578@newsread4.news.pas.earthlink.net>
Source record: 38244

Dave Platt wrote:
> In article <LvHni.9031$Od7.2923@newsread1.news.pas.earthlink.net>,
> Duane Allen <computeruser@sprintmail.com> wrote:
>
>> If your using the antenna for HDTV, you need only the UHF elements,
>> which for many TV antennas are the shorter elements at the front end of
>> the antenna. The VHF elements will not be needed when all OTA TV
>> stations go to HDTV.
>
> I believe that this statement is untrue, or is at least of somewhat
> limited (regional) truth.
>
> Although most TV stations have chosen to use UHF-band for their
> digital signals, that is not universally true. Some stations whose
> primary (NTSC analog) transmitters are in the VHF high-band (channels
> 7 through 13) have decided to use their VHF channels to carry ATSC
> digital, after the Big Switchover occurs. In a very few areas of the
> country, there's even a station or two which will be using its VHF
> low-band frequency slot (channel 2 through 5) for ATSC. The FCC has
> recommended against using VHF lowband channel 6 for ATSC, in order to
> prevent interference with the bottom of the FM broadcast band.
>
> I believe that these stations are electing VHF for ATSC, rather than
> using their "interim" UHF channel assignment, because they'll be able
> to get better ATSC signal coverage that way. They can operate at
> higher power on the VHF band than they could on UHF (likely because
> their interim UHF frequency assignment has co- or adjacent-channel
> users not all that far away).
>
> In most areas of the country, a good UHF antenna will suffice for ATSC
> digital. In a few (e.g. SF bay area) you'll still need to have an
> antenna capable of both UHF, and VHF high-band, to get all of the
> local stations... and in one or two areas you'll still need a
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> are likely to be annoyed, when they lose a channel or two on The Big
> Day.
>
> A nationwide table of the ATSC frequency assignments can be found at
>
> http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-150A1.pdf
>

Thanks for taking the time to correct my error.

3635. Re: A more rational approach -- how I would like to changethecell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 14:36:03 UTC
From: Dana <raff242@yahoo.com>
Message-ID: <7da46$46a0c857$944e306e$5611@STARBAND.NET>
Source record: 38245
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"RHF" <rhf-newsgroups@pacbell.net> wrote in message
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> "Don Bowey" <dbo...@comcast.net> wrote in message
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> news:C2C57170.700F8%dbowey@comcast.net...
>
>
>
>
>
> > On 7/19/07 6:59 PM, in article
> > a1f3c$46a0170b$944e306e$5...@STARBAND.NET,
> > "Dana" <raff...@yahoo.com> wrote:
>
> >> "Don Bowey" <dbo...@comcast.net> wrote in message
> >>news:C2C55D1A.700AD%dbowey@comcast.net...
> >>> On 7/19/07 4:41 PM, in article
> >>> aktv931m1ptv25uvtv0ihgd35hqoek4...@4ax.com,
> >>> "John Navas" <spamfilt...@navasgroup.com> wrote:
>
> >>>> On Thu, 19 Jul 2007 09:56:57 -0500, karlkrand...@sbcglobal.net wrote
> >>>> in
> >>>> <psuu93dip5jkf4fk12jq01oo3j4f3bc...@4ax.com>:
>
> >>>>> How about just national enforcing Californias proposed Consumer code
> >>>>> for cell phone companies.
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> >>>> Really bad idea. The market works better without government
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>
> >>> Brilliant stupid canned comment.
>
> >>> California has a government.
>
> >>> The US has a government.
>
> >>> I'd rather we work issues with our elected Federal representatives
> >>> than
> >>> have
> >>> California start pushing at the state level.

>
> >> States are more responsive than the feds, Besides we are a federal
> >> republic,
> >> hence the states should be taking back what the feds have grabbed.
>
> > Na&#65533;ve point of view.
>
> Not at all, and accurate statement reflecting current affairs with our
> federal republic.
>
> > The feds grabbed?
>
> Yep, common knowledge
>
> > Do you recall how the state's
> > representatives become feds?
>
> It is a mistake having popular elections for the state Senators. Kind of
> destroys the purpose of the Senate.
>
>
>
> - Hide quoted text -
>
> - Show quoted text -- Hide quoted text -
>
> - Show quoted text -

Yep - The US Senators should be 'appointed' by the
King of the State {Oops Governor} cause their should
represent the Big {Money} People.

And you think that the representatives and senators now publicly elected
represent the people. Come on, why do you think there are so many lobbyists
in D.C.

the divine right of money & the golden rule :
those with the gold make the rules ~ RHF
.
.
. .

3636. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 16:09:08 UTC
From: "mike-c@bulldoghome.com" <mike-c@bulldoghome.com>
Message-ID: <1184947748.575932.296360@r34g2000hsd.googlegroups.com>
Source record: 38246
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

On Jul 15, 3:57 am, Radium <gluceg...@gmail.com> wrote:
> George Dishman says Karl Uppiano is wrong about AM radio, carrier-
> frequencies, and aliasing. Who should I believe and why?
>
> On Jul 14, 4:11 pm, "George Dishman" <geo...@briar.demon.co.uk> wrote
> inhttp://groups.google.com/group/sci.astro.amateur/msg/1d3b52bbf05843c0...
> :
>
>
>
> > "Radium" <gluceg...@gmail.com> wrote in message
>
> >news:1184446739.705444.308660@i38g2000prf.googlegroups.com...
>
> > > On Jul 14, 1:17 am, "George Dishman" <geo...@briar.demon.co.uk> wrote:
> > >> "Radium" <gluceg...@gmail.com> wrote in message
>
> > >>news:1184373407.506861.132200@m37g2000prh.googlegroups.com...
> > >> ..
>
> > >> > Isn't it true that the carrier-frequency must be at least 2x the
> > >> > highest intended frequency of the modulator signal?
>
> > >> No.
>
> > > Karl Uppiano sharply disagrees.
>
> > > Karl Uppiano explained in
> > >http://groups.google.com/group/sci.energy/msg/a74d4d8ddcea47a5?hl=en&
>
> > He is wrong. The basis of AM is that the sine wave
> > carrier is multiplied by another signal which can be
> > treated as a sum of sines. The relevant maths is:
>
> > http://www.sosmath.com/trig/prodform/prodform.html
>
> > If the carrier frequency if fc and the modulation has
> > frequencies up to fm then you get sidebands like
> > this:
>
> > http://en.wikipedia.org/wiki/Image:Am-sidebands.png
>

> > If you multiply 44.1kHz by a band from 20Hz to 20kHz,
> > you get an upper sideband given 44.12kHz to 64.1kHz
> > and a lower sideband from 44.08kHz down to 24.1kHz
>
> > >> The highest modulating frequency for AM must be less than 1/2 the carrier
> > >> frequency. Conversely, the lowest carrier frequency must be twice the
> > >> highest modulating frequency. Period. I don't care what specific
> > >> frequencies
> > >> and/or energies and/or colors you propose.
>
> > >> If you want to modulate at 20KHz, the carrier must be at least 40KHz. It
> > >> is
> > >> no coincidence that CD audio uses a 44.1KHz sample rate. It is
> > >> essentially
> > >> the same principle. If you exceed the Nyquist criterion, the sidebands
> > >> overlap the baseband (i.e., aliasing occurs) and you cannot unambiguously
> > >> decode the original modulation.
>
> > Nyquist applies to sampling.
>
> > > So who is right and who is wrong?
>
> > Look at the maths, it is never wrong. Modulating fc
> > with fm gives a lowest frequency of fc-fm so as long
> > as fc > fm, you don't get aliasing.
>
> > George
>
> So is it possible for me to receive a 10 KHz audio sine-wave tone on a
> 1 Hz AM radio receiver? If not, why? My guess is it violates Nyquist/
> Shannon. Right?

er i dont know any AM radio or any reciever that will recieve at 1Hz
you surely mean 1 MHz which means that a 10 KHz tone would be easily
modulated at that frequency

3637. dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 16:48:11 UTC
From: chvjillson@aol.com
Message-ID: <1184950091.436603.119330@22g2000hsm.googlegroups.com>
Source record: 38247

Hi folks:

I've got a 110' 80 meter dipole that I've used for the past 4 years. I have the dipole strung about 30' in the air and connected between two trees.

Because of where the trees are and the location of my house, I've needed to use a pulley that's attached to my chimney to keep the dipole closer to my house. The pulley is located near the center of the antenna, and it creates about a 25 degree angle from the chimney to the other tree.

Each year I have to repair the antenna wire right around where the pulley is. I'm guessing because I use a cheap antenna wire (purchased at Radio Shack ... about 14 gauge I believe), that's why my antenna keeps breaking. I don't see how the pulley's creating that much wear on the antenna, although I'm sure it's possible.

Would you guess that I'd have better luck if I was to purchase a stronger antenna wire, such as a copper-clad steel wire I can get at Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html

Thanks for your suggestions.

Clark
KB9SJD

3638. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 17:04:03 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <IvednRb3gudgdz3bnZ2dnUVZ_qqgnZ2d@comcast.com>
Source record: 38248

<chvjillson@aol.com> wrote in message
news:1184950091.436603.119330@22g2000hsm.googlegroups.com...
> Hi folks:
>
> I've got a 110' 80 meter dipole that I've used for the past 4
> years. I have the dipole strung about 30' in the air and connected
> between two trees.
>
> Because of where the trees are and the location of my house, I've
> needed to use a pulley that's attached to my chimney to keep the
> dipole closer to my house. The pulley is located near the center of
> the antenna, and it creates about a 25 degree angle from the chimney
> to the other tree.
>
> Each year I have to repair the antenna wire right around where the
> pulley is. I'm guessing because I use a cheap antenna wire
> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> antenna keeps breaking. I don't see how the pulley's creating that
> much wear on the antenna, although I'm sure it's possible.
>
> Would you guess that I'd have better luck if I was to purchase a
> stronger antenna wire, such as a copper-clad steel wire I can get at
> Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> Thanks for your suggestions.
>
> Clark
> KB9SJD
>
My $0.02 worth - I would go to the nearest electrical supply store and
purchase 13 ga copper stranded wire with a plastic coating and a small piece
of either plastic or rubber tubing and slide the antenna wire into the
tubing only enough to where you need to run the whole assy thru the pulley.
The 13 ga wire is stronger than the RS wire and the outside covering should
withstand the abrasiveness of the pulley!
73's de Howard W3CQH

3639. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 17:19:23 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <1184951963.166276.4690@j4g2000prf.googlegroups.com>
Source record: 38249

On Jul 20, 9:48 am, chvjill...@aol.com wrote:
> Hi folks:
>
> I've got a 110' 80 meter dipole that I've used for the past 4
> years. I have the dipole strung about 30' in the air and connected
> between two trees.
>
> Because of where the trees are and the location of my house, I've
> needed to use a pulley that's attached to my chimney to keep the
> dipole closer to my house. The pulley is located near the center of
> the antenna, and it creates about a 25 degree angle from the chimney
> to the other tree.
>
> Each year I have to repair the antenna wire right around where the
> pulley is. I'm guessing because I use a cheap antenna wire
> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> antenna keeps breaking. I don't see how the pulley's creating that
> much wear on the antenna, although I'm sure it's possible.
>
> Would you guess that I'd have better luck if I was to purchase a
> stronger antenna wire, such as a copper-clad steel wire I can get at
> Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> Thanks for your suggestions.
>
> Clark
> KB9SJD

Hi.
Closely examine the break. You can tell if it was caused by wear,
flexing, or from chemical reaction with what is coming from the
chimney you mentioned. What are you heating with? Gas and oil heat
both create a small amount of sulfur containing acids going out the
chimney.

Also, are you using a pulley with a plastic wheel? A metal wheel, I
forget the real name for it, will wear the wire.

Good luck,
Paul KD7HB

3640. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 17:28:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <v1r1a31jc2ga34ueg5b1b3o9rjtbpucaur@4ax.com>
Source record: 38250
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

DTC <no_spam@move_along_folks.foob> hath wroth:

>> Brings back fond memories of the "RCC wars" (radio common carrier).
>
>In Texas, they were all pretty cooperative with reciprocal roaming.

In California, specifically the Orange County area near Smog Angeles,
the RCC's were perptually suing each other. About 5 years ago, I got
an invite to do a deposition on a running case that started in about
1970. The original parties are dead or gone, but the new business
owners have picked up the torch.

>Rates
>in the '70s were typically $40 a month which included mobile radio rental
>and unlimited minutes and free roaming. Denton Texas with the two
>universities had like 300 users in the early/mid '70s. When the rates
>jumped from $20 to $50 per month (on *TWO* VHF channels), it dropped to
>like fifteen users.

L.A. had a 3 year waiting list for VHF channels. My license was from
Nevada.

>The Secode was indeed much easier to program than the Motorola control
>head.

Program? I just had a Secode control head in my car connected to an
ordinary G.E. Progress Line on the shop channels. I was just trying
to impress the ladies, not talk to anyone on the phone. If I needed
to make a phone call, I would use one of the ham systems. I
eventually replaced the Prog Line with a T1234 mobile phone using the
same control head.

>Of
>course I would never whistle off the connect tone of an incoming call meant
>for another user and grab the channel when it went back to idle.

I had two pieces of brass pipe tuned to 1500 and 2805 for the purpose.
Incidentally, my senior project in kollege was designing an all solid
state Secode Selector. The original Secode model 70 or 90 selector
was a mechanical marvel and a nightmare to fix.

>I eventually upgraded to the all solid state Motos and smaller control heads.

That would probably be a Motorola Pulsar. The T1234 was solid state,
but with one pair of crystals per channel.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3641. Re: A more rational approach -- how I would like to change the cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 17:38:17 UTC
From: Mark McIntyre <markmcintyre@spamcop.net>
Message-ID: <5ls1a3he8il7655782l2q9urqoosisgaos@4ax.com>
Source record: 38251
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Thu, 19 Jul 2007 23:41:28 GMT, in alt.internet.wireless , John
Navas <spamfilter1@navasgroup.com> wrote:

>On Thu, 19 Jul 2007 09:56:57 -0500, karlkrandall@sbcglobal.net wrote in
><psuu93dip5jkf4fk12jq01oo3j4f3bcjh7@4ax.com>:
>
>>How about just national enforcing Californias proposed Consumer code
>>for cell phone companies.
>
>Really bad idea. The market works better without government
>interference.

Yeah, right - I mean ,who needs insider trading rules from govt
interfering with commerce, dratted FCC saying who can and can't use
bandwidth etc etc...

sigh.
--
Mark McIntyre

3642. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 18:11:11 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <5gcc60F3fivu8U1@mid.individual.net>
Source record: 38252
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

<mike-c@bulldoghome.com> wrote ...
> er i dont know any AM radio or any reciever that will recieve at 1Hz
> you surely mean 1 MHz which means that a 10 KHz tone would be easily
> modulated at that frequency

Those of us with previous experience with "Radium" can
easily believe he really means "1 Hz". He appears to throw
numbers and scientific/engineering terms around with no
actual understanding of what he is even asking. His Usenet
behavior is indistinguishable from a troll.

3643. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 18:42:47 UTC
From: George Dishman <george@briar.demon.co.uk>
Message-ID: <f7qve5$q0o$2@news.freedom2surf.net>
Source record: 38253
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

"Richard Crowley" <rcrowley@xp7rt.net> wrote in message
news:5gcc60F3fivu8U1@mid.individual.net...
> <mike-c@bulldoghome.com> wrote ...
>> er i dont know any AM radio or any reciever that will recieve at 1Hz
>> you surely mean 1 MHz which means that a 10 KHz tone would be easily
>> modulated at that frequency
>
> Those of us with previous experience with "Radium" can
> easily believe he really means "1 Hz". He appears to throw
> numbers and scientific/engineering terms around with no
> actual understanding of what he is even asking. His Usenet
> behavior is indistinguishable from a troll.

What you say may be true but in this case, since he was
asking about aliasing, the question is reasonable and
the values are what would often be called "toy numbers",
extreme values intended only to illustrate the point.

Modulating 1Hz with 10kHz produces nominally 10001 Hz
and -9999 Hz based on fc+fm and fc-fm. The latter of
course folds over to just 9999Hz illustrating what is
meant by 'aliasing' in the context.

HTH
George

3644. Re: George Dishman says Karl Uppiano is wrong about AM radio, carrier-frequencies, and aliasing. Who should I believe? Why?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 18:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <a0c7n4-nm2.ln1@mail.specsol.com>
Source record: 38254
Cross-posted to: rec.audio.tech,sci.astro,sci.physics,rec.radio.amateur.antenna,rec.radio.amateur.space

In rec.radio.amateur.antenna Richard Crowley <rcrowley@xp7rt.net> wrote:
> <mike-c@bulldoghome.com> wrote ...
> > er i dont know any AM radio or any reciever that will recieve at 1Hz
> > you surely mean 1 MHz which means that a 10 KHz tone would be easily
> > modulated at that frequency

> Those of us with previous experience with "Radium" can
> easily believe he really means "1 Hz". He appears to throw
> numbers and scientific/engineering terms around with no
> actual understanding of what he is even asking. His Usenet
> behavior is indistinguishable from a troll.

Radium posting usually follow the format of a wildly improbable or
impossible situation with a question that is at best tenuously related
to the situation.

A typical example would be something like:

If I had a nuclear hand grenade powered by the fusion of three atoms
of neon and threw it in my backyard, would the neighbor's cat still
be able to have kittens?

If so, should I change the neon to iron?

--
Jim Pennino

Remove .spam.sux to reply.

3645. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 20:11:36 UTC
From: chvjillson@aol.com
Message-ID: <1184962296.110493.247900@n2g2000hse.googlegroups.com>
Source record: 38255

On Jul 20, 12:19 pm, "pdr...@coinet.com" <co_far...@yahoo.com> wrote:
> On Jul 20, 9:48 am, chvjill...@aol.com wrote:
>
>
>
> > Hi folks:
>
> > I've got a 110' 80 meter dipole that I've used for the past 4
> > years. I have the dipole strung about 30' in the air and connected
> > between two trees.
>
> > Because of where the trees are and the location of my house, I've
> > needed to use a pulley that's attached to my chimney to keep the
> > dipole closer to my house. The pulley is located near the center of
> > the antenna, and it creates about a 25 degree angle from the chimney
> > to the other tree.
>
> > Each year I have to repair the antenna wire right around where the
> > pulley is. I'm guessing because I use a cheap antenna wire
> > (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> > antenna keeps breaking. I don't see how the pulley's creating that
> > much wear on the antenna, although I'm sure it's possible.
>
> > Would you guess that I'd have better luck if I was to purchase a
> > stronger antenna wire, such as a copper-clad steel wire I can get at
> > Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> > Thanks for your suggestions.
>
> > Clark
> > KB9SJD
>
> Hi.
> Closely examine the break. You can tell if it was caused by wear,
> flexing, or from chemical reaction with what is coming from the
> chimney you mentioned. What are you heating with? Gas and oil heat
> both create a small amount of sulfur containing acids going out the
> chimney.
>
> Also, are you using a pulley with a plastic wheel? A metal wheel, I
> forget the real name for it, will wear the wire.
>
> Good luck,
> Paul KD7HB

Thanks Paul. The chimney is no longer being used, so there's nothing happening there. I am using a metal pulley, but I'll look around for some sort of plastic one. Thanks for your suggestion.

3646. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 20:12:51 UTC
From: chvjillson@aol.com
Message-ID: <1184962371.642414.189110@k79g2000hse.googlegroups.com>
Source record: 38256

On Jul 20, 12:04 pm, "John Doe" <hgor...@adelphia.net> wrote:
> <chvjill...@aol.com> wrote in message
>
> news:1184950091.436603.119330@22g2000hsm.googlegroups.com...
>
> > Hi folks:
>
> > I've got a 110' 80 meter dipole that I've used for the past 4
> > years. I have the dipole strung about 30' in the air and connected
> > between two trees.
>
> > Because of where the trees are and the location of my house, I've
> > needed to use a pulley that's attached to my chimney to keep the
> > dipole closer to my house. The pulley is located near the center of
> > the antenna, and it creates about a 25 degree angle from the chimney
> > to the other tree.
>
> > Each year I have to repair the antenna wire right around where the
> > pulley is. I'm guessing because I use a cheap antenna wire
> > (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> > antenna keeps breaking. I don't see how the pulley's creating that
> > much wear on the antenna, although I'm sure it's possible.
>
> > Would you guess that I'd have better luck if I was to purchase a
> > stronger antenna wire, such as a copper-clad steel wire I can get at
> > Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> > Thanks for your suggestions.
>
> > Clark
> > KB9SJD
>
> My $0.02 worth - I would go to the nearest electrical supply store and
> purchase 13 ga copper stranded wire with a plastic coating and a small piece
> of either plastic or rubber tubing and slide the antenna wire into the
> tubing only enough to where you need to run the whole assy thru the pulley.
> The 13 ga wire is stronger than the RS wire and the outside covering should
> withstand the abrasiveness of the pulley!
> 73's de Howard W3CQH

Thanks Howard. Does the plastic coating affect the signal at all?

Clark

3647. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 21:10:52 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <cw9oi.406$ae7.132@bignews7.bellsouth.net>
Source record: 38257

<chvjillson@aol.com> wrote in message
news:1184950091.436603.119330@22g2000hsm.googlegroups.com...
> Hi folks:
>
> I've got a 110' 80 meter dipole that I've used for the past 4
> years. I have the dipole strung about 30' in the air and connected
> between two trees.
>
> Because of where the trees are and the location of my house, I've
> needed to use a pulley that's attached to my chimney to keep the
> dipole closer to my house. The pulley is located near the center of
> the antenna, and it creates about a 25 degree angle from the chimney
> to the other tree.
>
> Each year I have to repair the antenna wire right around where the
> pulley is. I'm guessing because I use a cheap antenna wire
> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> antenna keeps breaking. I don't see how the pulley's creating that
> much wear on the antenna, although I'm sure it's possible.
>
> Would you guess that I'd have better luck if I was to purchase a
> stronger antenna wire, such as a copper-clad steel wire I can get at
> Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> Thanks for your suggestions.
>
> Clark
> KB9SJD
>
I believe the pulley is the problem.
Run a line from the chimney to one of the trees.
run a line from the chimney to the other tree.
run a short jumper wire (leave a little slack) at the chimney from one line
to the other line.
- and I would be very very tempted to stick a 20-foot pole out the top of
that chimney to get the antenna a little higher.
- my nickel's worth - at a 2-cent discount.

3648. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 21:52:04 UTC
From: "David G. Nagel" <nagel.david@sbcglobal.net>
Message-ID: <8caoi.3290$Dx2.100@newssvr17.news.prodigy.net>
Source record: 38258

Roy Lewallen wrote:
> Jim Lux wrote:
>> Bob John wrote:
>>> Is Tarheel pricing their products out of the market? I had
>>> consideration purchasing a little Tarheel II during our local Hamfest
>>> last weekend in Aurora, IL. The dealer informed me the price had once
>>> again gone up and they are now $289.99.
>>
>> Seems a reasonable price for a retail thing. Someone has to buy the
>> parts, someone has to pay someone to assemble it, someone has to store
>> it in a warehouse, someone has to sit in a store to sell it, etc.
>> All those steps add up.
>>
>> When I worked in product design, we used to figure that retail selling
>> price (w/o discounts) would be 5-10 times the raw parts (Bill of
>> Materials, BOM) cost.
>>
>> So, based on that, the parts cost for that antenna would be somewhere
>> between $25-50. . .
>
> It makes absolutely no sense to apply one rule of thumb for pricing to
> all industries and situations. First, most rules of thumb are based on
> what it takes for a given business to make a profit on an item, and this
> varies tremendously on the volume, amount of R&D required for
> development, and a large number of other factors. What do you think the
> price of EZNEC is as a multiple of the cost of the CD -- or a printer
> ink cartridge based on its parts cost? How about a $3.00 calculator? But
> this doesn't have anything to do with what a product is worth, anyway.
> What a product is worth is what people are willing to pay for it, no
> more, no less. It's senseless to spend time figuring out what a vendor
> *should* charge based on some contrived rule based on only one of many
> factors determining its manufacturing cost. Vote with your pocketbook.
> If people find that the value of the item is worth the price, they'll
> pay it. Otherwise, they won't. And anyone thinking an item is overpriced
> should jump at the opportunity -- use the time you would have spent
> grousing and make it yourself and sell it for less. You'll be on your
> way to your first million. . . or, more likely, on your way to learning
> a few basic rules about business.
>
> Roy Lewallen, W7EL

A number of years ago a friend of mine worked for a company that made
oem patch antenna's for GPS receivers. His company sold them for $10
each. The retail sales price for these antenna's was $100.00. This is

quite in line with the above mentioned markup.

Dave WD9BDZ

BTW: I bought two and still have them somewhere.

3649. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 22:12:12 UTC
From: Chuck <no.spam@no.spam.at.all>
Message-ID: <1184969481_3451@sp12lax.superfeed.net>
Source record: 38259

chvjillson@aol.com wrote:
> Hi folks:
>
> I've got a 110' 80 meter dipole that I've used for the past 4
> years. I have the dipole strung about 30' in the air and connected
> between two trees.
>
> Because of where the trees are and the location of my house, I've
> needed to use a pulley that's attached to my chimney to keep the
> dipole closer to my house. The pulley is located near the center of
> the antenna, and it creates about a 25 degree angle from the chimney
> to the other tree.
>
> Each year I have to repair the antenna wire right around where the
> pulley is. I'm guessing because I use a cheap antenna wire
> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
> antenna keeps breaking. I don't see how the pulley's creating that
> much wear on the antenna, although I'm sure it's possible.
>
> Would you guess that I'd have better luck if I was to purchase a
> stronger antenna wire, such as a copper-clad steel wire I can get at
> Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>
> Thanks for your suggestions.
>
> Clark
> KB9SJD
>

Hello Clark,

Another possibility is to replace the pulley with an insulator and attach the insulator to your chimney with a length of shock cord. The pulley can allow movement of the antenna toward one tree or the other, but does nothing to relieve the effects of the trees moving in opposite directions in windy conditions. You need something other than the antenna wire to reduce the tension caused by those movements.

The shock cord stretches nicely as the wind blows and it is cheaper and easier to replace than the antenna wire. Some use springs or weights instead.

Chuck
NT3G

-----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet News==----
http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+ Newsgroups
----= East and West-Coast Server Farms - Total Privacy via Encryption =----

3650. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 22:24:02 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <6Caoi.10349$Od7.4376@newsread1.news.pas.earthlink.net>
Source record: 38260

<chvjillson@aol.com> wrote in message
news:1184962371.642414.189110@k79g2000hse.googlegroups.com...
> On Jul 20, 12:04 pm, "John Doe" <hgor...@adelphia.net> wrote:
>> <chvjill...@aol.com> wrote in message
>>
>> news:1184950091.436603.119330@22g2000hsm.googlegroups.com...
>>
>> > Clark
>> > KB9SJD
>>
>> My $0.02 worth - I would go to the nearest electrical supply store and
>> purchase 13 ga copper stranded wire with a plastic coating and a small
>> piece
>> of either plastic or rubber tubing and slide the antenna wire into the
>> tubing only enough to where you need to run the whole assy thru the
>> pulley.
>> The 13 ga wire is stronger than the RS wire and the outside covering
>> should
>> withstand the abrasiveness of the pulley!
>> 73's de Howard W3CQH
>
> Thanks Howard. Does the plastic coating affect the signal at all?
>
> Clark
>

I don't know where the 13 wire comes from , but the most common will be
either 12 or 14 in the US. Anyway the plastic or any other coating will
have no noticable effect on the antenna as far as the signal. It will have
a slight shortning effect on the length, but usually 20 meters or higher is
where that shows up. The higher the frequency the more the effect shows up.
Up to 10 meters, the standard formulars are still close enough for a
starthing point.

3651. Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 23:05:52 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9973A3CEB32B6spectrumhogstarbandn@198.186.192.196>
Source record: 38261

I wish to build a 23 foot whip antenna similar to the Shakespeare 393 HF marine antenna, (quite pricey). It must be in three 7 1/2 foot long sections and screws together, as shown here: http://shakespeare-marine.com/antennas.asp?antenna=393

I'm thinking along the lines of a 7 1/2 foot stainless steele whip on top of two 7 1/2 foot long segments of my own construction. At present, I think the two bottom sections would be copper tubing, enclosed within PVC pipe. Although I have some ideas for the connections, I would like to hear from others their ideas on both the building of two stiffer bottom sections for this whip, along with ways of fabricating the screw-together connections that would be both electrically sound and sturdy. The whip will be for fixed mobile operation at a motorhome. The entire assembly must break down and fit within a larger 8 foot long PVC tube for storage.

I realize I could go with telescoping aluminum tubing, but I prefer something more elegant, such as this marine antenna.

Ed K7AAT

3652. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-20 23:45:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <sOboi.1972$jC4.1404@trndny09>
Source record: 38262

i would go with 3 8' pieces of aluminum tubing telescoped. probably 5/8", 1/2", and 3/8". for temporary fixed operation that would be plenty strong enough and would easily pack in a small tube. joints are easy to make with a hacksaw and hose clamps and can easily be tuned by loosening a clamp and sliding the joint a bit.

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message news:Xns9973A3CEB32B6spectrumhogstarbandn@198.186.192.196...
>
>
> I wish to build a 23 foot whip antenna similar to the Shakespeare 393 HF
> marine antenna, (quite pricey). It must be in three 7 1/2 foot long
> sections and screws together, as shown here: http://shakespeare-
> marine.com/antennas.asp?antenna=393
>
> I'm thinking along the lines of a 7 1/2 foot stainless steele whip on
> top of two 7 1/2 foot long segments of my own construction. At present,
> I think the two bottom sections would be copper tubing, enclosed within
> PVC pipe. Although I have some ideas for the connections, I would like
> to hear from others their ideas on both the building of two stiffer bottom
> sections for this whip, along with ways of fabricating the screw-together
> connections that would be both electrically sound and sturdy. The whip
> will be for fixed mobile operation at a motorhome. The entire assembly
> must break down and fit within a larger 8 foot long PVC tube for storage.
>
> I realize I could go with telescoping aluminum tubing, but I prefer
> something more elegant, such as this marine antenna.
>
> Ed K7AAT
>

3653. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 00:14:55 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9973AF83EEC8Fspectrumhogstarbandn@198.186.192.196>
Source record: 38263

> i would go with 3 8' pieces of aluminum tubing telescoped. probably
> 5/8", 1/2", and 3/8". for temporary fixed operation that would be
> plenty strong enough and would easily pack in a small tube. joints
> are easy to make with a hacksaw and hose clamps and can easily be
> tuned by loosening a clamp and sliding the joint a bit.
>>

Dave,

That's probably the sane way to do it. I really wanted a Shakespeare
marine antenn clone, but the costs, or the labor involved is definitely
more than just doing the aluminum tubing thing.

Thanks.

Ed

3654. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 00:18:19 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <yJ6dnYkhlfVYzTzbnZ2dnUVZ_r6rnZ2d@comcast.com>
Source record: 38264

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:6Caoi.10349$Od7.4376@newsread1.news.pas.earthlink.net...
>
> <chvjillson@aol.com> wrote in message
> news:1184962371.642414.189110@k79g2000hse.googlegroups.com...
>> On Jul 20, 12:04 pm, "John Doe" <hgor...@adelphia.net> wrote:
>>> <chvjill...@aol.com> wrote in message
>>>
>>> news:1184950091.436603.119330@22g2000hsm.googlegroups.com...
>>>
>>> > Clark
>>> > KB9SJD
>>>
>>> My $0.02 worth - I would go to the nearest electrical supply store and
>>> purchase 13 ga copper stranded wire with a plastic coating and a small
>>> piece
>>> of either plastic or rubber tubing and slide the antenna wire into the
>>> tubing only enough to where you need to run the whole assy thru the
>>> pulley.
>>> The 13 ga wire is stronger than the RS wire and the outside covering
>>> should
>>> withstand the abrasiveness of the pulley!
>>> 73's de Howard W3CQH
>>
>> Thanks Howard. Does the plastic coating affect the signal at all?
>>
>> Clark
>>
>
> I don't know where the 13 wire comes from , but the most common will be
> either 12 or 14 in the US. Anyway the plastic or any other coating will
> have no noticable effect on the antenna as far as the signal. It will
> have a slight shortning effect on the length, but usually 20 meters or
> higher is where that shows up. The higher the frequency the more the
> effect shows up. Up to 10 meters, the standard formulars are still close
> enough for a starthing point.
13 ga copper stranded wire is also very common here in the USA... I am
running 540 ft of it as a longwire (stealth Antenna) from 160m to 70cm -
driving it with an Icom AH4 tuner... works like a champ... No the outer
jacket should have no effect on your signal, you might have to trim the
lengths of the dipole since you will be using a larger gauge wire...
73's de Howard W3CQH

3655. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 00:32:05 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <Cv6dnS24fuNjzjzbnZ2dnUVZ_uqvnZ2d@comcast.com>
Source record: 38265

"Chuck" <no.spam@no.spam.at.all> wrote in message
news:1184969481_3451@sp12lax.superfeed.net...
> chvjillson@aol.com wrote:
>> Hi folks:
>>
>> I've got a 110' 80 meter dipole that I've used for the past 4
>> years. I have the dipole strung about 30' in the air and connected
>> between two trees.
>>
>> Because of where the trees are and the location of my house, I've
>> needed to use a pulley that's attached to my chimney to keep the
>> dipole closer to my house. The pulley is located near the center of
>> the antenna, and it creates about a 25 degree angle from the chimney
>> to the other tree.
>>
>> Each year I have to repair the antenna wire right around where the
>> pulley is. I'm guessing because I use a cheap antenna wire
>> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
>> antenna keeps breaking. I don't see how the pulley's creating that
>> much wear on the antenna, although I'm sure it's possible.
>>
>> Would you guess that I'd have better luck if I was to purchase a
>> stronger antenna wire, such as a copper-clad steel wire I can get at
>> Universal Radio? http://www.universal-radio.com/catalog/cable/wire.html
>>
>> Thanks for your suggestions.
>>
>> Clark
>> KB9SJD
>>
>
> Hello Clark,
>
> Another possibility is to replace the pulley with an insulator and attach
> the insulator to your chimney with a length of shock cord. The pulley can
> allow movement of the antenna toward one tree or the other, but does
> nothing to relieve the effects of the trees moving in opposite directions
> in windy conditions. You need something other than the antenna wire to
> reduce the tension caused by those movements.
>
> The shock cord stretches nicely as the wind blows and it is cheaper and
> easier to replace than the antenna wire. Some use springs or weights
> instead.
>

> Chuck
> NT3G
>
> -----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet
> News==----
> http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+
> Newsgroups
> ----= East and West-Coast Server Farms - Total Privacy via Encryption
> =----
==========
For a weight you might want to consider either a Duckpin bowling ball about 4 LBS or a Tenpin bowling ball about 16 lbs... Hey don't laugh - you can usually find an old beat up bowling balls at most bowling alleys and for a couple of bucks or less they would probably give it to you rather than sending it to the landfill... Most bowling balls are made of either hard rubber or plastic and will not disinigrate for thousands of years in the dump or elements... If you do decide to use a bowling ball, all you have to do is drill a hole and screw in an eye-bolt, that you get at the local hardware store - for both size balls, I would recommend one that is about 3-4" long... 73's de Howard W3CQH

3656. How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 00:35:26 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1184978126.894452.166610@e9g2000prf.googlegroups.com>
Source record: 38266
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl=en&
:

> Radium <gluceg...@gmail.com> hath wroth:

> >On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...

> >> how would u like to change the cell phone industry?

> >Digital cell phones should stop using the compression they use and
> >start using monaural WMA compression with a CBR of 20 kbps or less and
> >a sample rate of at least 44.1 KHz.

> Very roughly, the current 8Kbits/sec encoding rate,
> compared to your 44Kbit/sec, will only handle about 1/5th the number
> of users.

Who said anything about 44Kbit/sec?

The bit-rate of my WMA CBR is 20Kbit/sec or less.

> >1. In its uncompressed form, the audio must have a bit-resolution of
> >at least 16-bit

> The encoding resolution is not changed by compression. If you encode
> something with 16 bit resolution, and compress it, you still have 16
> bit data coming out. It's the data rate or thruput that changes with
> compression.

Okay.

> >2. The sample-rate of the compressed and the uncompressed version of
> >the audio must be the same.

> Not possible. If the rate in and rate out are identical, then there's
> no compression happening.

Yes it is possible and it is compression. The uncompressed audio is a
monaural linear PCM at 44.1-KHz-sample-rate with a 16-bit-resolution
-- this audio has a bit-rate of 705.6 kbps. The compressed audio is a
monaural CBR WMA at 44.1-KHz-sample-rate with a bit-rate of 20 kbps or
less.

Where/when is there any change in sample-rate?????????

There is definitely a change in bit-rate. However, that is totally different from the sample-rate. Totally.

BIT-rate and SAMPLE-rate are two completely different things.

In linear PCM audio:

BIT-rate = SAMPLE-rate X bit-resolution X number of channels

Stereo has two channels. Mono has one channel.

44,100 Hz X 16-bit X 1 channel = 705,600 bps

3657. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 01:06:34 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <k8ydnVu1IN6NwTzbnZ2dnUVZ_tCrnZ2d@comcast.com>
Source record: 38267

<chvjillson@aol.com> wrote in message
news:1184962296.110493.247900@n2g2000hse.googlegroups.com...
> On Jul 20, 12:19 pm, "pdr...@coinet.com" <co_far...@yahoo.com> wrote:
>> On Jul 20, 9:48 am, chvjill...@aol.com wrote:
>>
>>
>>
>> > Hi folks:
>>
>> > I've got a 110' 80 meter dipole that I've used for the past 4
>> > years. I have the dipole strung about 30' in the air and connected
>> > between two trees.
>>
>> > Because of where the trees are and the location of my house, I've
>> > needed to use a pulley that's attached to my chimney to keep the
>> > dipole closer to my house. The pulley is located near the center of
>> > the antenna, and it creates about a 25 degree angle from the chimney
>> > to the other tree.
>>
>> > Each year I have to repair the antenna wire right around where the
>> > pulley is. I'm guessing because I use a cheap antenna wire
>> > (purchased at Radio Shack ... about 14 gauge I believe), that's why my
>> > antenna keeps breaking. I don't see how the pulley's creating that
>> > much wear on the antenna, although I'm sure it's possible.
>>
>> > Would you guess that I'd have better luck if I was to purchase a
>> > stronger antenna wire, such as a copper-clad steel wire I can get at
>> > Universal Radio?
>> > http://www.universal-radio.com/catalog/cable/wire.html
>>
>> > Thanks for your suggestions.
>>
>> > Clark
>> > KB9SJD
>>
>> Hi.
>> Closely examine the break. You can tell if it was caused by wear,
>> flexing, or from chemical reaction with what is coming from the
>> chimney you mentioned. What are you heating with? Gas and oil heat
>> both create a small amount of sulfur containing acids going out the
>> chimney.
>>
>> Also, are you using a pulley with a plastic wheel? A metal wheel, I
>> forget the real name for it, will wear the wire.

>>
>> Good luck,
>> Paul KD7HB
>
> Thanks Paul. The chimney is no longer being used, so there's nothing
> happening there. I am using a metal pulley, but I'll look around for
> some sort of plastic one. Thanks for your suggestion.
>
They make plastic clothes line pulleys. About 2 or 3 inch diameter, which
should minimize kinking of the wire.

Tam/WB2TT

3658. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 01:09:28 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <KbudndIPweIjwTzbnZ2dnUVZ_rGrnZ2d@comcast.com>
Source record: 38268

"John Doe" <hgorden@adelphia.net> wrote in message
news:Cv6dnS24fuNjzjzbnZ2dnUVZ_uqvnZ2d@comcast.com...
>
> "Chuck" <no.spam@no.spam.at.all> wrote in message
> news:1184969481_3451@sp12lax.superfeed.net...
>> chvjillson@aol.com wrote:
>>> Hi folks:
>>>
>>> I've got a 110' 80 meter dipole that I've used for the past 4
>>> years. I have the dipole strung about 30' in the air and connected
>>> between two trees.
>>>
>>> Because of where the trees are and the location of my house, I've
>>> needed to use a pulley that's attached to my chimney to keep the
>>> dipole closer to my house. The pulley is located near the center of
>>> the antenna, and it creates about a 25 degree angle from the chimney
>>> to the other tree.
>>>
>>> Each year I have to repair the antenna wire right around where the
>>> pulley is. I'm guessing because I use a cheap antenna wire
>>> (purchased at Radio Shack ... about 14 gauge I believe), that's why my
>>> antenna keeps breaking. I don't see how the pulley's creating that
>>> much wear on the antenna, although I'm sure it's possible.
>>>
>>> Would you guess that I'd have better luck if I was to purchase a
>>> stronger antenna wire, such as a copper-clad steel wire I can get at
>>> Universal Radio?
>>> http://www.universal-radio.com/catalog/cable/wire.html
>>>
>>> Thanks for your suggestions.
>>>
>>> Clark
>>> KB9SJD
>>>
>>
>> Hello Clark,
>>
>> Another possibility is to replace the pulley with an insulator and attach
>> the insulator to your chimney with a length of shock cord. The pulley can
>> allow movement of the antenna toward one tree or the other, but does
>> nothing to relieve the effects of the trees moving in opposite directions
>> in windy conditions. You need something other than the antenna wire to
>> reduce the tension caused by those movements.
>>

>> The shock cord stretches nicely as the wind blows and it is cheaper and
>> easier to replace than the antenna wire. Some use springs or weights
>> instead.
>>
>> Chuck
>> NT3G
>>
>> -----== Posted via Newsfeeds.Com - Unlimited-Unrestricted-Secure Usenet
>> News==----
>> http://www.newsfeeds.com The #1 Newsgroup Service in the World! 120,000+
>> Newsgroups
>> ----= East and West-Coast Server Farms - Total Privacy via Encryption
>> =----
> ==========
> For a weight you might want to consider either a Duckpin bowling ball
> about 4 LBS or a Tenpin bowling ball about 16 lbs... Hey don't laugh - you
> can usually find an old beat up bowling balls at most bowling alleys and
> for a couple of bucks or less they would probably give it to you rather
> than sending it to the landfill... Most bowling balls are made of either
> hard rubber or plastic and will not disinigrate for thousands of years in
> the dump or elements... If you do decide to use a bowling ball, all you
> have to do is drill a hole and screw in an eye-bolt, that you get at the
> local hardware store - for both size balls, I would recommend one that is
> about 3-4" long... 73's de Howard W3CQH
>
>
I am using half a cinder block for a similar application. Comes with its own
hole.

Tam/WB2TT

3659. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 02:14:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13a2r0qp4qnan03@corp.supernews.com>
Source record: 38269

Tam/WB2TT wrote:
>>
> I am using half a cinder block for a similar application. Comes with its own
> hole.

Cinder blocks weigh very little. Do you mean concrete block?

Roy Lewallen, W7EL

3660. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 02:53:17 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <BMWdnajEpuCO6DzbnZ2dnUVZ_gSdnZ2d@comcast.com>
Source record: 38270

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:13a2r0qp4qnan03@corp.supernews.com...
> Tam/WB2TT wrote:
>>>
>> I am using half a cinder block for a similar application. Comes with its
>> own hole.
>
> Cinder blocks weigh very little. Do you mean concrete block?
>
> Roy Lewallen, W7EL
I am really not into that kind of stuff. Whatever it is, it weighs around
10 # .

Tam/WB2TT

3661. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 03:21:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13a2uuh5cu3a769@corp.supernews.com>
Source record: 38271

Tam/WB2TT wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:13a2r0qp4qnan03@corp.supernews.com...
>> Tam/WB2TT wrote:
>>> I am using half a cinder block for a similar application. Comes with its
>>> own hole.
>> Cinder blocks weigh very little. Do you mean concrete block?
>>
>> Roy Lewallen, W7EL
> I am really not into that kind of stuff. Whatever it is, it weighs around
> 10 # .

That's concrete. Concrete blocks look like, and are as heavy as, well, concrete. Cinder blocks are black (or maybe other dark colors), very lightweight, and full of little holes -- like, um, cinder.

Not really relevant, but recently in Germany I saw "foamed" concrete blocks, which had small air bubbles in them like foamed dielectric coax insulation. They're considerably lighter weight than solid ones.

Roy Lewallen, W7EL

3662. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 03:27:59 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-AEBDD9.20275920072007@news.giganews.com>
Source record: 38272
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <1184978126.894452.166610@e9g2000prf.googlegroups.com>,
Radium <glucegen1@gmail.com> wrote:

> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
> http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl=
> en&
> :
>
> > Radium <gluceg...@gmail.com> hath wroth:
>
> > >On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> > >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
>
> > >> how would u like to change the cell phone industry?
>
I would do what Apple is doing right now. Use their power to force the
phone companies to offer (finally) great phones with simple plans that
their employees can't screw up or misinform customers about.

I want getting phone service like when I buy a Mac.

--
To reply by email, remove the word "space"

3663. Re: Do hammer drills really work for driving in ground rods?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 03:45:19 UTC
From: WindsorFox <sniffythecow@moocow.com>
Message-ID: <f7rv10$p51$7@posting.glorb.com>
Source record: 38273

Ian White GM3SEK wrote:
> Jeff wrote:
>>
>> "> The nut driver that I posted about was for SDS+ drills. Adapters
>>> probably don't exist for the larger size of drill that you were
>>> trying to
>>> rent.
>>>
>>> You're still thinking too big, Rick. "A bigger hammer" is not always the
>>> answer.
>>>
>>
>> Another solution may be hiring a small compressor and an air chisel,
>> or go
>> the whole hog and hire a Kango hammer.
>
> Nope, we're still missing the point. Pounding everything into rubble is
> NOT the answer to this problem.
>
>

Yes, I use a pair of gloves and a water hose, or a bucket of water.

--
"....a couple of belts of .50 BMG individually
engraved "Unsubscribe" - Cadbury Moose

3664. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 07:05:50 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <kfioi.2791$XH1.568@newsfe15.phx>
Source record: 38274

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9973A3CEB32B6spectrumhogstarbandn@198.186.192.196...
>
>
> I wish to build a 23 foot whip antenna similar to the Shakespeare 393
HF
> marine antenna, (quite pricey). It must be in three 7 1/2 foot long
> sections and screws together, as shown here: http://shakespeare-
> marine.com/antennas.asp?antenna=393
>
> I'm thinking along the lines of a 7 1/2 foot stainless steel whip on
> top of two 7 1/2 foot long segments of my own construction. At present,
> I think the two bottom sections would be copper tubing, enclosed within
> PVC pipe. Although I have some ideas for the connections, I would like
> to hear from others their ideas on both the building of two stiffer bottom
> sections for this whip, along with ways of fabricating the screw-together
> connections that would be both electrically sound and sturdy. The whip
> will be for fixed mobile operation at a motorhome. The entire assembly
> must break down and fit within a larger 8 foot long PVC tube for storage.

Ed, I have been thinking of a self-supporting whip, too and I am also going
to try big PVC, which is pretty rigid per unit length. I think adjacent
sizes would fit smaller-into-larger with two or four slots several inches
long cut into the larger pipe. Your application might use two sections of,
say, 1 1/2-inch PVC pipe, each 7 1/2 feet long and a shorter coupling piece
of 1 1/4-inch PVC pipe where they butt together. The large pieces would
have linear slots cut into them, with hose clamps on each side of the
coupling. (Lest anyone think I was neglecting pipe couplings that are made
for PVC -- no -- I just don't think they'd be very strong.)

This is all theoretical, mind you, as I have yet to put any pipe together,
myself. I have already thought of several variants, including: (a) using
a coupling piece larger than the two 7 1/2 foot sections, rather than
smaller and (b) making the lower 7 1/2 foot section larger than the upper
one, slotting just the lower one and thus omitting the coupling piece.

PVC has the advantage of having numerous adapter/reducer combinations to get
you to a suitable fitting for the base of your intended stainless steel whip
top section.

Question: What would you gain with copper tubing inside your lower PVC
sections. Slight BW increase, perhaps? It seems to me that it creates an
attachment problem, compared to just dropping a single conductor down from
the stainless steel whip, through the center of the PVC and out to the tuner
attachment. Speaking of that, including a PVC T-connector in the lower

section, perhaps a few feet off the ground, would give you an exit point for the radiating element, but it would probably louse up the process of storing the whole thing inside your 8 foot PVC tube (whose diameter is not given).

"Sal"

3665. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 08:58:53 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <CpWdnUYtnrpPVzzbnZ2dnUVZ_o-mnZ2d@giganews.com>
Source record: 38275
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Kurt" <labolide@spacegmail.com> wrote in message
news:labolide-AEBDD9.20275920072007@news.giganews.com...
> I want getting phone service like when I buy a Mac.

You only want them to work in a few dozen exchanges, and use a codec that
only other phones of that brand use, so you can't talk to anyone else but
other customers of that company (sort of like Sprint's "Friends and Family"
plan). ?

3666. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 13:20:13 UTC
From: "Madhav \"DogFocker\" Acharya" <macharya@tampabay.rr.com>
Message-ID: <ujohgj54p4me.1cja69jg0tu6d$.dlg@40tude.net>
Source record: 38276
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Sat, 21 Jul 2007 17:58:53 +0900, Brenda Ann wrote:

> "Kurt" <labolide@spacegmail.com> wrote in message
> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>> I want getting phone service like when I buy a Mac.
>
> You only want them to work in a few dozen exchanges, and use a codec that
> only other phones of that brand use, so you can't talk to anyone else but
> other customers of that company (sort of like Sprint's "Friends and Family"
> plan). ?

Thx.

--
skype:mranep
cell:813-610-2978; work:813-386-4500; work2:813-915-1663
Motto: Why face the world myself when my wife's skirt, it is so dark and
comfy under it?
Proclamation: "A man can have sex with sheep, cows and camels and so on.
However, he
should kill the animal after he has his orgasm. He should not sell the
meat to the people in Nepal; Ok I did so beat me with a Yeti dick.

3667. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 14:45:16 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C76A0C.70C0F%dbowey@comcast.net>
Source record: 38277
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 1:58 AM, in article
CpWdnUYtnrpPVzzbnZ2dnUVZ_o-mnZ2d@giganews.com, "Brenda Ann"
<brendad@shinbiro.com> wrote:

>
> "Kurt" <labolide@spacegmail.com> wrote in message
> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>> I want getting phone service like when I buy a Mac.
>
> You only want them to work in a few dozen exchanges, and use a codec that
> only other phones of that brand use, so you can't talk to anyone else but
> other customers of that company (sort of like Sprint's "Friends and Family"
> plan). ?
>
>
>

I wouldn't want facts to get in the way of your rant, but you really seem to
be misinformed or don't care for the facts.

3668. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 14:50:05 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C76B2D.70C11%dbowey@comcast.net>
Source record: 38278
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/20/07 8:27 PM, in article
labolide-AEBDD9.20275920072007@news.giganews.com, "Kurt"
<labolide@spacegmail.com> wrote:

> In article <1184978126.894452.166610@e9g2000prf.googlegroups.com>,
> Radium <glucegen1@gmail.com> wrote:
>
>> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
>>
http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl>>
=
>> en&
>> :
>>
>>> Radium <gluceg...@gmail.com> hath wroth:
>>
>>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
>>>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
>>
>>>>> how would u like to change the cell phone industry?
>>
> I would do what Apple is doing right now. Use their power to force the
> phone companies to offer (finally) great phones with simple plans that
> their employees can't screw up or misinform customers about.

Apple can't and isn't forcing "the phone companies" to do anything. You're
an idiot.

>
> I want getting phone service like when I buy a Mac.

You have a monthly payment plan for minutes of use of your Mac? Is this
something they forced you to buy?

3669. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 16:28:46 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-FDDD0E.09284621072007@news.giganews.com>
Source record: 38279
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C76B2D.70C11%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/20/07 8:27 PM, in article
> labolide-AEBDD9.20275920072007@news.giganews.com, "Kurt"
> <labolide@spacegmail.com> wrote:
>
> > In article <1184978126.894452.166610@e9g2000prf.googlegroups.com>,
> > Radium <glucegen1@gmail.com> wrote:
> >
> >> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
> >>
> http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl>
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> >>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >>>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
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> >>>>> how would u like to change the cell phone industry?
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> > I would do what Apple is doing right now. Use their power to force the
> > phone companies to offer (finally) great phones with simple plans that
> > their employees can't screw up or misinform customers about.
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> Apple can't and isn't forcing "the phone companies" to do anything. You're
> an idiot.
>
> >
> > I want getting phone service like when I buy a Mac.
>
> You have a monthly payment plan for minutes of use of your Mac? Is this
> something they forced you to buy?

You miss my point. Why do you think the iPhone is so successful?
Why the iPod?

--
To reply by email, remove the word "space"

3670. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 17:05:02 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997466A24B025spectrumhogstarbandn@198.186.192.196>
Source record: 38280

> Question: What would you gain with copper tubing inside your lower
> PVC sections. Slight BW increase, perhaps? It seems to me that it
> creates an attachment problem, compared to just dropping a single
> conductor down from the stainless steel whip, through the center of
> the PVC and out to the tuner attachment. Speaking of that, including
> a PVC T-connector in the lower section, perhaps a few feet off the
> ground, would give you an exit point for the radiating element, but it
> would probably louse up the process of storing the whole thing inside
> your 8 foot PVC tube (whose diameter is not given).

Sal,

Thanks for your ideas. Regarding the copper tubing issue, I was thinking of that for two reasons.... good rigidity for the PVC to prevent flexing, and also perhaps a better radiator. However, in raising the question, you have prompted me to rethink that issue. Perhaps just running some braid off of RG8 type coax in the PVC would be better in some respects, including weight. Will keep pondering this issue.

My other problem will be to find a proper way to fasten/screw the three elements together.

Perhaps just a PVC flat end cap on the top section with a 3/8-24 bolt sticking up to fasten the SS whip to the top piece. As far as the other two 7 1/2 foot sections go, I could simply do as you just suggested - use a slightly smaller PVC piece at the middle juncture, glue it into one of the two PVC sections, and simly pull it appart to dissassemble those two sections. If I run braid down those two sections, I can just leave it and fold the two PVC sections together to keep their storage length at 7 1/2 feet long.

..... that would work. Problem is, I like the elegance of the Shakespeare antenna, but I don't want to pay the price for one!

Ed

3671. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 17:24:53 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C78F75.70C91%dbowey@comcast.net>
Source record: 38281
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 9:28 AM, in article
labolide-FDDD0E.09284621072007@news.giganews.com, "Kurt"
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>> On 7/20/07 8:27 PM, in article
>> labolide-AEBDD9.20275920072007@news.giganews.com, "Kurt"
>> <labolide@spacegmail.com> wrote:
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>>> In article <1184978126.894452.166610@e9g2000prf.googlegroups.com>,
>>> Radium <glucegen1@gmail.com> wrote:
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>>>> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
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>>>>>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
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>>>>>>> how would u like to change the cell phone industry?
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>>> I would do what Apple is doing right now. Use their power to force the
>>> phone companies to offer (finally) great phones with simple plans that
>>> their employees can't screw up or misinform customers about.
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>> Apple can't and isn't forcing "the phone companies" to do anything. You're
>> an idiot.
>>
>>>
>>> I want getting phone service like when I buy a Mac.
>>
>> You have a monthly payment plan for minutes of use of your Mac? Is this
>> something they forced you to buy?

>
> You miss my point. Why do you think the iPhone is so successful?
> Why the iPod?

Until there are more facts, the iPhone's current success is due to people wanting a very cool instrument with good features.

The iPod's success is from Apple having a top-notch product line with good features, and cool looks. And people should not overlook, but often do, iTunes. It is iTunes that makes the iPod easy to use, giving it easy access to their CD and MP3 music regardless of where they buy it. People who don't want an iPod can still use the free iTunes to good advantage.

Apple doesn't make anyone do anything.

So, what was your point?

Don

3672. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 18:00:03 UTC
From: Kurt Ullman <kurtullman@yahoo.com>
Message-ID: <kurtullman-A7FC30.14000021072007@customer-201-125-217-207.uninet.net.mx>
Source record: 38182
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C78F75.70C91%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> > You miss my point. Why do you think the iPhone is so successful?
> > Why the iPod?
>
> Until there are more facts, the iPhone's current success is due to people
> wanting a very cool instrument with good features.

Which is pretty much the definition of putting out a product that the
public wants. But, yet, I seem to have feelings that you did not mean
this as a positive.

3673. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 18:14:42 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C79B22.70CC6%dbowey@comcast.net>
Source record: 38183
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 11:00 AM, in article
kurtullman-A7FC30.14000021072007@customer-201-125-217-207.uninet.net.mx,
"Kurt Ullman" <kurtullman@yahoo.com> wrote:

> In article <C2C78F75.70C91%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:
>
>
>>> You miss my point. Why do you think the iPhone is so successful?
>>> Why the iPod?
>>
>> Until there are more facts, the iPhone's current success is due to people
>> wanting a very cool instrument with good features.
>
> Which is pretty much the definition of putting out a product that the
> public wants. But, yet, I seem to have feelings that you did not mean
> this as a positive.

You are reading in something I did not say.

The iPhone is off to a great start, but it has no track record at this time.
I anticipate that it will be very successful, but we can only guess at it
now. From an investor point-of-view, I think the monthly kickback from AT&T
that Apple negotiated, is good. From a personal POV I think it sucks, and
will likely antagonize Apple supporters.

3674. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 18:44:59 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185043499.283610.124020@j4g2000prf.googlegroups.com>
Source record: 38184
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 11:14 am, Don Bowey <dbo...@comcast.net> wrote:
> On 7/21/07 11:00 AM, in article
> kurtullman-A7FC30.14000021072...@customer-201-125-217-207.uninet.net.mx,
>
> "Kurt Ullman" <kurtull...@yahoo.com> wrote:
> > In article <C2C78F75.70C91%dbo...@comcast.net>,
> > Don Bowey <dbo...@comcast.net> wrote:
>
> >>> You miss my point. Why do you think the iPhone is so successful?
> >>> Why the iPod?
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> >> Until there are more facts, the iPhone's current success is due to people
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>
> > > Which is pretty much the definition of putting out a product that the
> > > public wants. But, yet, I seem to have feelings that you did not mean
> > > this as a positive.
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> > The iPhone is off to a great start, but it has no track record at this time.
> > I anticipate that it will be very successful, but we can only guess at it
> > now. From an investor point-of-view, I think the monthly kickback from AT&T
> > that Apple negotiated, is good. From a personal POV I think it sucks, and
> > will likely antagonize Apple supporters.

IPhone Buyers and Users -and- Apple Supporters
may not be one and the same. ~ RHF

3675. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 19:19:50 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185045590.471407.165270@g12g2000prg.googlegroups.com>
Source record: 38185
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 10:24 am, Don Bowey <dbo...@comcast.net> wrote:
> On 7/21/07 9:28 AM, in article
> labolide-FDDD0E.09284621072...@news.giganews.com, "Kurt"
>
> <labol...@spacegmail.com> wrote:
> > In article <C2C76B2D.70C11%dbo...@comcast.net>,
> > Don Bowey <dbo...@comcast.net> wrote:
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> >> On 7/20/07 8:27 PM, in article
> >> labolide-AEBDD9.20275920072...@news.giganews.com, "Kurt"
> >> <labol...@spacegmail.com> wrote:
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> >>> In article <1184978126.894452.166...@e9g2000prf.googlegroups.com>,
> >>> Radium <gluceg...@gmail.com> wrote:
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> >>>> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
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> >>>>> Radium <gluceg...@gmail.com> hath wroth:
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> >>>>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >>>>>>http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
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> >>>>>>> how would u like to change the cell phone industry?
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> >>> I would do what Apple is doing right now. Use their power to force the
> >>> phone companies to offer (finally) great phones with simple plans that
> >>> their employees can't screw up or misinform customers about.
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> >> Apple can't and isn't forcing "the phone companies" to do anything. You're
> >> an idiot.
>

> >>> I want getting phone service like when I buy a Mac.
>
> >> You have a monthly payment plan for minutes of use of your Mac? Is this
> >> something they forced you to buy?
>
> > You miss my point. Why do you think the iPhone is so successful?
> > Why the iPod?
>
> Until there are more facts, the iPhone's current success is due to people
> wanting a very cool instrument with good features.

Until there are more facts, the iPhone's current success {?}
is due to people wanting {Gotto Have the Latest} a very cool
instrument {Newest Bells and Whistles} with good features
{of Questionable Utlity}.

-RANT-
While Senior Citzens like myself with Tired Old Eyes
and Big Old Fingers just want a basic CellPhone that
we can use without our Glasses like the "JitterBug" .
http://www.firststreetonline.com/product.jsp?id=50814&promotion=86678&PID=1583978
Why doesn't AT&T, Sprint, Nextel, T-Mobile, Verizon, etc
offer a CellPhone designed for Senior Citizens and the
Visually Limited-Impaired like the "JitterBug" ?
Here is where the ADA Laws should apply and force
the Cellphone providers to design and market these
Cellphone to Seniors with needs. -end-rant- ~ RHF

>
> The iPod's success is from Apple having a top-notch product line with good
> features, and cool looks. And people should not overlook, but often do,
> iTunes. It is iTunes that makes the iPod easy to use, giving it easy
> access to their CD and MP3 music regardless of where they buy it. People
> who don't want an iPod can still use the free iTunes to good advantage.
>
> Apple doesn't make anyone do anything.
>
> So, what was your point?
>
> Don- Hide quoted text -
>
> - Show quoted text -

3676. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 19:50:51 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C7B1AB.70D03%dbowey@comcast.net>
Source record: 38186
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 12:19 PM, in article
1185045590.471407.165270@g12g2000prg.googlegroups.com, "RHF"
<rhf-newsgroups@pacbell.net> wrote:

(snip)

> Until there are more facts, the iPhone's current success {?}
> is due to people wanting {Gotto Have the Latest} a very cool
> instrument {Newest Bells and Whistles} with good features
> {of Questionable Utlity}.
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> -RANT-
> While Senior Citzens like myself with Tired Old Eyes
> and Big Old Fingers just want a basic CellPhone that
> we can use without our Glasses like the "JitterBug" .
>
http://www.firststreetonline.com/product.jsp?id=50814&promotion=86678&PID=158397
8

That's as ugly as they get.....

> Why doesn't AT&T, Sprint, Nextel, T-Mobile, Verizon, etc
> offer a CellPhone designed for Senior Citizens and the
> Visually Limited-Impaired like the "JitterBug" ?
> Here is where the ADA Laws should apply and force
> the Cellphone providers to design and market these
> Cellphone to Seniors with needs. -end-rant- ~ RHF

(snip)

Lots of reasons..... Here's a couple:

* We senior citizens aren't perceived as being a large enough market.

* We aren't a cohesive group of a same mind. I'm one, but I'd have an
iPhone in a minute just cause it is cool, if it weren't for the ridiculous
rate structures.

3677. Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 20:07:19 UTC
From: Radium <glucegen1@gmail.com>
Message-ID: <1185048439.792010.286310@g12g2000prg.googlegroups.com>
Source record: 38187
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Please keep out the OT crap! I had to start a new thread because some
jerks decided to post irrelevant nonsense.

On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl=en&
:

> Radium <gluceg...@gmail.com> hath wroth:

> >On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...

> >> how would u like to change the cell phone industry?

> >Digital cell phones should stop using the compression they use and
> >start using monaural WMA compression with a CBR of 20 kbps or less and
> >a sample rate of at least 44.1 KHz.

> Very roughly, the current 8Kbits/sec encoding rate,
> compared to your 44Kbit/sec, will only handle about 1/5th the number
> of users.

Who said anything about 44Kbit/sec?

The bit-rate of my WMA CBR is 20Kbit/sec or less.

> >1. In its uncompressed form, the audio must have a bit-resolution of
> >at least 16-bit

> The encoding resolution is not changed by compression. If you encode
> something with 16 bit resolution, and compress it, you still have 16
> bit data coming out. It's the data rate or thruput that changes with
> compression.

Okay.

> >2. The sample-rate of the compressed and the uncompressed version of
> >the audio must be the same.

> Not possible. If the rate in and rate out are identical, then there's
> no compression happening.

Yes it is possible and it is compression. The uncompressed audio is a
monaural linear PCM at 44.1-KHz-sample-rate with a 16-bit-resolution
-- this audio has a bit-rate of 705.6 kbps. The compressed audio is a
monaural CBR WMA at 44.1-KHz-sample-rate with a bit-rate of 20 kbps or

less.

Where/when is there any change in sample-rate?????????

There is definitely a change in bit-rate. However, that is totally
different from the sample-rate. Totally.

BIT-rate and SAMPLE-rate are two completely different things.

In linear PCM audio:

BIT-rate = SAMPLE-rate X bit-resolution X number of channels

Stereo has two channels. Mono has one channel.

44,100 Hz X 16-bit X 1 channel = 705,600 bps

3678. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 21:02:38 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185051758.437314.92370@g12g2000prg.googlegroups.com>
Source record: 38188
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 1:07 pm, Radium <gluceg...@gmail.com> wrote:
- Please keep out the OT crap! I had to start a new thread
- because some jerks decided to post irrelevant nonsense.

- S N I P -

RADIUM,

The please keep 'your' OT crap! OFF of Rec.Radio.Shortwave
* The Theard Goes Where The Thread Goes
* That Is The Nature Of NewsGroups

- I had to start a new thread because some
- jerks decided to post irrelevant nonsense.

Relevance in in the Mind of the Poster.

Right now since the 'topic' is CellPhones - I makes me wonder
what kind of Cellphone and Service Provider others here may
have . . .

OK starting with me :
I have a Motorla RAZR V3 via AT&T {Cingular} Wireless
and I do not want any changes to the Cellphone
Broadcasting System [.]

Keep Posting Your Scientific and Cellphone BS to
Rec.Radio.Shortwave and you will see replying to
it with what ever comes into my mind and inviting
others hear to do the same.

However, leave Rec.Radio.Shortwave "Off" your
Cross-Posting List and you won't have to deal
with me. Now woldn't that be nice.

Say Cuhulin do you have a CellPhone ?

David I know you must have a Cellphone.

Bet-Ya Telamon has a Cellphone.

Wondering -if- DX Ace has a Cellphone ?

Burr way over in the PI - you got a Cellphone over there ?

Hey Back At You "Radium" Wondering . . .
You Gotta Cellphone and who is your Service Provider ?

IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !

I B 'rhf' Listening to my Shortwave Radio
with my Cellphone near-by bye bye ~ RHF
.
On the Internet Everyone Knows - I Am A Jerk !
.
.
. .

3679. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 21:03:17 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185051797.233567.166690@d30g2000prg.googlegroups.com>
Source record: 38189
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 12:19 pm, RHF <rhf-newsgro...@pacbell.net> wrote:
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> > >>>>>>http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
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> > >>> phone companies to offer (finally) great phones with simple plans that
> > >>> their employees can't screw up or misinform customers about.
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> > >>> I want getting phone service like when I buy a Mac.
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> While Senior Citzens like myself with Tired Old Eyes
> and Big Old Fingers just want a basic CellPhone that
> we can use without our Glasses like the "JitterBug"
.http://www.firststreetonline.com/product.jsp?id=50814&promotion=86678...
> Why doesn't AT&T, Sprint, Nextel, T-Mobile, Verizon, etc
> offer a CellPhone designed for Senior Citizens and the
> Visually Limited-Impaired like the "JitterBug" ?
> Here is where the ADA Laws should apply and force
> the Cellphone providers to design and market these
> Cellphone to Seniors with needs. -end-rant- ~ RHF
>
>
>
>
>
> > The iPod's success is from Apple having a top-notch product line with good
> > features, and cool looks. And people should not overlook, but often do,
> > iTunes. It is iTunes that makes the iPod easy to use, giving it easy
> > access to their CD and MP3 music regardless of where they buy it. People
> > who don't want an iPod can still use the free iTunes to good advantage.
>
> > Apple doesn't make anyone do anything.
>
> > So, what was your point?
>
> > Don- Hide quoted text -
>
> > - Show quoted text -- Hide quoted text -
>
> - Show quoted text -- Hide quoted text -
>
> - Show quoted text -

- S N I P -

RADIUM,

The please keep 'your' OT crap! OFF of Rec.Radio.Shortwave
* The Theard Goes Where The Thread Goes
* That Is The Nature Of NewsGroups

- I had to start a new thread because some
- jerks decided to post irrelevant nonsense.

Relevance in in the Mind of the Poster.

Right now since the 'topic' is CellPhones - I makes me wonder
what kind of Cellphone and Service Provider others here may
have . . .

OK starting with me :
I have a Motorla RAZR V3 via AT&T {Cingular} Wireless
and I do not want any changes to the Cellphone
Broadcasting System [.]

Keep Posting Your Scientific and Cellphone BS to
Rec.Radio.Shortwave and you will see replying to
it with what ever comes into my mind and inviting
others hear to do the same.

However, leave Rec.Radio.Shortwave "Off" your
Cross-Posting List and you won't have to deal
with me. Now woldn't that be nice.

Say Cuhulin do you have a CellPhone ?

David I know you must have a Cellphone.

Bet-Ya Telamon has a Cellphone.

Wondering -if- DX Ace has a Cellphone ?

Burr way over in the PI - you got a Cellphone over there ?

Hey Back At You "Radium" Wondering . . .
You Gotta Cellphone and who is your Service Provider ?

IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !

I B 'rhf' Listening to my Shortwave Radio
with my Cellphone near-by bye bye ~ RHF
.
On the Internet Everyone Knows - I Am A Jerk !
.
.
. .

3680. Re: How I would like to change the cell phone industry [was Re: AM electromagnetic waves: 20 KHz modulation frequency on an astronomically-low carrier frequency]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 21:05:16 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185051916.458455.265530@x35g2000prf.googlegroups.com>
Source record: 38190
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

- S N I P -

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I B 'rhf' Listening to my Shortwave Radio
with my Cellphone near-by bye bye ~ RHF
.
On the Internet Everyone Knows - I Am A Jerk !
.
.
. .

3681. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 21:41:53 UTC
From: N9NEO <yzordderrex@verizon.net>
Message-ID: <1185054113.789696.209630@q75g2000hsh.googlegroups.com>
Source record: 38191
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 5:02 pm, RHF <rhf-newsgro...@pacbell.net> wrote:
> On Jul 21, 1:07 pm, Radium <gluceg...@gmail.com> wrote:
> - Please keep out the OT crap! I had to start a new thread
> - because some jerks decided to post irrelevant nonsense.
>
> - S N I P -
>
> RADIUM,
>
> The please keep 'your' OT crap! OFF of Rec.Radio.Shortwave
> * The Theard Goes Where The Thread Goes
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> - I had to start a new thread because some
> - jerks decided to post irrelevant nonsense.
>
> Relevance in in the Mind of the Poster.
>
> Right now since the 'topic' is CellPhones - I makes me wonder
> what kind of Cellphone and Service Provider others here may
> have . . .
>
> OK starting with me :
> I have a Motorla RAZR V3 via AT&T {Cingular} Wireless
> and I do not want any changes to the Cellphone
> Broadcasting System [.]
>
> Keep Posting Your Scientific and Cellphone BS to
> Rec.Radio.Shortwave and you will see replying to
> it with what ever comes into my mind and inviting
> others hear to do the same.
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>
> I B 'rhf' Listening to my Shortwave Radio
> with my Cellphone near-by bye bye ~ RHF
> .
> On the Internet Everyone Knows - I Am A Jerk !
> .
> .
> . .

Verizon here RHF. I wouldn't have gotten a cell phone but I got this new job over at Harris. (And just the keep this post legal, Harris makes shortwave radios. Heheh.) So I'm working in Rochester, NY and Wife is in Ma so I had to get a cell phone to keep in communication. Hey, don't cell phones use tiny waves. I guess this stuff should really be posted to rec.radio.tinywave, but that keeps bouncing. Anyway, so there ya go, I like Verizon just fine. A really nice polite bunch of peeps over there and very helpful if you get the chance to call them. I give em a two thumbs up.

Regards,
N9NEO
Just say NEO!

3682. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 21:57:30 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185055050.732894.309050@e16g2000pri.googlegroups.com>
Source record: 38192
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 2:41 pm, N9NEO <yzordder...@verizon.net> wrote:
> On Jul 21, 5:02 pm, RHF <rhf-newsgro...@pacbell.net> wrote:
>
>
>
>
>
> > On Jul 21, 1:07 pm, Radium <gluceg...@gmail.com> wrote:
> > - Please keep out the OT crap! I had to start a new thread
> > - because some jerks decided to post irrelevant nonsense.
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> > - S N I P -
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> > Right now since the 'topic' is CellPhones - I makes me wonder
> > what kind of Cellphone and Service Provider others here may
> > have . . .
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> > OK starting with me :
> > I have a Motorla RAZR V3 via AT&T {Cingular} Wireless
> > and I do not want any changes to the Cellphone
> > Broadcasting System [.]
>
> > Keep Posting Your Scientific and Cellphone BS to
> > Rec.Radio.Shortwave and you will see replying to
> > it with what ever comes into my mind and inviting
> > others hear to do the same.
>
> > However, leave Rec.Radio.Shortwave "Off" your
> > Cross-Posting List and you won't have to deal
> > with me. Now woldn't that be nice.
>

> > Say Cuhulin do you have a CellPhone ?
>
> > David I know you must have a Cellphone.
>
> > Bet-Ya Telamon has a Cellphone.
>
> > Wondering -if- DX Ace has a Cellphone ?
>
> > Burr way over in the PI - you got a Cellphone over there ?
>
> > Hey Back At You "Radium" Wondering . . .
> > You Gotta Cellphone and who is your Service Provider ?
>
> > IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !
>
> > I B 'rhf' Listening to my Shortwave Radio
> > with my Cellphone near-by bye bye ~ RHF
> > .
> > On the Internet Everyone Knows - I Am A Jerk !
> > .
> > .
> > . .
>
> Verizon here RHF. I wouldn't have gotten a cell phone but I got this
> new job over at Harris. (And just the keep this post legal, Harris
> makes shortwave radios. Heheh.) So I'm working in Rochester, NY and
> Wife is in Ma so I had to get a cell phone to keep in communication.
> Hey, don't cell phones use tiny waves. I guess this stuff should
> really be posted to rec.radio.tinywave, but that keeps bouncing.
> Anyway, so there ya go, I like Verizon just fine. A really nice
> polite bunch of peeps over there and very helpful if you get the
> chance to call them. I give em a two thumbs up.
>
> Regards,
> N9NEO
> Just say NEO!- Hide quoted text -
>
> - Show quoted text -

Yeah the Cellphone's Tiny Waves keep bouncing off
my old rock-solid head.

You are right for Mobile-to-Mobile {Free Minutes}
the Cellphone is the best thing today for keeping
up family communications across long-distances.

But other than that to me they are an Electronic Leash.

the brick don't fall far from the wall ~ RHF
.
.

. .

3683. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 22:05:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5ccan4-s2n.ln1@mail.specsol.com>
Source record: 38193
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Radium <glucegen1@gmail.com> wrote:
> Please keep out the OT crap! I had to start a new thread because some
> jerks decided to post irrelevant nonsense.

Everything you post is irrelevant.

<snip reposted crap>

--
Jim Pennino

Remove .spam.sux to reply.

3684. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 22:13:56 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185056036.039023.28730@x35g2000prf.googlegroups.com>
Source record: 38194
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 3:05 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Radium <gluceg...@gmail.com> wrote:
>
> > Please keep out the OT crap! I had to start a new thread because some
> > jerks decided to post irrelevant nonsense.
>
> Everything you post is irrelevant.
>
> <snip reposted crap>
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

JP - You forgot 'nonsense'

-if- Radium is about anything it is about High School
Science Class classroom 'nonsense' which is most
often ' irrelevant' to the real world.

While Listening to Real World News on the Shortwave
Radio is very 'relevant' and far from 'nonsense' .

I B 'rhf' Listening to my Shortwave Radio
with my Cellphone near-by bye bye ~ RHF
.
.
. .

3685. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 22:46:17 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <TqudncD5M4j9ED_bnZ2dnUVZ_o2vnZ2d@giganews.com>
Source record: 38195

Roy Lewallen wrote:
> Tam/WB2TT wrote:
> >>
> > I am using half a cinder block for a similar application. Comes with its
own
> > hole.
>
> Cinder blocks weigh very little. Do you mean concrete block?
>
> Roy Lewallen, W7EL

My counterweight is a 5 gallon plastic bucket filled, as necessary, with rocks. A piece of scrap ¼" plywood (cut to fit) keeps the bottom of the pail from blowing through. A cover placed on top of the bucket keeps water & debris from adding more weight.

Bryan WA7PRC

3686. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-21 23:45:16 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185061516.185276.178950@j4g2000prf.googlegroups.com>
Source record: 38196
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 1:07 pm, Radium <gluceg...@gmail.com> wrote:
> Please keep out the OT crap! I had to start a new thread because some
> jerks decided to post irrelevant nonsense.
>
> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote
inhttp://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e6...
> :
>
> > Radium <gluceg...@gmail.com> hath wroth:
> > >On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> > >http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c...
> > >> how would u like to change the cell phone industry?
> > >Digital cell phones should stop using the compression they use and
> > >start using monaural WMA compression with a CBR of 20 kbps or less and
> > >a sample rate of at least 44.1 KHz.
> > Very roughly, the current 8Kbits/sec encoding rate,
> > compared to your 44Kbit/sec, will only handle about 1/5th the number
> > of users.
>
> Who said anything about 44Kbit/sec?
>
> The bit-rate of my WMA CBR is 20Kbit/sec or less.
>
> > >1. In its uncompressed form, the audio must have a bit-resolution of
> > >at least 16-bit
> > The encoding resolution is not changed by compression. If you encode
> > something with 16 bit resolution, and compress it, you still have 16
> > bit data coming out. It's the data rate or thruput that changes with
> > compression.
>
> Okay.
>
> > >2. The sample-rate of the compressed and the uncompressed version of
> > >the audio must be the same.
> > Not possible. If the rate in and rate out are identical, then there's
> > no compression happening.
>
> Yes it is possible and it is compression. The uncompressed audio is a
> monaural linear PCM at 44.1-KHz-sample-rate with a 16-bit-resolution
> -- this audio has a bit-rate of 705.6 kbps. The compressed audio is a
> monaural CBR WMA at 44.1-KHz-sample-rate with a bit-rate of 20 kbps or
> less.

>
> Where/when is there any change in sample-rate?????????
>
> There is definitely a change in bit-rate. However, that is totally
> different from the sample-rate. Totally.
>
> BIT-rate and SAMPLE-rate are two completely different things.
>
> In linear PCM audio:
>
> BIT-rate = SAMPLE-rate X bit-resolution X number of channels
>
> Stereo has two channels. Mono has one channel.
>
> 44,100 Hz X 16-bit X 1 channel = 705,600 bps

Radium Writes in Google Groups Guide :
Will someone please find the physical out where
google groups is located and fill their rooms with
flies, mosquitos, ants, pollen, feces, and other
irritants?
Then google groups will know how I feel.

- - - More Radium Rants to follow . . .

just a little 'gnat' buzzing in your ear ~ RHF
Radium - Yes I know that you only the WMA
Digital Audio Compression but . . . 'gnats' it is .
.
.
. .

3687. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 00:14:15 UTC
From: D Peter Maus <DPeterMaus@worldnet.att.net>
Message-ID: <rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38197
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Brenda Ann wrote:
> "Kurt" <labolide@spacegmail.com> wrote in message
> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>> I want getting phone service like when I buy a Mac.
>
> You only want them to work in a few dozen exchanges, and use a codec that
> only other phones of that brand use, so you can't talk to anyone else but
> other customers of that company (sort of like Sprint's "Friends and Family"
> plan). ?
>
>
>

There was a time that was true. Not so much since about OS X.2.

Truth is that I had a Mac on line at work since '89, and from home since '84, and with the exception of those who bothered to read the headers in e-mail, no one ever knew it. I've had my Macs and my PC's talking to each other the entire time.

As long as the output files are the same format, there's no more compatibility issue between Mac and Windows than between HP and Dell printers. And with Solaris and Linux making a showing in the marketplace, compatibility in general has become largely a non issue.

That's why the pissing match between the Microsoft and the keepers of standards is such a concern. Because if MS has their way, their proprietary formats, will continue to play havoc with compatibility between platforms that currently play well together using standards compliant output.

On my Macs, I use only open source software with the exception of one or two Apple branded programs for document and presentation creation. With the exception of nicer, more eye catching documents, and presentations with full animation and stereo sound, none of my colleagues can tell that I've used a Mac.

On my PC's the only MS software is the OS. Everything else... browser, IM client, office suite...everything, is open source.

The ONLY time I've ever had a compatibility issue is using MS software. And that's been true for more than a decade, now.

3688. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 00:27:23 UTC
From: Burr <pitzradio@earthlink.net>
Message-ID: <Lvxoi.5$PN1.2@newsfe22.lga>
Source record: 38198
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

What in the hell does a cell phone have to do with shortwave???

Burr

3689. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 00:33:12 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185064392.144076.98640@i38g2000prf.googlegroups.com>
Source record: 38199
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 5:14 pm, D Peter Maus <DPeterM...@worldnet.att.net> wrote:
> Brenda Ann wrote:
> > "Kurt" <labol...@spacegmail.com> wrote in message
> >news:labolide-AEBDD9.20275920072007@news.giganews.com...
> >> I want getting phone service like when I buy a Mac.
>
> > You only want them to work in a few dozen exchanges, and use a codec that
> > only other phones of that brand use, so you can't talk to anyone else but
> > other customers of that company (sort of like Sprint's "Friends and Family"
> > plan). ?
>
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> standards is such a concern. Because if MS has their way, their
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> browser, IM client, office suite...everything, is open source.
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> The ONLY time I've ever had a compatibility issue is using MS
> software. And that's been true for more than a decade, now.

DPM - I would suspect that you are right most of my
PC related problems have come from MicroSoft (MS)

Software related issues. ~ RHF

Didn't Wal*Mart offer some PC that had a Linux OS
with some of there store brand Computer Systems
for a while ? => http://en.wikipedia.org/wiki/Linux
http://news.zdnet.co.uk/software/0,1000000121,2125057,00.htm

Now Wal*Mart seems to have gone the other way
and now offers Dell Computer Systems in their
stores.
http://www.engadget.com/2007/05/24/wal-mart-set-to-sell-dell-desktops-in-june/
http://query.nytimes.com/gst/fullpage.html?res=9F0CE7DF1439F930A15757C0A965958260
.
.
. .

3690. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 01:24:13 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <nfCdnQ3t-4ojLD_bnZ2dnUVZ_ualnZ2d@giganews.com>
Source record: 38200
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"D Peter Maus" <DPeterMaus@worldnet.att.net> wrote in message
news:rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net...
> Brenda Ann wrote:
>> "Kurt" <labolide@spacegmail.com> wrote in message
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>>> I want getting phone service like when I buy a Mac.
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> On my PC's the only MS software is the OS. Everything else... browser,
> IM client, office suite...everything, is open source.

>
> The ONLY time I've ever had a compatibility issue is using MS software.
> And that's been true for more than a decade, now.
>

My biggest problem with Mac (I like the machines, always have) is the relative lack of software available for them. For instance, I have several video editing applications, and several internet webcasting applications, and they cannot be duplicated in Mac. (or at least they could not). I'll concede that their machines, and to an extent their OS, are very reliable.

3691. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 01:42:48 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185068568.036176.138360@e9g2000prf.googlegroups.com>
Source record: 38201
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 5:27 pm, "Burr" <pitzra...@earthlink.net> wrote:
> What in the hell does a cell phone have to do with shortwave???
>
> Burr

Burr - Do you own a Shortwave Radio and listen to it ?

Have you ever owned a Cellphone ?

If So . . . You are the 'connection' ;-) ~ RHF

Burr - Actually right now 1:25 UTC - I am listening to
Radio Netherland on 9845 kHz from Bonaire Neth.
Antilles and they are currently talking about the
German "Ramba Zamba" Theater Company.
Followed by Dutch War Crimes in the Indonesia
War for Independence at 1:40 UTC

My Radio/Receiver : Icom IC-R75 (R-75) with Kiwa Mods
Using an external RCA 4" Full Range Mini-Speaker [5" Cube]
.
My Shortwave Listening (SWL) Antenna : 45 Foot long
Low Noise Inverted "L" Antenna - a la John Doty
Laid-Out : East (Bottom Tip) to West (Far End)
15 Foot Vertical-Up-Leg with a 30 Foot Horizontal-Out-Arm
Wire Antenna Element = 50 Strands of #41 Litz Wire = 20 AWG
TV 'type' 300 Ohm to 75 Ohm Matching Transformer
RG6 Coax Cable Feed-in-Line about 25 Feet Long
.
My Location : OK-Land, Cali-4-Ni-A, USofA
Metro-Area : SF Bay Area
Geographic Region : Northern California
World : West Coast of the USA (North America)
Global : 122*W24' Longitude by 37*N78' Latitude
.
.
. .

3692. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 01:55:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ikpan4-dhr.ln1@mail.specsol.com>
Source record: 38202
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In rec.radio.amateur.antenna Burr <pitzradio@earthlink.net> wrote:

> What in the hell does a cell phone have to do with shortwave???

Since Radium is an ignorant idiot, he has no clue what group would
be appropriate for his moronic questions.

--
Jim Pennino

Remove .spam.sux to reply.

3693. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:26:53 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-D82F7C.19265221072007@news.giganews.com>
Source record: 38203
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net>,
D Peter Maus <DPeterMaus@worldnet.att.net> wrote:

> Brenda Ann wrote:
> > "Kurt" <labolide@spacegmail.com> wrote in message
> > news:labolide-AEBDD9.20275920072007@news.giganews.com...
> >> I want getting phone service like when I buy a Mac.
> > >
> > > You only want them to work in a few dozen exchanges, and use a codec that
> > > only other phones of that brand use, so you can't talk to anyone else but
> > > other customers of that company (sort of like Sprint's "Friends and Family"
> > > plan). ?
> > >
> > >
> > >
> >
> >
> >
> > There was a time that was true. Not so much since about OS X.2.
> >
> > Truth is that I had a Mac on line at work since '89, and from home
> > since '84, and with the exception of those who bothered to read the
> > headers in e-mail, no one ever knew it. I've had my Macs and my PC's
> > talking to each other the entire time.
> >
> > As long as the output files are the same format, there's no more
> > compatibility issue between Mac and Windows than between HP and Dell
> > printers. And with Solaris and Linux making a showing in the
> > marketplace, compatibility in general has become largely a non issue.
> >
> > That's why the pissing match between the Microsoft and the keepers of
> > standards is such a concern. Because if MS has their way, their
> > proprietary formats, will continue to play havoc with compatibility
> > between platforms that currently play well together using standards
> > compliant output.
> >
> > On my Macs, I use only open source software with the exception of one
> > or two Apple branded programs for document and presentation creation.
> > With the exception of nicer, more eye catching documents, and
> > presentations with full animation and stereo sound, none of my
> > colleagues can tell that I've used a Mac.
> >
> > On my PC's the only MS software is the OS. Everything else...

> browser, IM client, office suite...everything, is open source.
>
> The ONLY time I've ever had a compatibility issue is using MS
> software. And that's been true for more than a decade, now.

What's even worse is how MS thumbs their nose at making an HTML/CSS compliant browser.

All the non-standard workarounds we need to do to get some HTML and much CSS to appear properly in PCIE is ridiculous.

--
To reply by email, remove the word "space"

3694. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:29:19 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-93EACF.19291921072007@news.giganews.com>
Source record: 38204
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <nfCdnQ3t-4ojLD_bnZ2dnUVZ_ualnZ2d@giganews.com>,
"Brenda Ann" <brendad@shinbiro.com> wrote:

> "D Peter Maus" <DPeterMaus@worldnet.att.net> wrote in message
> news:rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net...
> > Brenda Ann wrote:
> >> "Kurt" <labolide@spacegmail.com> wrote in message
> >> news:labolide-AEBDD9.20275920072007@news.giganews.com...
> >>> I want getting phone service like when I buy a Mac.
> >>
> >> You only want them to work in a few dozen exchanges, and use a codec that
> >> only other phones of that brand use, so you can't talk to anyone else but
> >> other customers of that company (sort of like Sprint's "Friends and
> >> Family" plan). ?
> >>
> >>
> >>
> >
> >
> >
> > There was a time that was true. Not so much since about OS X.2.
> >
> > Truth is that I had a Mac on line at work since '89, and from home since
> > '84, and with the exception of those who bothered to read the headers in
> > e-mail, no one ever knew it. I've had my Macs and my PC's talking to each
> > other the entire time.
> >
> > As long as the output files are the same format, there's no more
> > compatibility issue between Mac and Windows than between HP and Dell
> > printers. And with Solaris and Linux making a showing in the marketplace,
> > compatibility in general has become largely a non issue.
> >
> > That's why the pissing match between the Microsoft and the keepers of
> > standards is such a concern. Because if MS has their way, their
> > proprietary formats, will continue to play havoc with compatibility
> > between platforms that currently play well together using standards
> > compliant output.
> >
> > On my Macs, I use only open source software with the exception of one or
> > two Apple branded programs for document and presentation creation. With
> > the exception of nicer, more eye catching documents, and presentations
> > with full animation and stereo sound, none of my colleagues can tell that
> > I've used a Mac.

> >
> > On my PC's the only MS software is the OS. Everything else... browser,
> > IM client, office suite...everything, is open source.
> >
> > The ONLY time I've ever had a compatibility issue is using MS software.
> > And that's been true for more than a decade, now.
> >
>
> My biggest problem with Mac (I like the machines, always have) is the
> relative lack of software available for them. For instance, I have several
> video editing applications, and several internet webcasting applications,
> and they cannot be duplicated in Mac. (or at least they could not). I'll
> concede that their machines, and to an extent their OS, are very reliable.

The proprietary stuff will always be an issue (yes, not having
DesignMyCloset couyld be an issue for some people).

Final Cut Pro is pretty swell for most of the pro world.

--
To reply by email, remove the word "space"

3695. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:33:42 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-3DFC84.19334221072007@news.giganews.com>
Source record: 38205
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C78F75.70C91%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/21/07 9:28 AM, in article
> labolide-FDDD0E.09284621072007@news.giganews.com, "Kurt"
> <labolide@spacegmail.com> wrote:
>
> > In article <C2C76B2D.70C11%dbowey@comcast.net>,
> > Don Bowey <dbowey@comcast.net> wrote:
> >
> >> On 7/20/07 8:27 PM, in article
> >> labolide-AEBDD9.20275920072007@news.giganews.com, "Kurt"
> >> <labolide@spacegmail.com> wrote:
> >>
> >>> In article <1184978126.894452.166610@e9g2000prf.googlegroups.com>,
> >>> Radium <glucegen1@gmail.com> wrote:
> >>>
> >>>> On Jul 19, 12:06 am, Jeff Liebermann <je...@cruzio.com> wrote in
> >>>>
> >>
> http://groups.google.com/group/sci.electronics.basics/msg/4b14d9c79e614fe3?hl>
> >
> >
> >>>
> >> =
> >>>> en&
> >>>> :
> >>>>
> >>>>> Radium <gluceg...@gmail.com> hath wroth:
> >>>>
> >>>>>> On Jul 1, 7:24 am, shawn.cormi...@gmail.com wrote in
> >>>>>> http://groups.google.com/group/sci.electronics.basics/msg/696d6abf90c..
> >>>>>> .
> >>>>
> >>>>>>> how would u like to change the cell phone industry?
> >>>>
> >>> I would do what Apple is doing right now. Use their power to force the
> >>> phone companies to offer (finally) great phones with simple plans that
> >>> their employees can't screw up or misinform customers about.
> >>
> >> Apple can't and isn't forcing "the phone companies" to do anything.
> >> You're
> >> an idiot.

> >>
> >>>
> >>> I want getting phone service like when I buy a Mac.
> >>
> >> You have a monthly payment plan for minutes of use of your Mac? Is this
> >> something they forced you to buy?
> >
> > You miss my point. Why do you think the iPhone is so successful?
> > Why the iPod?
>
> Until there are more facts, the iPhone's current success is due to people
> wanting a very cool instrument with good features.
>
> The iPod's success is from Apple having a top-notch product line with good
> features, and cool looks. And people should not overlook, but often do,
> iTunes. It is iTunes that makes the iPod easy to use, giving it easy
> access to their CD and MP3 music regardless of where they buy it. People
> who don't want an iPod can still use the free iTunes to good advantage.
>
> Apple doesn't make anyone do anything.
>
> So, what was your point?
>
> Don

Never said they do. People want to buy iPhones and iPods because of the
ease of use and right-on-the-nose product design. Then there is the
coolness factor.

Why is this so hard for other companies to do?

--
To reply by email, remove the word "space"

3696. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:33:52 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A2C216.3A48B3B0@earthlink.net>
Source record: 38206
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Don Bowey wrote:
>
> * We senior citizens aren't perceived as being a large enough market.

http://www.jitterbug.com/Phones.aspx

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3697. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:36:11 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-1FEEDB.19361121072007@news.giganews.com>
Source record: 38207
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C7B1AB.70D03%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/21/07 12:19 PM, in article
> 1185045590.471407.165270@g12g2000prg.googlegroups.com, "RHF"
> <rhf-newsgroups@pacbell.net> wrote:
>
> (snip)
>
>
> > Until there are more facts, the iPhone's current success {?}
> > is due to people wanting {Gotto Have the Latest} a very cool
> > instrument {Newest Bells and Whistles} with good features
> > {of Questionable Utlity}.
> >
> > -RANT-
> > While Senior Citzens like myself with Tired Old Eyes
> > and Big Old Fingers just want a basic CellPhone that
> > we can use without our Glasses like the "JitterBug" .
> >
> http://www.firststreetonline.com/product.jsp?id=50814&promotion=86678&PID=1583
> 97
> 8
>
> That's as ugly as they get.....
>
> > Why doesn't AT&T, Sprint, Nextel, T-Mobile, Verizon, etc
> > offer a CellPhone designed for Senior Citizens and the
> > Visually Limited-Impaired like the "JitterBug" ?
> > Here is where the ADA Laws should apply and force
> > the Cellphone providers to design and market these
> > Cellphone to Seniors with needs. -end-rant- ~ RHF
>
> (snip)
>
> Lots of reasons..... Here's a couple:
>
> * We senior citizens aren't perceived as being a large enough market.
>
> * We aren't a cohesive group of a same mind. I'm one, but I'd have an
> iPhone in a minute just cause it is cool, if it weren't for the ridiculous
> rate structures.

Far better for data than anyone else's offerings. Take a look.

I need reading glasses for my Treo, but there are those who simply want
a phone with large numbers and no features other than voice.

--
To reply by email, remove the word "space"

3698. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:38:31 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-7560AB.19383121072007@news.giganews.com>
Source record: 38208
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article
<kurtullman-A7FC30.14000021072007@customer-201-125-217-207.uninet.net.mx
>,
Kurt Ullman <kurtullman@yahoo.com> wrote:

> In article <C2C78F75.70C91%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:
>
>
> > > You miss my point. Why do you think the iPhone is so successful?
> > > Why the iPod?
> >
> > Until there are more facts, the iPhone's current success is due to people
> > wanting a very cool instrument with good features.
>
> Which is pretty much the definition of putting out a product that the
> public wants. But, yet, I seem to have feelings that you did not mean
> this as a positive.

We had these same naysayers in these groups who were predicting the flop
of iPhone a week before it came out. The more rabid ones disappeared.
Now we have this more ambiguous approach.

--
To reply by email, remove the word "space"

3699. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:40:38 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-0FD7A5.19403821072007@news.giganews.com>
Source record: 38209
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <1185043499.283610.124020@j4g2000prf.googlegroups.com>,
RHF <rhf-newsgroups@pacbell.net> wrote:

> On Jul 21, 11:14 am, Don Bowey <dbo...@comcast.net> wrote:
> > On 7/21/07 11:00 AM, in article
> > kurtullman-A7FC30.14000021072...@customer-201-125-217-207.uninet.net.mx,
> >
> > "Kurt Ullman" <kurtull...@yahoo.com> wrote:
> > > In article <C2C78F75.70C91%dbo...@comcast.net>,
> > > Don Bowey <dbo...@comcast.net> wrote:
> >
> > >>> You miss my point. Why do you think the iPhone is so successful?
> > >>> Why the iPod?
> >
> > >> Until there are more facts, the iPhone's current success is due to people
> > >> wanting a very cool instrument with good features.
> >
> > > Which is pretty much the definition of putting out a product that the
> > > public wants. But, yet, I seem to have feelings that you did not mean
> > > this as a positive.
> >
> > You are reading in something I did not say.
> >
> > The iPhone is off to a great start, but it has no track record at this time.
> > I anticipate that it will be very successful, but we can only guess at it
> > now. From an investor point-of-view, I think the monthly kickback from AT&T
> > that Apple negotiated, is good. From a personal POV I think it sucks, and
> > will likely antagonize Apple supporters.
>
> IPhone Buyers and Users -and- Apple Supporters
> may not be one and the same. ~ RHF

Bottom line - People want products that work for them. Period.
Mac delivers, like them or not.

--
To reply by email, remove the word "space"

3700. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:43:38 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185072218.312390.77540@m37g2000prh.googlegroups.com>
Source record: 38210
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 6:55 pm, j...@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna Burr <pitzra...@earthlink.net> wrote:
>
> > What in the hell does a cell phone have to do with shortwave???
>
> Since Radium is an ignorant idiot, he has no clue what group would
> be appropriate for his moronic questions.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

JP - Actually Radium may be an http://www.wisconsinmedicalsociety.org/savant_syndrome/
"Island of Genius" unto himself ~ RHF
http://en.wikipedia.org/wiki/Savant_Syndrome

But it does seem that : Rec.Radio.Shortwave and
Rec.Radio.Amateur.Antenna are a bit 'off' for a
Proposal to Change the Digital Cellphone World
kind of question that Radium posed.

While had he stuck to : Sci.Electronics.Basics,
Alt.Cellular.Cingular, and Alt.Internet.Wireless
He would not be hearing {reading} any of this
back chatter now.

If Radium could only understand that :
* Rec.Radio.Shortwave is about Shortwave Radio
and Shortwave Radio Listening (SWL) including
Radios, Receivers and related SWL Equipment
like Receiving Antennas and Feed-in-Lines for
the SWLer.
* Rec.Radio.Amateur.Antenna is about Antennas
for Amatueur {Ham} Radio use : Theory, Design
and practical application of Transmitting and
Receiving for the Amateur Radio Service.

Clearly Radium's Re-Inventing the Cellphone
Transmission {Delivery} System is a stretch
beyond the normal focus of these two groups.

Listening to 7505 kHz right now at 2:28 UTC
KTBN - Salt Lake City UT USA

http://www.tbn.org/index.php/2/21.html
Mister Preacher Man preaching 'The Word'
.
.
. .

3701. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:43:59 UTC
From: Burr <pitzradio@earthlink.net>
Message-ID: <Qvzoi.105$n91.0@newsfe14.lga>
Source record: 38211
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"RHF" <rhf-newsgroups@pacbell.net> wrote in message
news:1185068568.036176.138360@e9g2000prf.googlegroups.com...
> On Jul 21, 5:27 pm, "Burr" <pitzra...@earthlink.net> wrote:
>> What in the hell does a cell phone have to do with shortwave???
>>
>> Burr
>
> Burr - Do you own a Shortwave Radio and listen to it ?
>
> Have you ever owned a Cellphone ?
>
> If So . . . You are the 'connection' ;-) ~ RHF

If you say so!!!

3702. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 02:47:52 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A2C55E.913D0713@earthlink.net>
Source record: 38212
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Kurt wrote:
>
> Never said they do. People want to buy iPhones and iPods because of the
> ease of use and right-on-the-nose product design.

'Right-on-the-nose product design'? What you like and want may be
totally useless to a lot of other people. When i saw that Iphone on TV,
I thought it looked like another useless piece of junk. 'Right on' is
doing what you need, and doing it as easily and cheap as possible. Not
cramming every damn gimmick and stupid idea you can come up with. There
are already complaints about battery life. Don't you even wonder how
much longer it would work without all the crap?

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3703. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:15:29 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C819E1.70D66%dbowey@comcast.net>
Source record: 38213
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

```
On 7/21/07 6:24 PM, in article
nfCdnQ3t-4ojLD_bnZ2dnUVZ_ualnZ2d@giganews.com, "Brenda Ann"
<brendad@shinbiro.com> wrote:

>
> "D Peter Maus" <DPeterMaus@worldnet.att.net> wrote in message
> news:rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net...
>> Brenda Ann wrote:
>>> "Kurt" <labolide@spacegmail.com> wrote in message
>>> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>>>> I want getting phone service like when I buy a Mac.
>>>
>>> You only want them to work in a few dozen exchanges, and use a codec that
>>> only other phones of that brand use, so you can't talk to anyone else but
>>> other customers of that company (sort of like Sprint's "Friends and
>>> Family" plan). ?
>>>
>>>
>>>
>>
>>
>>
>> There was a time that was true. Not so much since about OS X.2.
>>
>> Truth is that I had a Mac on line at work since '89, and from home since
>> '84, and with the exception of those who bothered to read the headers in
>> e-mail, no one ever knew it. I've had my Macs and my PC's talking to each
>> other the entire time.
>>
>> As long as the output files are the same format, there's no more
>> compatibility issue between Mac and Windows than between HP and Dell
>> printers. And with Solaris and Linux making a showing in the marketplace,
>> compatibility in general has become largely a non issue.
>>
>> That's why the pissing match between the Microsoft and the keepers of
>> standards is such a concern. Because if MS has their way, their
>> proprietary formats, will continue to play havoc with compatibility
>> between platforms that currently play well together using standards
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>>
>> On my Macs, I use only open source software with the exception of one or
>> two Apple branded programs for document and presentation creation. With
>> the exception of nicer, more eye catching documents, and presentations
```

>> with full animation and stereo sound, none of my colleagues can tell that
>> I've used a Mac.
>>
>> On my PC's the only MS software is the OS. Everything else... browser,
>> IM client, office suite...everything, is open source.
>>
>> The ONLY time I've ever had a compatibility issue is using MS software.
>> And that's been true for more than a decade, now.
>>
>
> My biggest problem with Mac (I like the machines, always have) is the
> relative lack of software available for them. For instance, I have several
> video editing applications, and several internet webcasting applications,
> and they cannot be duplicated in Mac. (or at least they could not). I'll
> concede that their machines, and to an extent their OS, are very reliable.
>

I've been a Mac user since the MacIIci. Usually, at home, I stayed one model ahead of what I got at work. My primary home computer now is a recent MacBook Pro, and I like it, but Apple's think different finally got to me. When I decided to do some serious video/DVD work and discovered there was no way to get video into the Mac except through a digital camera or a $300 box, I just bought a PC tower and equipped it with a PCI card, which works fine. Hardware and software for the PC is much less expensive than for the Mac and it does a great job. Also, Windows XP is a trouble free system. I'll probably add XP as a native system to the MacBook Pro too. I have two Macs and two PCs on my home wireless lan and all have high speed internet access and at least one printer to share off the Mac Airport. The PCs were at least as easy to integrate as the Macs. Word, Excel, photo, and music files are shared by all.

3704. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:22:02 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfa5jaq.146f.bit-bucket@shell.config.com>
Source record: 38214

On Sat, 21 Jul 2007 15:46:17 -0700, Bryan wrote:
>
> My counterweight is a 5 gallon plastic bucket filled, as necessary, with
> rocks. A piece of scrap ï¿½" plywood (cut to fit) keeps the bottom of the
> pail from blowing through. A cover placed on top of the bucket keeps water
> & debris from adding more weight.

What keeps the UV from eating the plastic bucket -- which, I assume, is
a "contractor's bucket"? They only last about a year out-of-doors
around here.

Jonesy W3DHJ

3705. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:23:00 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-89B489.20230021072007@news.giganews.com>
Source record: 38215
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46A2C55E.913D0713@earthlink.net>,
"Michael A. Terrell" <mike.terrell@earthlink.net> wrote:

> Kurt wrote:
> >
> > Never said they do. People want to buy iPhones and iPods because of the
> > ease of use and right-on-the-nose product design.
>
>
> 'Right-on-the-nose product design'? What you like and want may be
> totally useless to a lot of other people. When i saw that Iphone on TV,
> I thought it looked like another useless piece of junk. 'Right on' is
> doing what you need, and doing it as easily and cheap as possible. Not
> cramming every damn gimmick and stupid idea you can come up with. There
> are already complaints about battery life. Don't you even wonder how
> much longer it would work without all the crap?

Yes, for you, buy a phone with large numbers and voice only.

I'm a lot older than you and the iPhone does it right for 90% of what
people really want.

Youth market fuels gimmicks. Ringtones reap untold millions.

--
To reply by email, remove the word "space"

3706. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:24:21 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-5E65B6.20242121072007@news.giganews.com>
Source record: 38216
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C819E1.70D66%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/21/07 6:24 PM, in article
> nfCdnQ3t-4ojLD_bnZ2dnUVZ_ualnZ2d@giganews.com, "Brenda Ann"
> <brendad@shinbiro.com> wrote:
>
> >
> > "D Peter Maus" <DPeterMaus@worldnet.att.net> wrote in message
> > news:rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net...
> >> Brenda Ann wrote:
> >>> "Kurt" <labolide@spacegmail.com> wrote in message
> >>> news:labolide-AEBDD9.20275920072007@news.giganews.com...
> >>>> I want getting phone service like when I buy a Mac.
> >>>
> >>> You only want them to work in a few dozen exchanges, and use a codec that
> >>> only other phones of that brand use, so you can't talk to anyone else but
> >>> other customers of that company (sort of like Sprint's "Friends and
> >>> Family" plan). ?
> >>>
> >>>
> >>>
> >>
> >>
> >>
> >> There was a time that was true. Not so much since about OS X.2.
> >>
> >> Truth is that I had a Mac on line at work since '89, and from home since
> >> '84, and with the exception of those who bothered to read the headers in
> >> e-mail, no one ever knew it. I've had my Macs and my PC's talking to each
> >> other the entire time.
> >>
> >> As long as the output files are the same format, there's no more
> >> compatibility issue between Mac and Windows than between HP and Dell
> >> printers. And with Solaris and Linux making a showing in the marketplace,
> >> compatibility in general has become largely a non issue.
> >>
> >> That's why the pissing match between the Microsoft and the keepers of
> >> standards is such a concern. Because if MS has their way, their
> >> proprietary formats, will continue to play havoc with compatibility
> >> between platforms that currently play well together using standards
> >> compliant output.
> >>

> >> On my Macs, I use only open source software with the exception of one or
> >> two Apple branded programs for document and presentation creation. With
> >> the exception of nicer, more eye catching documents, and presentations
> >> with full animation and stereo sound, none of my colleagues can tell that
> >> I've used a Mac.
> >>
> >> On my PC's the only MS software is the OS. Everything else... browser,
> >> IM client, office suite...everything, is open source.
> >>
> >> The ONLY time I've ever had a compatibility issue is using MS software.
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> >>
> >
> > My biggest problem with Mac (I like the machines, always have) is the
> > relative lack of software available for them. For instance, I have several
> > video editing applications, and several internet webcasting applications,
> > and they cannot be duplicated in Mac. (or at least they could not). I'll
> > concede that their machines, and to an extent their OS, are very reliable.
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>
> I've been a Mac user since the MacIIci. Usually, at home, I stayed one
> model ahead of what I got at work. My primary home computer now is a recent
> MacBook Pro, and I like it, but Apple's think different finally got to me.
> When I decided to do some serious video/DVD work and discovered there was no
> way to get video into the Mac except through a digital camera or a $300 box,
> I just bought a PC tower and equipped it with a PCI card, which works fine.
> Hardware and software for the PC is much less expensive than for the Mac and
> it does a great job. Also, Windows XP is a trouble free system. I'll
> probably add XP as a native system to the MacBook Pro too. I have two Macs
> and two PCs on my home wireless lan and all have high speed internet access
> and at least one printer to share off the Mac Airport. The PCs were at
> least as easy to integrate as the Macs. Word, Excel, photo, and music files
> are shared by all.

You really enjoy that MS interface?

--
To reply by email, remove the word "space"

3707. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:28:27 UTC
From: Scott <how.do@you.do>
Message-ID: <-b2dnSmSZeRGUz_bnZ2dnUVZ_sHinZ2d@adelphia.com>
Source record: 38217
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Kurt <labolide@spacegmail.com> wrote in
news:labolide-89B489.20230021072007@news.giganews.com:

>
> I'm a lot older than you and the iPhone does it right for 90% of what
> people really want.

And what do you base this claim on?

3708. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:35:43 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <-aidnXqikI8STT_bnZ2dnUVZ_r-vnZ2d@giganews.com>
Source record: 38218
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Kurt" <labolide@spacegmail.com> wrote in message
news:labolide-89B489.20230021072007@news.giganews.com...
> In article <46A2C55E.913D0713@earthlink.net>,
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>
>> Kurt wrote:
>> >
>> > Never said they do. People want to buy iPhones and iPods because of the
>> > ease of use and right-on-the-nose product design.
>>
>>
>> 'Right-on-the-nose product design'? What you like and want may be
>> totally useless to a lot of other people. When i saw that Iphone on TV,
>> I thought it looked like another useless piece of junk. 'Right on' is
>> doing what you need, and doing it as easily and cheap as possible. Not
>> cramming every damn gimmick and stupid idea you can come up with. There
>> are already complaints about battery life. Don't you even wonder how
>> much longer it would work without all the crap?
>
> Yes, for you, buy a phone with large numbers and voice only.
>
> I'm a lot older than you and the iPhone does it right for 90% of what
> people really want.
>
> Youth market fuels gimmicks. Ringtones reap untold millions.
>

Do people REALLY want something that is easily broken, lost or stolen that would pretty much give away their entire life if it fell into the hands of someone else? And hey, my iPaq does most of what the iPhone does. Besides, sometimes I want to do more than one thing at a time. For that it takes more than one device. Cute gimmick, yeah, and young people will buy any gimcrack that comes out just to be "kewl". That doesn't make it worth what they're paying for it.

As far as Apple being the be all and end all of gimmickry, I have a very nice (and reliable) mp3/video player with a 60GB HDD in it that cost me far less than a similar iPod, and I don't have to deal with proprietary files.

3709. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:44:16 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C820A0.70DDA%dbowey@comcast.net>
Source record: 38219
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 8:24 PM, in article
labolide-5E65B6.20242121072007@news.giganews.com, "Kurt"
<labolide@spacegmail.com> wrote:

> In article <C2C819E1.70D66%dbowey@comcast.net>,
> Don Bowey <dbowey@comcast.net> wrote:

(snip)
>>
>> I've been a Mac user since the MacIIci. Usually, at home, I stayed one
>> model ahead of what I got at work. My primary home computer now is a recent
>> MacBook Pro, and I like it, but Apple's think different finally got to me.
>> When I decided to do some serious video/DVD work and discovered there was no
>> way to get video into the Mac except through a digital camera or a $300 box,
>> I just bought a PC tower and equipped it with a PCI card, which works fine.
>> Hardware and software for the PC is much less expensive than for the Mac and
>> it does a great job. Also, Windows XP is a trouble free system. I'll
>> probably add XP as a native system to the MacBook Pro too. I have two Macs
>> and two PCs on my home wireless lan and all have high speed internet access
>> and at least one printer to share off the Mac Airport. The PCs were at
>> least as easy to integrate as the Macs. Word, Excel, photo, and music files
>> are shared by all.
>
> You really enjoy that MS interface?

It works trouble free and there isn't all that much difference between the
XP interface and many of the Mac interfaces. I can make the XP interface
appear about any way I wish. When I'm in a Word or Excel document, and many
other types, there isn't any interface difference between OSX and XP.

Do you have a specific point you wish to make?

3710. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 03:59:44 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C82440.70DE5%dbowey@comcast.net>
Source record: 38220
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/21/07 8:35 PM, in article
-aidnXqikI8STT_bnZ2dnUVZ_r-vnZ2d@giganews.com, "Brenda Ann"
<brendad@shinbiro.com> wrote:

>
> "Kurt" <labolide@spacegmail.com> wrote in message
> news:labolide-89B489.20230021072007@news.giganews.com...
>> In article <46A2C55E.913D0713@earthlink.net>,
>> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>>
>>> Kurt wrote:
>>>>
>>>> Never said they do. People want to buy iPhones and iPods because of the
>>>> ease of use and right-on-the-nose product design.
>>>
>>>
>>> 'Right-on-the-nose product design'? What you like and want may be
>>> totally useless to a lot of other people. When i saw that Iphone on TV,
>>> I thought it looked like another useless piece of junk. 'Right on' is
>>> doing what you need, and doing it as easily and cheap as possible. Not
>>> cramming every damn gimmick and stupid idea you can come up with. There
>>> are already complaints about battery life. Don't you even wonder how
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>> Yes, for you, buy a phone with large numbers and voice only.
>>
>> I'm a lot older than you and the iPhone does it right for 90% of what
>> people really want.
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>> Youth market fuels gimmicks. Ringtones reap untold millions.
>>
>
> Do people REALLY want something that is easily broken, lost or stolen that
> would pretty much give away their entire life if it fell into the hands of
> someone else? And hey, my iPaq does most of what the iPhone does. Besides,
> sometimes I want to do more than one thing at a time. For that it takes more
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> paying for it.
>
> As far as Apple being the be all and end all of gimmickry, I have a very
> nice (and reliable) mp3/video player with a 60GB HDD in it that cost me far
> less than a similar iPod, and I don't have to deal with proprietary files.

>
>
>

I have an original iPod and my wife has a nano, and we don't have to deal
with proprietary files either.

What's your point?

3711. Re: Tarheel pricing too high?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 04:25:54 UTC
From: Craig Buck <k4ia@verizon.net>
Message-ID: <m%Aoi.11449$U47.346@trnddc08>
Source record: 38221

The best bet is the ATAS120. Same price as the Tarheel and you don;t need any expensive interface boxes. You can't work 80 with it but you couldn't possibly have been considering 80 with the little Tarheel anyway. The FT100D and ATAS are a great mobile combo. I have two of them in two different vehicles.

"Bob John" <AA8X@wowway.com> wrote in message news:C9CdnU-lOMafbgXbnZ2dnUVZ_jydnZ2d@wideopenwest.com...
> Is Tarheel pricing their products out of the market? I had consideration
> purchasing a little Tarheel II during our local Hamfest last weekend in
> Aurora, IL. The dealer informed me the price had once again gone up and
> they are now $289.99. Add to this amount the sales tax, auto-controller
> and mount and you are way over $600.00. This is more then I paid for my
> FT-100D, which I purchased new. At this point in time, the Hustler antenna
> is working fine and I don't have to worry about theft.
>
> Bob, AA8X
>
>

3712. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 04:42:18 UTC
From: D Peter Maus <DPeterMaus@worldnet.att.net>
Message-ID: <KeBoi.1145$iX3.545@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38222
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

RHF wrote:
> On Jul 21, 5:14 pm, D Peter Maus <DPeterM...@worldnet.att.net> wrote:
>> Brenda Ann wrote:
>>> "Kurt" <labol...@spacegmail.com> wrote in message
>>> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>>>> I want getting phone service like when I buy a Mac.
>>> You only want them to work in a few dozen exchanges, and use a codec that
>>> only other phones of that brand use, so you can't talk to anyone else but
>>> other customers of that company (sort of like Sprint's "Friends and Family"
>>> plan). ?
>> There was a time that was true. Not so much since about OS X.2.
>>
>> Truth is that I had a Mac on line at work since '89, and from home
>> since '84, and with the exception of those who bothered to read the
>> headers in e-mail, no one ever knew it. I've had my Macs and my PC's
>> talking to each other the entire time.
>>
>> As long as the output files are the same format, there's no more
>> compatibility issue between Mac and Windows than between HP and Dell
>> printers. And with Solaris and Linux making a showing in the
>> marketplace, compatibility in general has become largely a non issue.
>>
>> That's why the pissing match between the Microsoft and the keepers of
>> standards is such a concern. Because if MS has their way, their
>> proprietary formats, will continue to play havoc with compatibility
>> between platforms that currently play well together using standards
>> compliant output.
>>
>> On my Macs, I use only open source software with the exception of one
>> or two Apple branded programs for document and presentation creation.
>> With the exception of nicer, more eye catching documents, and
>> presentations with full animation and stereo sound, none of my
>> colleagues can tell that I've used a Mac.
>>
>> On my PC's the only MS software is the OS. Everything else...
>> browser, IM client, office suite...everything, is open source.
>>
>> The ONLY time I've ever had a compatibility issue is using MS
>> software. And that's been true for more than a decade, now.
>
> DPM - I would suspect that you are right most of my
> PC related problems have come from MicroSoft (MS)
> Software related issues. ~ RHF

>
> Didn't Wal*Mart offer some PC that had a Linux OS
> with some of there store brand Computer Systems
> for a while ? => http://en.wikipedia.org/wiki/Linux
> http://news.zdnet.co.uk/software/0,1000000121,2125057,00.htm
>

Yeah, they did for awhile. And Lindows, IIRC. Even a basic machine to which you could bring your own O/S.

They didn't sell well.

Truth is, that there are two things that play heavily against non-MS systems, today. There is the FUD spread by MS itself. The shadow of lawsuits against users of Linux, and other non-MS O/S's. The huge mass of mis and disinformation about MS compatibility, and the refusal of many network sysadmins to even consider non-MS product on their networks. And the built in compatibility restraints that MS builds into their code. Especially to drive upgrades to more recent product at end user cost, despite the fact that the end user's product is, in fact, perfectly serviceable. MS turns off functionality when they want to force an upgrade. Something I've had first had dealings with. Something I also forced MS to turn back on with some very loud and very public complaints.

Then there is the fact that Linux other systems are not quite user friendly. Not that Windows is any prize, but it's familiar. The Devil you know, and all that. As Linux becomes more user friendly, market share will increase. This is what's driving the shadow of lawsuits and the tribute payments MS has extracted from Novell and other purveyors of Linux.

They've made similar noise against Apple for years. And even as recently as a year and a half ago, threatened to pull the Mac division from their catalog.

So, alternative systems are not selling well. And as they make inroads, you can watch Redmond play different and more aggressive games to spread FUD about non MS product.

None of it's true.

But if you afraid to believe, you don't ever take the step.

3713. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 04:45:29 UTC
From: D Peter Maus <DPeterMaus@worldnet.att.net>
Message-ID: <JhBoi.351553$p47.143234@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38223
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Brenda Ann wrote:
> "D Peter Maus" <DPeterMaus@worldnet.att.net> wrote in message
> news:rjxoi.86$iX3.14@bgtnsc05-news.ops.worldnet.att.net...
>> Brenda Ann wrote:
>>> "Kurt" <labolide@spacegmail.com> wrote in message
>>> news:labolide-AEBDD9.20275920072007@news.giganews.com...
>>>> I want getting phone service like when I buy a Mac.
>>> You only want them to work in a few dozen exchanges, and use a codec that
>>> only other phones of that brand use, so you can't talk to anyone else but
>>> other customers of that company (sort of like Sprint's "Friends and
>>> Family" plan). ?
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>>
>> There was a time that was true. Not so much since about OS X.2.
>>
>> Truth is that I had a Mac on line at work since '89, and from home since
>> '84, and with the exception of those who bothered to read the headers in
>> e-mail, no one ever knew it. I've had my Macs and my PC's talking to each
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>> compatibility issue between Mac and Windows than between HP and Dell
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>>
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>>
>> On my PC's the only MS software is the OS. Everything else... browser,
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> relative lack of software available for them. For instance, I have several
> video editing applications, and several internet webcasting applications,
> and they cannot be duplicated in Mac. (or at least they could not). I'll
> concede that their machines, and to an extent their OS, are very reliable.
>
>
>

The applications...very likely are not duplicated under Mac, no.
Their functionality will be found in other apps, however. Especially in
video and audio editing. Most of them in open source, or at least
standards compliant apps. The challenge is finding them.

There are websites that are dedicated to nothing but video and audio
apps for Macintosh. The names escape me at the moments, but if you do a
websearch you can find thousands of audio, video and webcasting apps for
Mac. Some of which are produced by Apple.

3714. Re: Please keep out the OT crap! [was Re: How I would like to change the *digital* cell phone industry.]

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:03:34 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A2E52D.62975A07@earthlink.net>
Source record: 38224
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

RHF wrote:
>
> On Jul 21, 6:55 pm, j...@specsol.spam.sux.com wrote:
> > In rec.radio.amateur.antenna Burr <pitzra...@earthlink.net> wrote:
> >
> > > What in the hell does a cell phone have to do with shortwave???
> >
> > Since Radium is an ignorant idiot, he has no clue what group would
> > be appropriate for his moronic questions.
> >
> > --
> > Jim Pennino
> >
> > Remove .spam.sux to reply.
>
> JP - Actually Radium may be an http://www.wisconsinmedicalsociety.org/savant_syndrome/
> "Island of Genius" unto himself ~ RHF
> http://en.wikipedia.org/wiki/Savant_Syndrome
>
> But it does seem that : Rec.Radio.Shortwave and
> Rec.Radio.Amateur.Antenna are a bit 'off' for a
> Proposal to Change the Digital Cellphone World
> kind of question that Radium posed.
>
> While had he stuck to : Sci.Electronics.Basics,
> Alt.Cellular.Cingular, and Alt.Internet.Wireless
> He would not be hearing {reading} any of this
> back chatter now.
>
> If Radium could only understand that :
> * Rec.Radio.Shortwave is about Shortwave Radio
> and Shortwave Radio Listening (SWL) including
> Radios, Receivers and related SWL Equipment
> like Receiving Antennas and Feed-in-Lines for
> the SWLer.
> * Rec.Radio.Amateur.Antenna is about Antennas
> for Amatueur {Ham} Radio use : Theory, Design
> and practical application of Transmitting and
> Receiving for the Amateur Radio Service.
>
> Clearly Radium's Re-Inventing the Cellphone
> Transmission {Delivery} System is a stretch

> beyond the normal focus of these two groups.
>
> Listening to 7505 kHz right now at 2:28 UTC
> KTBN - Salt Lake City UT USA
> http://www.tbn.org/index.php/2/21.html
> Mister Preacher Man preaching 'The Word'
> .
> .
> . .

Think about it. How can he piss people off, if he doesn't post his
crap where it will offend the most people?

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3715. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:05:24 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185080724.581768.22050@g12g2000prg.googlegroups.com>
Source record: 38225
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 8:35 pm, "Brenda Ann" <bren...@shinbiro.com> wrote:
> "Kurt" <labol...@spacegmail.com> wrote in message
>
> news:labolide-89B489.20230021072007@news.giganews.com...
>
>
>
>
>
> > In article <46A2C55E.913D0...@earthlink.net>,
> > "Michael A. Terrell" <mike.terr...@earthlink.net> wrote:
>
> >> Kurt wrote:
>
> >> > Never said they do. People want to buy iPhones and iPods because of the
> >> > ease of use and right-on-the-nose product design.
>
> >> 'Right-on-the-nose product design'? What you like and want may be
> >> totally useless to a lot of other people. When i saw that Iphone on TV,
> >> I thought it looked like another useless piece of junk. 'Right on' is
> >> doing what you need, and doing it as easily and cheap as possible. Not
> >> cramming every damn gimmick and stupid idea you can come up with. There
> >> are already complaints about battery life. Don't you even wonder how
> >> much longer it would work without all the crap?
>
> > Yes, for you, buy a phone with large numbers and voice only.
>
> > I'm a lot older than you and the iPhone does it right for 90% of what
> > people really want.
>
> > Youth market fuels gimmicks. Ringtones reap untold millions.
>
> Do people REALLY want something that is easily broken, lost or stolen that
> would pretty much give away their entire life if it fell into the hands of
> someone else? And hey, my iPaq does most of what the iPhone does. Besides,
> sometimes I want to do more than one thing at a time. For that it takes more
> than one device. Cute gimmick, yeah, and young people will buy any gimcrack
> that comes out just to be "kewl". That doesn't make it worth what they're
> paying for it.
>
> As far as Apple being the be all and end all of gimmickry, I have a very
> nice (and reliable) mp3/video player with a 60GB HDD in it that cost me far
> less than a similar iPod, and I don't have to deal with proprietary files.- Hide quoted

text -
>
> - Show quoted text -

BAD,

Let see to date I have never used the Camera
on my Motorola RAZR V3 Cellphone -and-
only down loaded on Ring Tone {Tune} :
"Hello Goodbye" -by- The Beattles

Two of the three iPhone owners that I know of
are ready to show everyone their iPhones . . .
but the third one already has a broken LCD
Display Screen. Oops ! They each average
$100 plus a Month in their AT&T Bill just for
the priviledge of saying : Hey Look At My iPhone !

As for me give me something like a "JitterBug"
Cellphone design with Senior Citizens in mind.
http://www.firststreetonline.com/product.jsp?id=50814&promotion=86678&PID=1583978
-but- make it comatable with the AT&T Wireless
System.

Back to the Suject of Shortwave Radio :
Currently at 4:50 UTC on 5935 kHz is Pastor Melissa $cott
keeping the $pirit of Dr Gene $cott alive -by- Teaching and
Preaching the BIBLE Word for Word -If- You see Her on
TV She has taken to wearing the Gene $cott "Look" right
down to the Shoes :o) => http://www.drgenescott.org/
Has Her own website WWW . Pastor Melissa $cott . Com
PMS => http://www.pastormelissascott.com/
WWCR =>
Say "PMS" is that a recurring Prophecy ?
Yes it is "That Time* of the Month Again . . .
. . . . . When We Ask For Money !" :o)
* Hell It Is Always Time To Ask For Money !
.
.
. .

3716. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:18:57 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A2E8C7.BDEC3015@earthlink.net>
Source record: 38226
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Kurt wrote:
>
> In article <46A2C55E.913D0713@earthlink.net>,
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>
> > Kurt wrote:
> > >
> > > Never said they do. People want to buy iPhones and iPods because of the
> > > ease of use and right-on-the-nose product design.
> > >
> > >
> > > 'Right-on-the-nose product design'? What you like and want may be
> > totally useless to a lot of other people. When i saw that Iphone on TV,
> > I thought it looked like another useless piece of junk. 'Right on' is
> > doing what you need, and doing it as easily and cheap as possible. Not
> > cramming every damn gimmick and stupid idea you can come up with. There
> > are already complaints about battery life. Don't you even wonder how
> > much longer it would work without all the crap?
>
> Yes, for you, buy a phone with large numbers and voice only.

I already have a very good digital camera, and I don't like to listen
to music through earphones or headsets. Blow all your money on gimmicks
now, so all you can afford to eat when you retire is Chinese canned cat
food.

> I'm a lot older than you and the iPhone does it right for 90% of what
> people really want.

Really? How old would that be?

> Youth market fuels gimmicks. Ringtones reap untold millions.

Youth are generally ignorant and very wasteful.

For you I would have to buy the "Braying Jackass" ringtone. OTOH,
someone who doesn't want to be bothered when he's not home doesn't need
anything more than 911 capability on a cell phone and I can do that for
free. I have boxes full of used, working cell phones with good
batteries that the recyclers won't pay for. I might as well use up the
old batteries before I give them to the local battered women's group.
They have a good supply at the moment, so why dump more on them? They
will need new batteries before they are given out, and the used
batteries are shipped off for recycling.

The newer phones go to charity to raise money for Disabled, and other Veterans groups.

--
Service to my country? Been there, Done that, and I've got my DD214 to prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3717. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:31:24 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <MYBoi.23017$QF3.22189@newsfe13.phx>
Source record: 38227

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns997466A24B025spectrumhogstarbandn@198.186.192.196...

>
> My other problem will be to find a proper way to fasten/screw the
> three elements together.
>
< snip >

IF ... you go with any kind of socketing arrangement for joining the PVC sections, then Mr. Gravity will be your friend -- hose clamps only.

Related: I didn't go to the home improvement store today to check availability, but I gave some thought last night to PVC parts that might make a base. There are some elbow and three-way fittings that might be adaptable to forming a base. Do you need a way to keep the thing sorta vertical and/or keep the bottom from kicking out and toppling the whole thing? It's got to be relatively free-standing (away from the body of your RV), right?

3718. (OT) : IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:44:22 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185083062.507546.179920@e9g2000prf.googlegroups.com>
Source record: 38228
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Say Cuhulin do you have a CellPhone ?

David I know you must have a Cellphone.

Bet-Ya Telamon has a Cellphone.

Wondering -if- DX Ace has a Cellphone ?

Burr way over in the PI - you got a Cellphone over there ?

Hey Back At You "Radium" Wondering . . .
You Gotta Cellphone and who is your Service Provider ?

IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !

I B 'rhf' Listening to my Shortwave Radio
with my Cellphone near-by bye bye ~ RHF
.
On the Internet Everyone Knows - I Am A Jerk !
.
.
. .

On Jul 21, 2:02 pm, RHF <rhf-newsgro...@pacbell.net> wrote:
> On Jul 21, 1:07 pm, Radium <gluceg...@gmail.com> wrote:
> - Please keep out the OT crap! I had to start a new thread
> - because some jerks decided to post irrelevant nonsense.
>
> - S N I P -
>
> RADIUM,
>
> The please keep 'your' OT crap! OFF of Rec.Radio.Shortwave
> * The Theard Goes Where The Thread Goes
> * That Is The Nature Of NewsGroups
>
> - I had to start a new thread because some
> - jerks decided to post irrelevant nonsense.
>
> Relevance in in the Mind of the Poster.
>
> Right now since the 'topic' is CellPhones - I makes me wonder
> what kind of Cellphone and Service Provider others here may
> have . . .
>
> OK starting with me :

> I have a Motorla RAZR V3 via AT&T {Cingular} Wireless
> and I do not want any changes to the Cellphone
> Broadcasting System [.]
>
> Keep Posting Your Scientific and Cellphone BS to
> Rec.Radio.Shortwave and you will see replying to
> it with what ever comes into my mind and inviting
> others hear to do the same.
>
> However, leave Rec.Radio.Shortwave "Off" your
> Cross-Posting List and you won't have to deal
> with me. Now woldn't that be nice.
>
> Say Cuhulin do you have a CellPhone ?
>
> David I know you must have a Cellphone.
>
> Bet-Ya Telamon has a Cellphone.
>
> Wondering -if- DX Ace has a Cellphone ?
>
> Burr way over in the PI - you got a Cellphone over there ?
>
> Hey Back At You "Radium" Wondering . . .
> You Gotta Cellphone and who is your Service Provider ?
>
> IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !
>
> I B 'rhf' Listening to my Shortwave Radio
> with my Cellphone near-by bye bye ~ RHF
> .
> On the Internet Everyone Knows - I Am A Jerk !
> .
> .
> . .

3719. Re: (OT) : IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 05:50:17 UTC
From: Burr <pitzradio@earthlink.net>
Message-ID: <ueCoi.2031$dA7.1633@newsfe16.lga>
Source record: 38229
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"RHF" <rhf-newsgroups@pacbell.net> wrote in message
news:1185083062.507546.179920@e9g2000prf.googlegroups.com...
> Say Cuhulin do you have a CellPhone ?
>
> David I know you must have a Cellphone.
>
> Bet-Ya Telamon has a Cellphone.
>
> Wondering -if- DX Ace has a Cellphone ?
>
> Burr way over in the PI - you got a Cellphone over there ?
>
> Hey Back At You "Radium" Wondering . . .
> You Gotta Cellphone and who is your Service Provider ?
>
> IF YOU GOT A CELLPHONE LET RADIUM HEAR ABOUT IT !
>
> I B 'rhf' Listening to my Shortwave Radio
> with my Cellphone near-by bye bye ~ RHF
> .
> On the Internet Everyone Knows - I Am A Jerk !
> .
> .
> . .
>
I have a cell phone plus my wife. We have always had cell phones in the USA.
Our phones are always on and close.

Burr

3720. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 06:14:54 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <M66dnSFH0NTNaj_bnZ2dnUVZ_i2dnZ2d@giganews.com>
Source record: 38230

Allodoxaphobia wrote:
> On Sat, 21 Jul 2007 15:46:17 -0700, Bryan wrote:
> >
> > My counterweight is a 5 gallon plastic bucket filled, as necessary, with
> > rocks. A piece of scrap ¾" plywood (cut to fit) keeps the bottom of the
> > pail from blowing through. A cover placed on top of the bucket keeps
water
> > & debris from adding more weight.
>
> What keeps the UV from eating the plastic bucket -- which, I assume, is
> a "contractor's bucket"? They only last about a year out-of-doors
> around here.
>
> Jonesy W3DHJ

Good point, Jonesy. The tree is a cedar, with foliage close to ground level, and mostly shields the bucket from the sun's rays. If/when it *does* give up, I won't lose the end of the rope -- it's tied to one of the lower limbs of the tree.
Bryan WA7PRC

3721. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 07:22:17 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185088937.381031.57520@e16g2000pri.googlegroups.com>
Source record: 38231
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 21, 9:42 pm, D Peter Maus <DPeterM...@worldnet.att.net> wrote:
> RHF wrote:
> > On Jul 21, 5:14 pm, D Peter Maus <DPeterM...@worldnet.att.net> wrote:
> >> Brenda Ann wrote:
> >>> "Kurt" <labol...@spacegmail.com> wrote in message
> >>>news:labolide-AEBDD9.20275920072007@news.giganews.com...
> >>>> I want getting phone service like when I buy a Mac.
> >>> You only want them to work in a few dozen exchanges, and use a codec that
> >>> only other phones of that brand use, so you can't talk to anyone else but
> >>> other customers of that company (sort of like Sprint's "Friends and Family"
> >>> plan). ?
> >> There was a time that was true. Not so much since about OS X.2.
>
> >> Truth is that I had a Mac on line at work since '89, and from home
> >> since '84, and with the exception of those who bothered to read the
> >> headers in e-mail, no one ever knew it. I've had my Macs and my PC's
> >> talking to each other the entire time.
>
> >> As long as the output files are the same format, there's no more
> >> compatibility issue between Mac and Windows than between HP and Dell
> >> printers. And with Solaris and Linux making a showing in the
> >> marketplace, compatibility in general has become largely a non issue.
>
> >> That's why the pissing match between the Microsoft and the keepers of
> >> standards is such a concern. Because if MS has their way, their
> >> proprietary formats, will continue to play havoc with compatibility
> >> between platforms that currently play well together using standards
> >> compliant output.
>
> >> On my Macs, I use only open source software with the exception of one
> >> or two Apple branded programs for document and presentation creation.
> >> With the exception of nicer, more eye catching documents, and
> >> presentations with full animation and stereo sound, none of my
> >> colleagues can tell that I've used a Mac.
>
> >> On my PC's the only MS software is the OS. Everything else...
> >> browser, IM client, office suite...everything, is open source.
>
> >> The ONLY time I've ever had a compatibility issue is using MS
> >> software. And that's been true for more than a decade, now.
>
> > DPM - I would suspect that you are right most of my
> > PC related problems have come from MicroSoft (MS)

> > Software related issues. ~ RHF
>
> > Didn't Wal*Mart offer some PC that had a Linux OS
> > with some of there store brand Computer Systems
> > for a while ? =>http://en.wikipedia.org/wiki/Linux
> >http://news.zdnet.co.uk/software/0,1000000121,2125057,00.htm
>
> Yeah, they did for awhile. And Lindows, IIRC. Even a basic machine to
> which you could bring your own O/S.
>
> They didn't sell well.
>
> Truth is, that there are two things that play heavily against non-MS
> systems, today. There is the FUD spread by MS itself. The shadow of
> lawsuits against users of Linux, and other non-MS O/S's. The huge mass
> of mis and disinformation about MS compatibility, and the refusal of
> many network sysadmins to even consider non-MS product on their
> networks. And the built in compatibility restraints that MS builds into
> their code. Especially to drive upgrades to more recent product at end
> user cost, despite the fact that the end user's product is, in fact,
> perfectly serviceable. MS turns off functionality when they want to
> force an upgrade. Something I've had first had dealings with. Something
> I also forced MS to turn back on with some very loud and very public
> complaints.
>
> Then there is the fact that Linux other systems are not quite user
> friendly. Not that Windows is any prize, but it's familiar. The Devil
> you know, and all that. As Linux becomes more user friendly, market
> share will increase. This is what's driving the shadow of lawsuits and
> the tribute payments MS has extracted from Novell and other purveyors of
> Linux.
>
> They've made similar noise against Apple for years. And even as
> recently as a year and a half ago, threatened to pull the Mac division
> from their catalog.
>
> So, alternative systems are not selling well. And as they make
> inroads, you can watch Redmond play different and more aggressive games
> to spread FUD about non MS product.
>
> None of it's true.
>
> But if you afraid to believe, you don't ever take the step.- Hide quoted text -
>
> - Show quoted text -

FUD = Fear, Uncertainty and Doubt a Sales or Marketing
Strategy of disseminating Negative (and vague) Information
on a Competitor's Product.
http://en.wikipedia.org/wiki/Fear%2C_uncertainty_and_doubt

3722. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 08:45:36 UTC
From: Jeff <jeff@local.host>
Message-ID: <46a31d0e$0$1339$834e42db@reader.greatnowhere.com>
Source record: 38132

I would recommend getting a glass fibre fishing rod and sliding copper braid over it, then getting some thin glass fibre tape and resin and taping over the braid. This is how some military vehicle whips are constructed. You can then paint it if you wish.

73
Jeff
G8HUL

3723. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 12:25:36 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46a34cb7$0$30618$4c368faf@roadrunner.com>
Source record: 38133

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9973A3CEB32B6spectrumhogstarbandn@198.186.192.196...
>
>
> I wish to build a 23 foot whip antenna similar to the Shakespeare 393 HF
> marine antenna, (quite pricey). It must be in three 7 1/2 foot long
> sections and screws together, as shown here: http://shakespeare-
> marine.com/antennas.asp?antenna=393
>
> I'm thinking along the lines of a 7 1/2 foot stainless steele whip on
> top of two 7 1/2 foot long segments of my own construction. At present,
> I think the two bottom sections would be copper tubing, enclosed within
> PVC pipe. Although I have some ideas for the connections, I would like
> to hear from others their ideas on both the building of two stiffer bottom
> sections for this whip, along with ways of fabricating the screw-together
> connections that would be both electrically sound and sturdy. The whip
> will be for fixed mobile operation at a motorhome. The entire assembly
> must break down and fit within a larger 8 foot long PVC tube for storage.
>
> I realize I could go with telescoping aluminum tubing, but I prefer
> something more elegant, such as this marine antenna.
>
> Ed K7AAT
>

A 23 ft antenna should be easy and cheap. I would get one of those old
Antron antenas that was so popular for CB. They are nearly as long as you
want and add a full length CB whip to the top replacing the origonal whip
should get you there or awful close. These were end fed half wave antennas
so you could remove the matching network at the bottom and replace it with
your own.

Jimmie

3724. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 12:27:26 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <e2vbn4-f9e.ln1@p400bob.personal.cox.net>
Source record: 38135

Just a thought John

Is it a directivity issue or that rotating it places the device in a null? The way to check is to move the entire antenna some distance in the horizontal plane, then try the rotation test again. We are talking a small distance here, no more than a halfwave at the operating frequency - say 6-12 inches/150-300mm maximum. Leaning on the mast would be good enough for testing..

Yes chopping the end off the antenna will make it less directive and lower gain. Will it be enough though? One has to ask how many degrees "slightly" is. (Decreasing gain means an increase in the half power beam-width) Simplest answer is to not theorize but try it! If the angle between stations is too great a second antenna may be the only easy solution.

Cheers Bob VK2YQA

John wrote:
> will that make the antenna less directional?. Or if not, is it able to be
> done?

3725. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 12:44:36 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46a3512b$0$30674$4c368faf@roadrunner.com>
Source record: 38134

"Jeff" <jeff@local.host> wrote in message
news:46a31d0e$0$1339$834e42db@reader.greatnowhere.com...
>
>
> I would recommend getting a glass fibre fishing rod and sliding copper
> braid over it, then getting some thin glass fibre tape and resin and
> taping over the braid. This is how some military vehicle whips are
> constructed. You can then paint it if you wish.
>
> 73
> Jeff
> G8HUL
>

Yeah, I used to frequent a place that had parts for people who like to make
ther eown fishing rods. They had a lot of great stuff that would be useful
for makeing antennas. I would think something like this should be available
on the internet.

Jimmie

3726. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 14:45:41 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-960A25.07454122072007@news.giganews.com>
Source record: 38136
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46A2E8C7.BDEC3015@earthlink.net>,
"Michael A. Terrell" <mike.terrell@earthlink.net> wrote:

>
>
> For you I would have to buy the "Braying Jackass" ringtone. OTOH,

Troll plonk.

--
To reply by email, remove the word "space"

3727. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 15:23:56 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A37693.944F0575@earthlink.net>
Source record: 38137
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Kurt wrote:
>
> In article <46A2E8C7.BDEC3015@earthlink.net>,
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>
> >
> >
> > For you I would have to buy the "Braying Jackass" ringtone. OTOH,
>
> Troll plonk.

Yes, you are a troll. Goodbye.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3728. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 15:34:54 UTC
From: Todd Allcock <elecconnec@AmericaOnLine.com>
Message-ID: <346324481020070722153454elecconnec@AmericaOnLine.com>
Source record: 38138
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

At 22 Jul 2007 12:35:43 +0900 Brenda Ann wrote:

> Do people REALLY want something that is easily broken, lost or stolen
> that would pretty much give away their entire life if it fell into the
> hands of someone else?

No, but many of us do want an all-in-one device, rather than schlep
separate phones, PDAa, cameras, etc.

I use a PPC phone, and my data's password protected. Not a perfect
failsafe against loss, but I'm not exactly James Bond keeping Her
Majesty's Secrets out of the hands of SPECTRE either...

> And hey, my iPaq does most of what the iPhone does.

So you pick on iPhone buyers for wanting an all-in-one device while using
a competitive all-in-one? You might as well make fun of Coke drinkers
for downing wasted empty calories, then say "and I prefer Pepsi anyway!"

> Besides,
> sometimes I want to do more than one thing at a time. For that it takes
more
> than one device.

Depends on how well designed the device is- theoretically I could shoot
pictures on my PPC phone while talking on the phone (with my bluetooth
headet) but I haven't actually needed to.

> Cute gimmick, yeah, and young people will buy any gimcrack
> that comes out just to be "kewl". That doesn't make it worth what
they're
> paying for it.

I think the iPhone is overpriced personally, but I don't condemn the
concept because of it, just as I think Lexus' cars are overpriced as well
but don't condemn all automobiles because of it.

> As far as Apple being the be all and end all of gimmickry, I have a
very
> nice (and reliable) mp3/video player with a 60GB HDD in it that cost me
far
> less than a similar iPod,

To be fair, you use a player that didn't exist before the iPod proved it
market-viable. The MP3 player market was floundering in a sea of akward
to use flash-memory players (like my Rio 500) that were battling each
other on cost vs. capacity. It took Apple to say "people will pay more

for a device with a large, easy to read screen and a huge capacity." And they were right.

And not to pick on the Apple faithful, but can we cut this hooey about "perfect design" and "ergonomics?" The iPods' menus are just as idiotic, confusing and non-intuitive as ever other MP3 player out there- the difference was an easy-to-read multiline display that could indicate where in the menu system you were. My Rio 500's menuing system was no easier or harder to understand than my Nano's, it was just harder to navigate through it a one-line, grey, pocket-calculator-style, LCD panel.

> and I don't have to deal with proprietary files.

Another iPod basher that apparently has never actually used one: iPod owners do not "have to deal with proprietary files." I have several MP3 players lying around, including an iPod Nano. The iPod doesn't use "proprietary files"- it plays MP3s I drag to it's drive letter just like all of my other MP3 players. (Yes, Apple fans, I know I'm missing out on the whole "iTunes experience"- sue me. I've used computers since before the GUI, and MP3 players since before the iPod and I don't do "playlists" and "media syncing"- I drag albums to my player and play them in their entirety.) Having said that, iPods CAN use non-MP3 .aiff files, but they're no more (or less) proprietary than the Microsoft .wma files many players, including yours, probably, can play as well. Like .wma, they offer better sound quality in a smaller file, but also like .wma, they cause compatiblity issues since all players can't play them, forcing many of us to stick with (inferior) MP3 files.

--
Posted via a free Usenet account from http://www.teranews.com

3729. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 15:46:53 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <isu6a3tao7i0o99hthi483fchcl485ip33@4ax.com>
Source record: 38139

Can we get this out of the antenna group? The cross-posting is putting
this stuff where no one really wants to read it.

bob
k5qwg

3730. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 16:12:05 UTC
From: DaveC <me@bogusdomain.net>
Message-ID: <0001HW.C2C8CFE5004BE1A0F01826C8@news.sf.sbcglobal.net>
Source record: 38140
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

> How I would like to change the *digital* cell phone industry.

Do away with GPS location reporting.

"Those who would give up essential liberty to purchase a little temporary
safety deserve neither liberty nor safety." -- Benjamin Franklin, US author,
diplomat, inventor, physicist, politician, & printer (1706 - 1790)
--
DaveC
me@bogusdomain.net
This is an invalid return address
Please reply in the news group

3731. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 18:19:12 UTC
From: Todd Allcock <elecconnec@AmericaOnLine.com>
Message-ID: <346324481020070722181912elecconnec@AmericaOnLine.com>
Source record: 38145
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

At 21 Jul 2007 19:40:38 -0700 Kurt wrote:

> Bottom line - People want products that work for them. Period.
> Mac delivers, like them or not.

Yet Macs have been around for 20 years and still only have a 5% market share- clearly they "deliver" something those 5% want, but not something "everyone" wants.

In the iPhone's case, the potential market is fairly large, but not the entire cellphone market, like our resident troll "none" believes, simply because the entire cellphone market is not interested in smartphones, regardless of how "smart" the phone is. Many people simply won't trade a physical 12-key phone dialpad for access to Youtube or Google, period.

I'm not in that category obviously, nor are you, but the VAST majority of people simply are. Those people, even if they were clamoring for an MP3 phone, would likely prefer a ROKR to an iPhone!

--
Posted via a free Usenet account from http://www.teranews.com

3732. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 18:24:04 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9975740BA6BA1spectrumhogstarbandn@198.186.192.196>
Source record: 38141

>
> IF ... you go with any kind of socketing arrangement for joining the
> PVC sections, then Mr. Gravity will be your friend -- hose clamps
> only.
>
> Related: I didn't go to the home improvement store today to check
> availability, but I gave some thought last night to PVC parts that
> might make a base. There are some elbow and three-way fittings that
> might be adaptable to forming a base. Do you need a way to keep the
> thing sorta vertical and/or keep the bottom from kicking out and
> toppling the whole thing? It's got to be relatively free-standing
> (away from the body of your RV), right?

It is my intent to have some sort of either removable, or possibly semi-permanent mount fastened to the rear bumper of my motorhome to hold this verticle antenna. It will be located close to the ladder on the back of the motorhome and the vertical antenna will be supported in one place at the top of the ladder with a nylon marine type support bracket made for that purpose.

Until I figure the actual hardware that will be on the bottom of the bottom section of this antenna, I will hold off on the actual design of the base support portion of this project.

Ed

3733. Re: dipole antenna design question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 18:25:45 UTC
From: Oscar <Oscar_not_oscar14@yahoo.com>
Message-ID: <46A3A129.5A0F3D2D@yahoo.com>
Source record: 38142

Some primer paint and then two coats of OD green paint.

> What keeps the UV from eating the plastic bucket -- which, I assume, is
> a "contractor's bucket"? They only last about a year out-of-doors
> around here.
>

3734. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 18:27:33 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997574A317B1spectrumhogstarbandn@198.186.192.196>
Source record: 38143

>
> I would recommend getting a glass fibre fishing rod and sliding copper
> braid over it, then getting some thin glass fibre tape and resin and
> taping over the braid. This is how some military vehicle whips are
> constructed. You can then paint it if you wish.

Such an antenna would be excellent for my purposes if it is about 23 feet tall, except I need to break it down into three 7 1/2 foot sections for storage inside an 8 foot PVC tube. I don't know if those long fishing poles break down as such, do they?

Also, I do recall pricing such long poles in the past and the cost of such may be approaching the cost of just buying an actual marine HF antenna such as I wish to copy.

Ed

3735. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 18:29:50 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997575064FA9Dspectrumhogstarbandn@198.186.192.196>
Source record: 38144

> A 23 ft antenna should be easy and cheap. I would get one of those old
> Antron antenas that was so popular for CB. They are nearly as long as
> you want and add a full length CB whip to the top replacing the
> origonal whip should get you there or awful close. These were end fed
> half wave antennas so you could remove the matching network at the
> bottom and replace it with your own.
>
>

Another interesting possibility. Unfortunately, I live inthe boonies.
Will look at those CB antennas on the WEB, but purchasing such an antenna
new would probably negate the money savings I'm trying to accomplish by
building a copy of a marine HF antenna to begin with!

Ed

3736. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 19:56:44 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185134204.233921.155470@i38g2000prf.googlegroups.com>
Source record: 38146
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On Jul 22, 9:12 am, DaveC <m...@bogusdomain.net> wrote:
> > How I would like to change the *digital* cell phone industry.
>
- Do away with GPS location reporting.
>
> "Those who would give up essential liberty to purchase a little temporary
> safety deserve neither liberty nor safety." -- Benjamin Franklin, US author,
> diplomat, inventor, physicist, politician, & printer (1706 - 1790)
> --
> DaveC
> m...@bogusdomain.net
> This is an invalid return address
> Please reply in the news group

DC,

No Problem - You Already Have An Alien Implant That
Allows Us To Track You 24/7 Throughout the Gallaxy.

we are here and we are watching you ~ RHF The Grey
.
.
. .

3737. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 21:52:45 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-9157B5.14524522072007@news.giganews.com>
Source record: 38147
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
Todd Allcock <elecconnec@AmericaOnLine.com> wrote:

> At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
>
> > Bottom line - People want products that work for them. Period.
> > Mac delivers, like them or not.
>
>
> Yet Macs have been around for 20 years and still only have a 5% market
> share- clearly they "deliver" something those 5% want, but not something
> "everyone" wants.
>
Haven't me from running a good-sized design advertising design studio.
Never got what everyone else liked about PCs (and forget the "PCS are
cheaper" excuse - you pay more in time and virus prevention later).
Use Virtual PC about once a week to test on IE browser and access a
couple ActiveX powered control panels.

The masses generally were led to believe that Macs weren't compatible
with what they do and that software was extremely limited.
Comfort level, too. Some folks loved Windows 98.

--
To reply by email, remove the word "space"

3738. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 22:41:43 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <8K2dnQBeyti6QD7bnZ2dnUVZ_qqgnZ2d@giganews.com>
Source record: 38148
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"DaveC" <me@bogusdomain.net> wrote in message
news:0001HW.C2C8CFE5004BE1A0F01826C8@news.sf.sbcglobal.net...
>> How I would like to change the *digital* cell phone industry.
>
> Do away with GPS location reporting.
>
> "Those who would give up essential liberty to purchase a little temporary
> safety deserve neither liberty nor safety." -- Benjamin Franklin, US
> author,
> diplomat, inventor, physicist, politician, & printer (1706 - 1790)
> --

I see you don't believe the government's stated primary goal of making E911
available to cell users..

3739. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 23:01:35 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2C92FDF.70F34%dbowey@comcast.net>
Source record: 38149
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/22/07 2:52 PM, in article
labolide-9157B5.14524522072007@news.giganews.com, "Kurt"
<labolide@spacegmail.com> wrote:

> In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
>
>> At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
>>
>>> Bottom line - People want products that work for them. Period.
>>> Mac delivers, like them or not.
>>
>>
>> Yet Macs have been around for 20 years and still only have a 5% market
>> share- clearly they "deliver" something those 5% want, but not something
>> "everyone" wants.

Last I heard Apple was number 3 in laptop sales, and growing fast.

>>
> Haven't me from running a good-sized design advertising design studio.
> Never got what everyone else liked about PCs (and forget the "PCS are
> cheaper" excuse - you pay more in time and virus prevention later).
> Use Virtual PC about once a week to test on IE browser and access a
> couple ActiveX powered control panels.

Nonsense. My wife's Fujitsu laptop is about 5 years old and has been as
dependable as my Macs. Except for defragging it a few times it has taken
none of my time.

My year old PC tower, running XP, is also flawless.

>
> The masses generally were led to believe that Macs weren't compatible
> with what they do and that software was extremely limited.
> Comfort level, too. Some folks loved Windows 98.

And some love XP.

IMHO Mac has had only one computer that flat knocked the socks off the PC
competition, and they quit making it (638CDV). They also made at least one
laptop that was a pathetic Power Mac which was slower by far than my 040
desktop computer of the time.

The only reason I'm still using a Mac (MacBook Pro) is that I can run
Windows when I need to, without using an emulator.

Bottom line, like it or not, PCs are cheaper than Macs and retrofit cards for the PC are VERY inexpensive for high quality functionality.

3740. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-22 23:17:34 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-A163BC.16173422072007@news.giganews.com>
Source record: 38150
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <C2C92FDF.70F34%dbowey@comcast.net>,
Don Bowey <dbowey@comcast.net> wrote:

> On 7/22/07 2:52 PM, in article
> labolide-9157B5.14524522072007@news.giganews.com, "Kurt"
> <labolide@spacegmail.com> wrote:
>
> > In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> > Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
> >
> >> At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
> >>
> >>> Bottom line - People want products that work for them. Period.
> >>> Mac delivers, like them or not.
> >>
> >>
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> laptop that was a pathetic Power Mac which was slower by far than my 040
> desktop computer of the time.
>
> The only reason I'm still using a Mac (MacBook Pro) is that I can run
> Windows when I need to, without using an emulator.
>
> Bottom line, like it or not, PCs are cheaper than Macs and retrofit cards
> for the PC are VERY inexpensive for high quality functionality.

I'll tell you, every time I have to get into XP, I cringe at the design
and implementation. Vista is even worse (and been a nightmare for a lot
of my non-tech friends).
My "Old" G5 2.5 does a fine job. Have about 5 other older machines in
daily use around here (iMacs, a couple towers, and an iBook). Never a
problem.

--
To reply by email, remove the word "space"

3741. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 00:04:22 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <agSoi.983$7V6.643@trnddc03>
Source record: 38151

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9975740BA6BA1spectrumhogstarbandn@198.186.192.196...
>
>>
>> IF ... you go with any kind of socketing arrangement for joining the
>> PVC sections, then Mr. Gravity will be your friend -- hose clamps
>> only.
>>
>> Related: I didn't go to the home improvement store today to check
>> availability, but I gave some thought last night to PVC parts that
>> might make a base. There are some elbow and three-way fittings that
>> might be adaptable to forming a base. Do you need a way to keep the
>> thing sorta vertical and/or keep the bottom from kicking out and
>> toppling the whole thing? It's got to be relatively free-standing
>> (away from the body of your RV), right?
>
>
> It is my intent to have some sort of either removable, or possibly
> semi-permanent mount fastened to the rear bumper of my motorhome to hold
> this verticle antenna. It will be located close to the ladder on the
> back of the motorhome and the vertical antenna will be supported in one
> place at the top of the ladder with a nylon marine type support bracket
> made for that purpose.
>
> Until I figure the actual hardware that will be on the bottom of the
> bottom section of this antenna, I will hold off on the actual design of
> the base support portion of this project.
>
> Ed

Hi Ed

I use alot of PVC pipe to get my VHF antennas up in the air. It is my
opinion that a 23 foot tall structure made from hardware store quality PVC
will never make you happy, especially of it is made of 3 disassembalble
sections. PVC bends over alot in the wind, especially on warm days.

Jerry

3742. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 01:43:19 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A407C0.21AA2C75@earthlink.net>
Source record: 38152
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Kurt wrote:
>
> In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
>
> > At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
> > >
> > > > Bottom line - People want products that work for them. Period.
> > > > Mac delivers, like them or not.
> > >
> > >
> > > Yet Macs have been around for 20 years and still only have a 5% market
> > > share- clearly they "deliver" something those 5% want, but not something
> > > "everyone" wants.
> > >
> Haven't me from running a good-sized design advertising design studio.
> Never got what everyone else liked about PCs (and forget the "PCS are
> cheaper" excuse - you pay more in time and virus prevention later).
> Use Virtual PC about once a week to test on IE browser and access a
> couple ActiveX powered control panels.

More lies from the mac community. There are excellent anti virus
programs that are free for private use AVG is my favorite.

Have you EVER seen any instrumentation cards for a MAC? I've seen
ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.

>
> The masses generally were led to believe that Macs weren't compatible
> with what they do and that software was extremely limited.
> Comfort level, too. Some folks loved Windows 98.

If it did what they needed, what business is it of yours?

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3743. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 02:10:07 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9975C310F26BDspectrumhogstarbandn@198.186.192.196>
Source record: 38153

> I use alot of PVC pipe to get my VHF antennas up in the air. It
> is my
> opinion that a 23 foot tall structure made from hardware store quality
> PVC will never make you happy, especially of it is made of 3
> disassembalble sections. PVC bends over alot in the wind, especially
> on warm days.
>

Point taken. One of the reasons I had considered putting copper tubing
inside... both to act as the radiator, and also to stiffen the PVC.

But.... see my next posted comment on this subject.

Ed

3744. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 02:13:57 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9975C3B7EFC70spectrumhogstarbandn@198.186.192.196>
Source record: 38154

My thanks to all who responded to my query on this subject. After much thought, and numererous replies with good info, I have decided it is just not economically feasible to either purchase a marine HF antenna, (~ $150), nor build a copy of one due to the expense of materials and labor.

I have decided to take the suggestions of many of you and just use telescoping aluminum tubing to get my ~23 foot radiator and nevermind the aesthetics of the pretty white Shakespeare 393 antenna.

Again, thanks to all.

Ed K7AAT

3745. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 02:37:40 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13a853j1309olc7@corp.supernews.com>
Source record: 38155
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Michael A. Terrell wrote:

> Have you EVER seen any instrumentation cards for a MAC?

Funny you should ask ;) The only NI GPIB card I could afford
is the surplus one that showed up in an old Mac LC together
with its Labview (68K) driver. The Mac was tossed at a
landfill collection center.

Regards,

Michael

3746. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 03:00:01 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <kbu7a3h2mm9f9a2g1u5ms6h0vuav43jnpu@4ax.com>
Source record: 38156
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Brenda Ann" <brendad@shinbiro.com> hath wroth:

>"DaveC" <me@bogusdomain.net> wrote in message
>> Do away with GPS location reporting.

>I see you don't believe the government's stated primary goal of making E911
>available to cell users..

Phase 2 E911 is a long way from being universally available.
<http://mrtmag.com/mag/radio_waiting/>
Most of the PSAP's are having problems getting their state governments
to release money already allocated for the purpose. (First they steal
from the rich, then from the poor, and now from themselves).

The FCC is also getting a bit irritated at cooked test results for
complying with location accuracy. I've seen some really suspicious
results using some possibly (not sure) dubious technology.
<http://mrtmag.com/mag/radio_fcc_looks_location/index.html>

Incidentally, the governments apparent goal is more like "We want
everyone to be safe, even if it bankrupts everyone".

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3747. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 03:25:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <q178a3dbhurlnq2qdpvtm5hrq45diahrt8@4ax.com>
Source record: 38157
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:

> Have you EVER seen any instrumentation cards for a MAC? I've seen
>ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.

Add EPIC, EPIC Express, ITX, Mini-ITX, Nano-ITX, EBX, PCI-104, PC-104
Plus, CompactPCI, EPIC, EPIC-Express, PC/104, PC/104-Plus,
PC/104-Express, PICMG, AMC, ETX, ECX, XTX, COM-Express, COM-Express,
and probably a few I've missed. PC's own the industrial control
market. The catch is that most boards are rather expensive.

See:
<http://www.mini-itx.com>
On the right side is a list of "projects" that various users have
built. They range from ingenious to ludicrous. All are interesting.
I suppose that could be done with a disembowled Mac, but Apple doesn't
sell motherboards so it requires cannibalization of a complete
machine. So much for the hobbyist market.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3748. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 03:47:47 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A424EC.CE0BD00F@earthlink.net>
Source record: 38158
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

msg wrote:
>
> Michael A. Terrell wrote:
>
> > Have you EVER seen any instrumentation cards for a MAC?
>
> Funny you should ask ;) The only NI GPIB card I could afford
> is the surplus one that showed up in an old Mac LC together
> with its Labview (68K) driver. The Mac was tossed at a
> landfill collection center.
>
> Regards,
>
> Michael

I've seen dozens for the PC, but never one for a MAC. In fact, I
still have a couple 8 bit NI cards, somewhere. Microdyne built telemetry
receivers in various PC form factors, but no one ever requested any
design be ported to a MAC. We also built VME and PC-104 based equipment
with IEEE-488 ports..

I've also had IEEE-488 interfaces for the Commodore 64. I used it
with their 4023 and 8023 P series printers.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3749. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 04:49:24 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A43358.EA19AE11@earthlink.net>
Source record: 38159
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
>
> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
>
> > Have you EVER seen any instrumentation cards for a MAC? I've seen
> >ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
>
> Add EPIC, EPIC Express, ITX, Mini-ITX, Nano-ITX, EBX, PCI-104, PC-104
> Plus, CompactPCI, EPIC, EPIC-Express, PC/104, PC/104-Plus,
> PC/104-Express, PICMG, AMC, ETX, ECX, XTX, COM-Express, COM-Express,
> and probably a few I've missed. PC's own the industrial control
> market. The catch is that most boards are rather expensive.

You do have to consider the total volume of sales vs the engineering
costs, plus these items are generally not built with all jelly bean
parts.

The HP 85 desktop computer with the tape drive, tiny monochrome
monitor and IEEE-488 port was used at Microdyne for some very old
equipment for test and alignment, till they finally hired a programmer
to write new software for a PC.

http://www.oldcalculatormuseum.com/hp85.html

> See:
> <http://www.mini-itx.com>
> On the right side is a list of "projects" that various users have
> built. They range from ingenious to ludicrous. All are interesting.
> I suppose that could be done with a disembowled Mac, but Apple doesn't
> sell motherboards so it requires cannibalization of a complete
> machine. So much for the hobbyist market.

http://www.measurementcomputing.com/index.html was our supplier for
PC-104 IEEE-488 interface boards. They used to be Computer Boards, Inc.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3750. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 05:00:10 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-71FBBA.22001022072007@newsclstr02.news.prodigy.com>
Source record: 38160
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <46A407C0.21AA2C75@earthlink.net>,
"Michael A. Terrell" <mike.terrell@earthlink.net> wrote:

> Kurt wrote:
> >
> > In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> > Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
> >
> > > At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
> > >
> > > > Bottom line - People want products that work for them. Period.
> > > > Mac delivers, like them or not.
> > >
> > >
> > > Yet Macs have been around for 20 years and still only have a 5% market
> > > share- clearly they "deliver" something those 5% want, but not something
> > > "everyone" wants.
> > >
> > Haven't me from running a good-sized design advertising design studio.
> > Never got what everyone else liked about PCs (and forget the "PCS are
> > cheaper" excuse - you pay more in time and virus prevention later).
> > Use Virtual PC about once a week to test on IE browser and access a
> > couple ActiveX powered control panels.
>
>
> More lies from the mac community. There are excellent anti virus
> programs that are free for private use AVG is my favorite.
>
> Have you EVER seen any instrumentation cards for a MAC? I've seen
> ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.

< Snip >

Yes. National Instruments.

--
Telamon
Ventura, California

3751. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 05:10:17 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <iad8a3h09nn8kok9pjmsf629bs8n8rvvph@4ax.com>
Source record: 38161
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

"Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:

>Jeff Liebermann wrote:
>>
>> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
>>
>> > Have you EVER seen any instrumentation cards for a MAC? I've seen
>> >ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
>>
>> Add EPIC, EPIC Express, ITX, Mini-ITX, Nano-ITX, EBX, PCI-104, PC-104
>> Plus, CompactPCI, EPIC, EPIC-Express, PC/104, PC/104-Plus,
>> PC/104-Express, PICMG, AMC, ETX, ECX, XTX, COM-Express, COM-Express,
>> and probably a few I've missed. PC's own the industrial control
>> market. The catch is that most boards are rather expensive.

Sorry about the duplicated acronyms.

> The HP 85 desktop computer with the tape drive, tiny monochrome
>monitor and IEEE-488 port was used at Microdyne for some very old
>equipment for test and alignment, till they finally hired a programmer
>to write new software for a PC.
> http://www.oldcalculatormuseum.com/hp85.html

You could have used an emulator. Some of the old HP test hardware has
been emulated on a PC as a means of preserving the investment in
software. For the HP85:
<http://www.kaser.com/hp85.html>

Incidentally, I collect HP calculators:
<http://802.11junk.com/jeffl/pics/hp-calc/>
Ugh. Those are ancient photos. My collection is easily twice as
large today. I also do some repairs:
<http://802.11junk.com/jeffl/pics/hp65/>
in my non-existent spare time.

> http://www.measurementcomputing.com/index.html was our supplier for
>PC-104 IEEE-488 interface boards. They used to be Computer Boards, Inc.

They still own http:/www.ComputerBoards.com I used to buy
relatively cheap ISA and PCI I/O cards from them.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3752. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 09:57:21 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A47B89.D3661C7D@earthlink.net>
Source record: 38162
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

Jeff Liebermann wrote:
>
> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
>
> >Jeff Liebermann wrote:
> >>
> >> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
> >>
> >> > Have you EVER seen any instrumentation cards for a MAC? I've seen
> >> >ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
> >>
> >> Add EPIC, EPIC Express, ITX, Mini-ITX, Nano-ITX, EBX, PCI-104, PC-104
> >> Plus, CompactPCI, EPIC, EPIC-Express, PC/104, PC/104-Plus,
> >> PC/104-Express, PICMG, AMC, ETX, ECX, XTX, COM-Express, COM-Express,
> >> and probably a few I've missed. PC's own the industrial control
> >> market. The catch is that most boards are rather expensive.
>
> Sorry about the duplicated acronyms.

:-)

> > The HP 85 desktop computer with the tape drive, tiny monochrome
> >monitor and IEEE-488 port was used at Microdyne for some very old
> >equipment for test and alignment, till they finally hired a programmer
> >to write new software for a PC.
> > http://www.oldcalculatormuseum.com/hp85.html
>
> You could have used an emulator.

Most of the software needed updated, anyway. The equipment being
tested had the newer IEEE-488 implementation, and the old system
couldn't make use of it. We had five of them and the cal lab could
barely keep two running. There were days we had to forcible take the
only working unit away from engineering to ship on time. After the new
software was ready, they bought a pile of NI boards for the Win 95
computers used in test and engineering. (This was pre Y2K)

> Some of the old HP test hardware has
> been emulated on a PC as a means of preserving the investment in
> software. For the HP85:
> <http://www.kaser.com/hp85.html>
>
> Incidentally, I collect HP calculators:
> <http://802.11junk.com/jeffl/pics/hp-calc/>

> Ugh. Those are ancient photos. My collection is easily twice as
> large today. I also do some repairs:
> <http://802.11junk.com/jeffl/pics/hp65/>
> in my non-existent spare time.
>
> > http://www.measurementcomputing.com/index.html was our supplier for
> >PC-104 IEEE-488 interface boards. They used to be Computer Boards, Inc.
>
> They still own http:/www.ComputerBoards.com I used to buy
> relatively cheap ISA and PCI I/O cards from them.

I may still have a few of the padded shipping boxes, some of each
name.

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3753. Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 12:25:15 UTC
From: amdx <amdx@knology.net>
Message-ID: <4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET>
Source record: 38163

I built the circuit from the page below.

http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm

The I get 0v out when held near my wireless router, if
I put it near the microwave oven, the high input impedance
meter bounces up and down between 7mv and 80mv and
everything in between.
I used a 1N416E diode and a 1500pf filter capacitor. The
tuning cap doesn't have any affect.
Should this circuit work? If so what could I be doing wrong?

Mike

3754. Re: Front-to-back ratio for UHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 12:31:31 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185193891.964061.229920@n2g2000hse.googlegroups.com>
Source record: 38164
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 2, 1:49 pm, szilagyic <ch...@groupinfo.com> wrote:
> Hello:
>
> I have been trying to find the answer to my question on the front-to-
> back ratio onUHFantennas, and so far have been unsuccessful.
>
> I think I understand what the front-to-back ratio is, but the specs on
> my Winegard PR-8800 (8 bay bowtie) show negative front-to-back ratios
> (-9 dB @ ch 14; -17 dB @ ch 32; -11 dB @ ch 50; -9 dB @ ch 69). The
> "dB over reference dipole" is: 10.7 dB @ ch 14; 12 dB @ ch 32; 11 dB @
> ch 50; 12.5 dB @ ch 69. How can the front-to-back ratio be negative,
> and is this good or bad? I am assuming this could be bad in my case
> as I would like the signal at the back of the antenna to be minimal.
>
> I am currently trying to improve our HDTV reception. I currently have
> the PR-8800 antenna in our attic hooked to a Radio Shack 30 dB mast
> amp. This antenna works very well overall. But from time to time, on
> a couple channels the HD signal strength will drop all the way down,
> enough to drop the signal or cause break-up. I've been considering a
> Winegard HD9095P or PR9032 to use in conjunction with the PR-8800
> since they have a higher gain than the PR-8800, then rotate the
> PR-8800 the other way to receive some different stations.
>
> I really appreciate the help and feedback on this!!
>
> Thanks,
> --
> Chris

Thanks to all for the help. I have replaced my Radio Shack 15-1109
preamp with a Winegard AP-8275 preamp (I know the recommended model in
this thread was the AP-8700, but I want to put in a splitter and feed
about 5 separate devices at some point). After doing a direct swap, I
noticed a slight improvement in signal quality. We gained about 5-10%
signal strength for HDTV feeds, and about the same for our FM
reception.

Best,
--
Chris

3755. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 13:11:42 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns99765D96F48AEjxp16psuedu@128.118.141.40>
Source record: 38165

"amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
@KNOLOGY.NET:

> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm

Hi:
That circuit should work. The exact value of the filter capacitor is not
critical. Lead length is important. If your copy look EXACTLY like the
pictures then it could work. The diode pictured is important. A common
glass type diode will not work well. Also the pictured diode type is very
static sensitive and should come to you wrapped in metal foil. If it wasn't
likely the problem is a bad diode. Building things for this high of
frequency is tricky and if any short cuts are taken it will probably stop
the device from working well.

John Passaneau
W3JXP

3756. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 13:49:55 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13a9cg2bp2nq87a@corp.supernews.com>
Source record: 38166
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Michael A. Terrell wrote:

<snip>

> I've also had IEEE-488 interfaces for the Commodore 64. I used it
> with their 4023 and 8023 P series printers.
>

Indeed the PET 4000 and 8000 series GPIB ports are useful for
instrument control and I have seen quite a few in physics
departments doing that job.

Regards,

Michael

3757. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 13:53:00 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13a9clq3i3chhe3@corp.supernews.com>
Source record: 38167
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Michael A. Terrell wrote:

<snip>

> The HP 85 desktop computer with the tape drive, tiny monochrome
> monitor and IEEE-488 port was used at Microdyne for some very old
> equipment for test and alignment, till they finally hired a programmer
> to write new software for a PC.

One may be surprised at the current level of interest in HP85
hardware; many are still running well in their roles as experiment
controllers and with spares there is little impetus to replace
them.

Regards,

Michael

3758. Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:07:40 UTC
From: art <aunwin@insightbb.com>
Message-ID: <1185199660.050387.138050@n2g2000hse.googlegroups.com>
Source record: 38168

Since there is little interest in the academic details fo the gaussian
antenna
I have decided to add in depth details of the elements used so one
can
easily make one in half a day. A single element can ofcourse be used
as a
a separate antenna and will put to bed the negative comments from the
naysayers.
Google keywords: antenna english gaussian array
Art

3759. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:08:06 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2CA0456.70FD1%dbowey@comcast.net>
Source record: 38169
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

On 7/22/07 10:10 PM, in article iad8a3h09nn8kok9pjmsf629bs8n8rvvph@4ax.com,
"Jeff Liebermann" <jeffl@cruzio.com> wrote:

> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
>
>> Jeff Liebermann wrote:
>>>
>>> "Michael A. Terrell" <mike.terrell@earthlink.net> hath wroth:
>>>
>>>> Have you EVER seen any instrumentation cards for a MAC? I've seen
>>>> ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
>>>
>>> Add EPIC, EPIC Express, ITX, Mini-ITX, Nano-ITX, EBX, PCI-104, PC-104
>>> Plus, CompactPCI, EPIC, EPIC-Express, PC/104, PC/104-Plus,
>>> PC/104-Express, PICMG, AMC, ETX, ECX, XTX, COM-Express, COM-Express,
>>> and probably a few I've missed. PC's own the industrial control
>>> market. The catch is that most boards are rather expensive.
>
> Sorry about the duplicated acronyms.
>
>> The HP 85 desktop computer with the tape drive, tiny monochrome
>> monitor and IEEE-488 port was used at Microdyne for some very old
>> equipment for test and alignment, till they finally hired a programmer
>> to write new software for a PC.
>> http://www.oldcalculatormuseum.com/hp85.html
>
> You could have used an emulator. Some of the old HP test hardware has
> been emulated on a PC as a means of preserving the investment in
> software. For the HP85:
> <http://www.kaser.com/hp85.html>
>
(snip)

I have a new, old-stock printer for the HP85, still in it's bag and box.

Is there any interest in it or is it junk?

Post here or email.

3760. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:09:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <c6427$46a4b683$18d6b40c$17891@KNOLOGY.NET>
Source record: 38170

"John Passaneau" <w3jxp@arrl.net> wrote in message
news:Xns99765D96F48AEjxp16psuedu@128.118.141.40...
> "amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
> @KNOLOGY.NET:
>
>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>
> Hi:
> That circuit should work. The exact value of the filter capacitor is not
> critical. Lead length is important. If your copy look EXACTLY like the
> pictures then it could work. The diode pictured is important. A common
> glass type diode will not work well. Also the pictured diode type is very
> static sensitive and should come to you wrapped in metal foil. If it
> wasn't
> likely the problem is a bad diode. Building things for this high of
> frequency is tricky and if any short cuts are taken it will probably stop
> the device from working well.
>
> John Passaneau
> W3JXP

Hi John,
I tried to keep leads short, I built it per the pictures and dimensions.
I did use a microwave diode (1N416E) I did ruin one diode soldering
#14 wire to it (I think). So I just soldered a small diameter wire to the
next diode and attached the small wire to the circuit.
The problem is the erratic reading near the microwave oven. Seems like
the filter cap would smooth that.
Mike

3761. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:24:49 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13a9ehfgv6l9b2c@corp.supernews.com>
Source record: 38171
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

Don Bowey wrote:

>
> I have a new, old-stock printer for the HP85, still in it's bag and box.
>
> Is there any interest in it or is it junk?
>
Some many years ago now, I organized a group purchase from PIC of
drive belts for the printer and also developed a technique for
re-rubbering the capstan roller in the tape drive. I would
appreciate getting your printer ;)

Regards,

Michael
msg _at_ cybertheque _dot_ org

3762. Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:27:48 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185200868.515062.114440@o61g2000hsh.googlegroups.com>
Source record: 38172
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Hello,

I have two antennas that I am trying to combine, and have a question in regards to the best way to do this. The first antenna is a Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and tuned in perfectly. I want to add my other antenna (Winegard PR-8800 UHF bowtie) that is also tuned in and points in the opposite direction (almost 180 degrees) to pick up some UHF stations. The two antennas are side by side, but the ends of the elements are about 4 feet apart. When I disconnect the HD7084P from the preamp and connect the combiner and hook the HD7084P to the combiner, the signal strength for HD stations maintains about the same. But when I hook up the second antenna to the combiner, the HD signal strength from the HD7084P drops by 10-40% (depending on the channel). I tried two combiners/splitters and got the same results, one is a RCA brand splitter, the other is a Radio Shack hybrid splitter/combiner. Would something like the Channel Master 0538 or the Winegard CC-7870 work better for this?? I read up and these models mention "high isolation" which I can't seem to find any information on. It seems like a powered combiner would be ideal so that there is no loss at all, but I haven't seen anything like that. I am looking for any suggestions or ideas that anybody might have.

I really appreciate all of the help and feedback.

Thank you very much,
--
Chris

3763. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:42:09 UTC
From: Smarty <nobody@nobody.com>
Message-ID: <s8OdnbTVvsDfIznbnZ2dnUVZ_i2dnZ2d@adelphia.com>
Source record: 38173
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Since both antennas cover UHF, point in opposite directions, and are spaced within a fraction of a wavelength at UHF frequencies and below, it is extremely likely that the phase cancellations of the two antennas causes the drop in signal strength when mixed in a combiner. The solutions are far as I can tell would be to bring both feed lines (coax lines) down to the receiver and switch when you need one or the other, or to filter out UHF content from the log periodic with a step low pass filter, or separate the 2 antennas more, since you appear to be creating a phased array even though you never intended to by the way you are configuring them. Phased arrays deliberately add and subtract RF energy to gain directivity at the expense of attenuation in other directions.

Smarty

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185200868.515062.114440@o61g2000hsh.googlegroups.com...
> Hello,
>
> I have two antennas that I am trying to combine, and have a question
> in regards to the best way to do this. The first antenna is a
> Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> UHF bowtie) that is also tuned in and points in the opposite direction
> (almost 180 degrees) to pick up some UHF stations. The two antennas
> are side by side, but the ends of the elements are about 4 feet
> apart. When I disconnect the HD7084P from the preamp and connect the
> combiner and hook the HD7084P to the combiner, the signal strength for
> HD stations maintains about the same. But when I hook up the second
> antenna to the combiner, the HD signal strength from the HD7084P drops
> by 10-40% (depending on the channel). I tried two combiners/splitters
> and got the same results, one is a RCA brand splitter, the other is a
> Radio Shack hybrid splitter/combiner. Would something like the
> Channel Master 0538 or the Winegard CC-7870 work better for this?? I
> read up and these models mention "high isolation" which I can't seem
> to find any information on. It seems like a powered combiner would be
> ideal so that there is no loss at all, but I haven't seen anything
> like that. I am looking for any suggestions or ideas that anybody
> might have.
>
> I really appreciate all of the help and feedback.
>
> Thank you very much,
> --
> Chris

>

3764. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 14:57:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <s6f9a3pjuggm07nr57qbesdh17b1jddib7@4ax.com>
Source record: 38174
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

msg <msg@_cybertheque.org_> hath wroth:

>Don Bowey wrote:
>> I have a new, old-stock printer for the HP85, still in it's bag and box.
>> Is there any interest in it or is it junk?

Not me. I've got one.

>Some many years ago now, I organized a group purchase from PIC of
>drive belts for the printer and also developed a technique for
>re-rubbering the capstan roller in the tape drive. I would
>appreciate getting your printer ;)

That was the problem with much of the HP mechanical hardware. The
rubber composition just didn't last and would eventually decompose
into a sticky mess. For example, this is my reconstructed HP-65 mag
stripe reader drive wheel using a slice of clear vinyl tubing.
<http://802.11junk.com/jeffl/pics/hp65/slides/Hp65-Drive-Roller.html>
Incidentally, the most difficult part of this exercise was neatly
cutting the hose to size. I had to use a razor blade or a scalpel.

The tape drive roller in the HP85 was susceptible to the same rubber
deterioration.
<http://www.series80.org/Articles/capstan-repair.html>
I fixed two using the same clear vinyl tubing trick. Sorry, no
photos.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3765. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 15:11:13 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <ly3pi.1042$Ok5.10@trndny02>
Source record: 38175

"art" <aunwin@insightbb.com> wrote in message
news:1185199660.050387.138050@n2g2000hse.googlegroups.com...
> Since there is little interest in the academic details fo the gaussian
> antenna
> I have decided to add in depth details of the elements used so one
> can
> easily make one in half a day. A single element can ofcourse be used
> as a
> a separate antenna and will put to bed the negative comments from the
> naysayers.
> Google keywords: antenna english gaussian array
> Art
>
OK, I bit. That google search had 94,800 results. Can you narrow it down a
bit?

3766. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 15:28:24 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f82heodiv1@nntp1.jpl.nasa.gov>
Source record: 38178

Jeff wrote:
> I would recommend getting a glass fibre fishing rod and sliding copper braid
Why not copper foil tape?
3M has several widths in both conductive and non-conductive adhesive
used for shielding.

braid has that horrible "corrosion between the strands causing problems"
issue, although if it's new, and you're glassing over it, it might not
be a problem.

Or, why not just run a bunch of magnet wire...

> over it, then getting some thin glass fibre tape and resin and taping over
> the braid. This is how some military vehicle whips are constructed. You can
> then paint it if you wish.
>
> 73
> Jeff
> G8HUL
>
>

3767. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 15:29:50 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f82hhfdiv2@nntp1.jpl.nasa.gov>
Source record: 38179

Ed wrote:
>>I would recommend getting a glass fibre fishing rod and sliding copper
>>braid over it, then getting some thin glass fibre tape and resin and
>>taping over the braid. This is how some military vehicle whips are
>>constructed. You can then paint it if you wish.
>
>
> Such an antenna would be excellent for my purposes if it is about 23
> feet tall, except I need to break it down into three 7 1/2 foot sections
> for storage inside an 8 foot PVC tube. I don't know if those long fishing
> poles break down as such, do they?
>
> Also, I do recall pricing such long poles in the past and the cost of
> such may be approaching the cost of just buying an actual marine HF antenna
> such as I wish to copy.
>
>
> Ed

Check out Crappie or Panfish poles at a big online source like Cabelas.
You can get a (fairly light duty) collapsible 20 foot pole for <$20.
They're Black Widow brand, and collapse to less than 4 feet.

3768. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 15:30:11 UTC
From: Kurt <labolide@spacegmail.com>
Message-ID: <labolide-DEA51B.08301123072007@news.giganews.com>
Source record: 38176
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article
<telamon_spamshield-71FBBA.22001022072007@newsclstr02.news.prodigy.com>,
Telamon <telamon_spamshield@pacbell.net.is.invalid> wrote:

> In article <46A407C0.21AA2C75@earthlink.net>,
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>
> > Kurt wrote:
> > >
> > > In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> > > Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
> > >
> > > > At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
> > > >
> > > > > Bottom line - People want products that work for them. Period.
> > > > > Mac delivers, like them or not.
> > > >
> > > >
> > > > Yet Macs have been around for 20 years and still only have a 5% market
> > > > share- clearly they "deliver" something those 5% want, but not something
> > > > "everyone" wants.
> > > >
> > > Haven't me from running a good-sized design advertising design studio.
> > > Never got what everyone else liked about PCs (and forget the "PCS are
> > > cheaper" excuse - you pay more in time and virus prevention later).
> > > Use Virtual PC about once a week to test on IE browser and access a
> > > couple ActiveX powered control panels.
> > >
> > >
> > More lies from the mac community. There are excellent anti virus
> > programs that are free for private use AVG is my favorite.
> >
> > Have you EVER seen any instrumentation cards for a MAC? I've seen
> > ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
>
> < Snip >
>
> Yes. National Instruments.
>
> --
> Telamon
> Ventura, California

Hey, neighbor (also Ventura)

--
To reply by email, remove the word "space"

3769. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 15:57:48 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfa9jvs.2bvm.bit-bucket@shell.config.com>
Source record: 38177

On Mon, 23 Jul 2007 07:25:15 -0500, amdx wrote:
> I built the circuit from the page below.
>
> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>
> The I get 0v out when held near my wireless router, if
> I put it near the microwave oven, the high input impedance
> meter bounces up and down between 7mv and 80mv and
> everything in between.

Don't treat the microwave oven as a "steady source" for RF. There is
usually a rotating "stirrer" in the waveguide entrance to the cooking
chamber. This is engineered to more evenly distribute the RF energy
about the cooking chamber -- eliminating (hopefully) hot and cold spots.

You may actually be seeing peaks and nulls as an artifact of this design.

HTH
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

3770. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:10:00 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <lh5pi.1716$9A6.1649@trnddc01>
Source record: 38180

"amdx" <amdx@knology.net> wrote in message
news:4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET...
> I built the circuit from the page below.
>
> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>
> The I get 0v out when held near my wireless router, if
> I put it near the microwave oven, the high input impedance
> meter bounces up and down between 7mv and 80mv and
> everything in between.
> I used a 1N416E diode and a 1500pf filter capacitor. The
> tuning cap doesn't have any affect.
> Should this circuit work? If so what could I be doing wrong?
>
> Mike

Hi Mike

That device looks so interesting to me that I will build one.
Have you thought about the reason for using the Quad? It seems that
complexity of the Quad+Reflector with the tuning capacitor might be used for
some reason other than gain. A dipole over a piece of copper would be
about the same "gain".
And, since the output of this device never needs to connect to a coax, why
do you suppose the *right angle* BNC is used?
I'll learn something from this project.

Jerry

3771. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:11:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <agn9a3d6jq3s1cjh939j7351mrukdqila6@4ax.com>
Source record: 38082

On Mon, 23 Jul 2007 07:07:40 -0700, art <aunwin@insightbb.com> wrote:

> will put to bed the negative comments from the naysayers.

Hi Arthur,

You mean like the -64 dBi gain reported by others?

73's
Richard Clark, KB7QHC

3772. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:11:23 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997667BAA282Bspectrumhogstarbandn@198.186.192.196>
Source record: 38181

> Check out Crappie or Panfish poles at a big online source like
> Cabelas.
> You can get a (fairly light duty) collapsible 20 foot pole for <$20.
> They're Black Widow brand, and collapse to less than 4 feet.
>

Wished I'd found that one when I was searching poles on Cabelas' web site the other day. As it is, I've got aluminum tubing currently on order. Will definitely keep this inexpensive pole in mind, though, for the future or another project.

Ed

3773. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:51:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <klo9a3dk81s3vd3n0bdfmo6uce0t4iocrg@4ax.com>
Source record: 38083

On Mon, 23 Jul 2007 17:10:00 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

>
>"amdx" <amdx@knology.net> wrote in message
>news:4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET...
>> I built the circuit from the page below.
>>
>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>> The I get 0v out when held near my wireless router, if
>> I put it near the microwave oven, the high input impedance
>> meter bounces up and down between 7mv and 80mv and
>> everything in between.
>> I used a 1N416E diode and a 1500pf filter capacitor. The
>> tuning cap doesn't have any affect.
>> Should this circuit work? If so what could I be doing wrong?
>>
>> Mike
>
> Hi Mike
>
> That device looks so interesting to me that I will build one.
> Have you thought about the reason for using the Quad? It seems that
>complexity of the Quad+Reflector with the tuning capacitor might be used for
>some reason other than gain. A dipole over a piece of copper would be
>about the same "gain".
> And, since the output of this device never needs to connect to a coax, why
>do you suppose the *right angle* BNC is used?
> I'll learn something from this project.
>
> Jerry
>

Hi Jerry,

You do point out a number of unnecessary elaborations. Tuning the
driven element (what in the world for?) necessarily invalidates any
director utility. Also, that humongous booger holding the director to
the driven element has got to be a huge detuner. Imagine it scaled
for a 20M Quad antenna.

The design looks like buttoning your fly to your shirt to keep your
pants from falling down.

73's
Richard Clark, KB7QHC

3774. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:52:55 UTC
From: JXStern <JXSternChangeX2R@gte.net>
Message-ID: <38q9a3dp60tu5h2fensp498vsigmi12kpt@4ax.com>
Source record: 38084
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Mon, 23 Jul 2007 14:27:48 -0000, szilagyic <chris@groupinfo.com>
wrote:

>I really appreciate all of the help and feedback.

Basically, the combiners only work with antennas (lines) that address
different frequencies.

I'm sure with the right filters and spacing you could combine things
in phase, and also instantly detect missile launches from North Korea,
but basically you want to run them down separately and put some kind
of manual switch between the two sources.

... unless someone can point me to a source of filters that would let
him (and me!) combine things on a channel-by-channel basis, ... at
reasonable cost.

J.

3775. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 17:54:58 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f82q1iiqk1@nntp1.jpl.nasa.gov>
Source record: 38085

Jerry Martes wrote:
> "amdx" <amdx@knology.net> wrote in message
> news:4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET...
>
>> I built the circuit from the page below.
>>
>>http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>>The I get 0v out when held near my wireless router, if
>>I put it near the microwave oven, the high input impedance
>>meter bounces up and down between 7mv and 80mv and
>>everything in between.
>> I used a 1N416E diode and a 1500pf filter capacitor. The
>>tuning cap doesn't have any affect.
>>Should this circuit work? If so what could I be doing wrong?
>>
>> Mike
>
>
> Hi Mike
>
> That device looks so interesting to me that I will build one.
> Have you thought about the reason for using the Quad? It seems that
> complexity of the Quad+Reflector with the tuning capacitor might be used for
> some reason other than gain. A dipole over a piece of copper would be
> about the same "gain".
> And, since the output of this device never needs to connect to a coax, why
> do you suppose the *right angle* BNC is used?

because that packaging worked for the original builder? It stands off
nicely from the BNC/Banana adapter?

I once built some helical antennas and used TNC connectors I had in my
junkbox. The TNC to BNC or TNC to SMA adapters I then had to use
actually cost more than the whole rest of the antenna, and certainly
more than a SMA chassis mount connector would have. Should have just
used the right connector from the start.

> I'll learn something from this project.
>
> Jerry
>
>

3776. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:01:01 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f82qcuivq1@nntp1.jpl.nasa.gov>
Source record: 38091

Richard Clark wrote:
> On Mon, 23 Jul 2007 17:10:00 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
>
>>"amdx" <amdx@knology.net> wrote in message
>>news:4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET...
>>
>>> I built the circuit from the page below.
>>>
>>>http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>>
>>>The I get 0v out when held near my wireless router, if
>>>I put it near the microwave oven, the high input impedance
>>>meter bounces up and down between 7mv and 80mv and
>>>everything in between.
>>> I used a 1N416E diode and a 1500pf filter capacitor. The
>>>tuning cap doesn't have any affect.
>>>Should this circuit work? If so what could I be doing wrong?
>>>
>>> Mike
>>
>> Hi Mike
>>
>> That device looks so interesting to me that I will build one.
>> Have you thought about the reason for using the Quad? It seems that
>>complexity of the Quad+Reflector with the tuning capacitor might be used for
>>some reason other than gain. A dipole over a piece of copper would be
>>about the same "gain".
>> And, since the output of this device never needs to connect to a coax, why
>>do you suppose the *right angle* BNC is used?
>> I'll learn something from this project.
>>
>> Jerry
>>
>
>
> Hi Jerry,
>
> You do point out a number of unnecessary elaborations. Tuning the
> driven element (what in the world for?) necessarily invalidates any
> director utility. Also, that humongous booger holding the director to
> the driven element has got to be a huge detuner. Imagine it scaled
> for a 20M Quad antenna.

>
> The design looks like buttoning your fly to your shirt to keep your
> pants from falling down.

At least the quad is more rugged than a dipole. I've built a fair
number of dipole type probes and they're always getting bent. These
days, I build probes by etching/machining/razorblading on copper clad,
or copper tape on a piece of insulating substrate.

>
> 73's
> Richard Clark, KB7QHC

3777. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:12:37 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185214357.954167.55720@57g2000hsv.googlegroups.com>
Source record: 38086
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
> Since both antennas cover UHF, point in opposite directions, and are spaced
> within a fraction of a wavelength at UHF frequencies and below, it is
> extremely likely that the phase cancellations of the two antennas causes the
> drop in signal strength when mixed in a combiner. The solutions are far as I
> can tell would be to bring both feed lines (coax lines) down to the receiver
> and switch when you need one or the other, or to filter out UHF content from
> the log periodic with a step low pass filter, or separate the 2 antennas
> more, since you appear to be creating a phased array even though you never
> intended to by the way you are configuring them. Phased arrays deliberately
> add and subtract RF energy to gain directivity at the expense of attenuation
> in other directions.
>
> Smarty
>

Thanks for the quick reply. Right now the best alternative is the
spacing as I only have one downfeed that uses a preamp. What would be
the minimum distance between the two antennas that I should use for
UHF considering VHF doesn't appear to be a problem, or is
it better to stack these instead, and if so what would be the minimum
distance that should be used? Or, would a metal barrier between the
two fix this issue with spacing??

I really appreciate the help.
--
Chris

3778. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:28:04 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <Uq6pi.3129$ib7.2475@trnddc02>
Source record: 38087
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
> On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
>> Since both antennas cover UHF, point in opposite directions, and are
>> spaced
>> within a fraction of a wavelength at UHF frequencies and below, it is
>> extremely likely that the phase cancellations of the two antennas causes
>> the
>> drop in signal strength when mixed in a combiner. The solutions are far
>> as I
>> can tell would be to bring both feed lines (coax lines) down to the
>> receiver
>> and switch when you need one or the other, or to filter out UHF content
>> from
>> the log periodic with a step low pass filter, or separate the 2 antennas
>> more, since you appear to be creating a phased array even though you
>> never
>> intended to by the way you are configuring them. Phased arrays
>> deliberately
>> add and subtract RF energy to gain directivity at the expense of
>> attenuation
>> in other directions.
>>
>> Smarty
>>
>
>
>
> Thanks for the quick reply. Right now the best alternative is the
> spacing as I only have one downfeed that uses a preamp. What would be
> the minimum distance between the two antennas that I should use for
> UHF considering VHF doesn't appear to be a problem, or is
> it better to stack these instead, and if so what would be the minimum
> distance that should be used? Or, would a metal barrier between the
> two fix this issue with spacing??
>
> I really appreciate the help.
> --
> Chris

Hi Chris

Is there a reason for not mounting the two antennas "back to back"?
Is there an amplifier at one antenna *before* the combiner? If so, why?

Jerry

3779. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:29:00 UTC
From: You <You@shadow.orgs>
Message-ID: <You-667038.10290623072007@netnews.worldnet.att.net>
Source record: 38088

In article <4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET>,
"amdx" <amdx@knology.net> wrote:

> I built the circuit from the page below.
>
> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>
> The I get 0v out when held near my wireless router, if
> I put it near the microwave oven, the high input impedance
> meter bounces up and down between 7mv and 80mv and
> everything in between.
> I used a 1N416E diode and a 1500pf filter capacitor. The
> tuning cap doesn't have any affect.
> Should this circuit work? If so what could I be doing wrong?
>
> Mike
>
>

Hmmmm, I am not suprised at you 0V out near the Wireless Router,
when compared with a Microwave Oven, the difference in Power
Output IS significant. (100Mw Spread Spectrum, 100+ Watts
CW)

3780. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:36:09 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-05837A.10361623072007@netnews.worldnet.att.net>
Source record: 38089

In article <Xns997574A317B1spectrumhogstarbandn@198.186.192.196>,
Ed <Huckleberry_REMOVE_@bigvalley.net> wrote:

> >
> > I would recommend getting a glass fibre fishing rod and sliding copper
> > braid over it, then getting some thin glass fibre tape and resin and
> > taping over the braid. This is how some military vehicle whips are
> > constructed. You can then paint it if you wish.
>
> Such an antenna would be excellent for my purposes if it is about 23
> feet tall, except I need to break it down into three 7 1/2 foot sections
> for storage inside an 8 foot PVC tube. I don't know if those long fishing
> poles break down as such, do they?
>
> Also, I do recall pricing such long poles in the past and the cost of
> such may be approaching the cost of just buying an actual marine HF antenna
> such as I wish to copy.
>
>
> Ed

A few things you really need to look at ARE:

Just how efficent do you think your 23Ft Antenna is going to be
on MF/HF?
What kind of RF Ground are you going to use to support this 23Ft
MF/HF Antenna?
You of course realize that ANY Antenna isn't going to do Diddle
Squat if your RF Ground is POOR, no matter how much you spend
or save, building it.....

Bruce in alaska
--
add a <2> before @

3781. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 18:54:46 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns99767942360B5spectrumhogstarbandn@198.186.192.196>
Source record: 38090

> A few things you really need to look at ARE:
>
> Just how efficent do you think your 23Ft Antenna is going to be
> on MF/HF?
> What kind of RF Ground are you going to use to support this 23Ft
> MF/HF Antenna?
> You of course realize that ANY Antenna isn't going to do Diddle
> Squat if your RF Ground is POOR, no matter how much you spend
> or save, building it........
>

First of all, you need to realize this is a MOBILE antenna, even if only intended for operation while parked. Secondly, I have already used a homebrew 12' tall Texas Bugcatcher type antenna with excellent results.

The antenna is mounted on the back end of a motorhome, and the ground side of the antenna base is well bonded to the chassis underneath with 2 inch ground strap. So far, such mounting has worked well for me. My intent is simply to build a newer, somewhat taller antenna for increased performance.... primarily on 75 and 40M.

3782. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 19:02:50 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <uX6pi.3133$ib7.1408@trnddc02>
Source record: 38092

"You" <You@shadow.orgs> wrote in message
news:You-667038.10290623072007@netnews.worldnet.att.net...
> In article <4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET>,
> "amdx" <amdx@knology.net> wrote:
>
>> I built the circuit from the page below.
>>
>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>> The I get 0v out when held near my wireless router, if
>> I put it near the microwave oven, the high input impedance
>> meter bounces up and down between 7mv and 80mv and
>> everything in between.
>> I used a 1N416E diode and a 1500pf filter capacitor. The
>> tuning cap doesn't have any affect.
>> Should this circuit work? If so what could I be doing wrong?
>>
>> Mike
>>
>>
>
> Hmmmm, I am not suprised at you 0V out near the Wireless Router,
> when compared with a Microwave Oven, the difference in Power
> Output IS significant. (100Mw Spread Spectrum, 100+ Watts
> CW)

Hi You

It seems reasonable to assume the oven door was closed when the voltmeter
readings were made.
But, If-*IF* the meter readings were accurate *and* he was able to read
even 1 mv at the Router and 80mv at the oven, there is alot-*alot* of error
introduced into this test from somewhere. The math and power level
estimates are left for the readers to deal with.

Jerry

3783. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 19:42:50 UTC
From: Smarty <nobody@nobody.com>
Message-ID: <yMGdnX-D97AkmTjbnZ2dnUVZ_jCdnZ2d@adelphia.com>
Source record: 38093
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Stacking the antennas vertically could work but will create some nulls / signal attenuation /cancellation in the elevation plane (versus your current problem in the azimuth plane). The elevation nulls can put some signals near the horizon (where you want the antenna to provide its' gain) into a deep trough. The effect would depend on frequency / channel, the physical spacing of the two vertically stacked antennas, and the antenna designs themselves. To get a rough idea about how to avoid these effects either in vertical or horizontal separation of the two antennas, consider that 1 wavelength at the end of the UHF band is very roughly 1 meter long and that it is roughly half that at the high end of the UHF band. A minimum separation of quite a few wavelengths is required before the so-called "near field" effects of the antenna diminish, and I would guess that 10 wavelength = ten meters = about 35 feet would be very adequate for low band UHF and about 17 or 18 foot separation if you were seeing cancellation / attenuation at the high end of the UHF band only. I would NEVER suggest putting metal / insulating plates or surfaces between the 2 antennas since this would act as yet another element to cause attenuation / reflections / etc.

You are therefore left the options of spatially separating the antennas on a single mast vertically 17-35 feet apart, or on 2 masts 17 to 35 feet apart.

My approach is very conservative and somewhat smaller spacings may work adequately, but this could only be determined by experimentation. A lot has to do with the specific antenna designs, the arrival angles of the desired channels / signals, the coax line lengths and impedance matches, etc., etc., etc.

Smarty

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
> On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
>> Since both antennas cover UHF, point in opposite directions, and are
>> spaced
>> within a fraction of a wavelength at UHF frequencies and below, it is
>> extremely likely that the phase cancellations of the two antennas causes
>> the
>> drop in signal strength when mixed in a combiner. The solutions are far
>> as I
>> can tell would be to bring both feed lines (coax lines) down to the
>> receiver
>> and switch when you need one or the other, or to filter out UHF content
>> from
>> the log periodic with a step low pass filter, or separate the 2 antennas

>> more, since you appear to be creating a phased array even though you
>> never
>> intended to by the way you are configuring them. Phased arrays
>> deliberately
>> add and subtract RF energy to gain directivity at the expense of
>> attenuation
>> in other directions.
>>
>> Smarty
>>
>
>
>
> Thanks for the quick reply. Right now the best alternative is the
> spacing as I only have one downfeed that uses a preamp. What would be
> the minimum distance between the two antennas that I should use for
> UHF considering VHF doesn't appear to be a problem, or is
> it better to stack these instead, and if so what would be the minimum
> distance that should be used? Or, would a metal barrier between the
> two fix this issue with spacing??
>
> I really appreciate the help.
> --
> Chris
>

3784. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 20:00:08 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185220808.287039.228250@m3g2000hsh.googlegroups.com>
Source record: 38094
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 2:28 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> "szilagyic" <ch...@groupinfo.com> wrote in message
>
> news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
>
>
>
> > On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
> >> Since both antennas cover UHF, point in opposite directions, and are
> >> spaced
> >> within a fraction of a wavelength at UHF frequencies and below, it is
> >> extremely likely that the phase cancellations of the two antennas causes
> >> the
> >> drop in signal strength when mixed in a combiner. The solutions are far
> >> as I
> >> can tell would be to bring both feed lines (coax lines) down to the
> >> receiver
> >> and switch when you need one or the other, or to filter out UHF content
> >> from
> >> the log periodic with a step low pass filter, or separate the 2 antennas
> >> more, since you appear to be creating a phased array even though you
> >> never
> >> intended to by the way you are configuring them. Phased arrays
> >> deliberately
> >> add and subtract RF energy to gain directivity at the expense of
> >> attenuation
> >> in other directions.
>
> >> Smarty
>
> > Thanks for the quick reply. Right now the best alternative is the
> > spacing as I only have one downfeed that uses a preamp. What would be
> > the minimum distance between the two antennas that I should use for
> > UHF considering VHF doesn't appear to be a problem, or is
> > it better to stack these instead, and if so what would be the minimum
> > distance that should be used? Or, would a metal barrier between the
> > two fix this issue with spacing??
>
> > I really appreciate the help.
> > --
> > Chris
>
> Hi Chris

>
> Is there a reason for not mounting the two antennas "back to back"?
> Is there an amplifier at one antenna *before* the combiner? If so, why?
>
> Jerry

Hi Jerry,

It would be difficult for me to mount them back to back based on the space where they are mounted, but if this would help our situation then I'd be open to trying it.

There is not an amplifier before the combiner. Basically, I have the coax feeds running directly from each antenna to the combiner, which goes to the preamp, which runs down to a splitter, and then to a couple receivers.

Thank you!
--
Chris

3785. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 20:13:52 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <4_7pi.1276$2c7.586@trnddc06>
Source record: 38095
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185220808.287039.228250@m3g2000hsh.googlegroups.com...
> On Jul 23, 2:28 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> "szilagyic" <ch...@groupinfo.com> wrote in message
>>
>> news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
>>
>>
>>
>> > On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
>> >> Since both antennas cover UHF, point in opposite directions, and are
>> >> spaced
>> >> within a fraction of a wavelength at UHF frequencies and below, it is
>> >> extremely likely that the phase cancellations of the two antennas
>> >> causes
>> >> the
>> >> drop in signal strength when mixed in a combiner. The solutions are
>> >> far
>> >> as I
>> >> can tell would be to bring both feed lines (coax lines) down to the
>> >> receiver
>> >> and switch when you need one or the other, or to filter out UHF
>> >> content
>> >> from
>> >> the log periodic with a step low pass filter, or separate the 2
>> >> antennas
>> >> more, since you appear to be creating a phased array even though you
>> >> never
>> >> intended to by the way you are configuring them. Phased arrays
>> >> deliberately
>> >> add and subtract RF energy to gain directivity at the expense of
>> >> attenuation
>> >> in other directions.
>>
>> >> Smarty
>>
>> > Thanks for the quick reply. Right now the best alternative is the
>> > spacing as I only have one downfeed that uses a preamp. What would be
>> > the minimum distance between the two antennas that I should use for
>> > UHF considering VHF doesn't appear to be a problem, or is
>> > it better to stack these instead, and if so what would be the minimum
>> > distance that should be used? Or, would a metal barrier between the
>> > two fix this issue with spacing??

>>
>> > I really appreciate the help.
>> > --
>> > Chris
>>
>> Hi Chris
>>
>> Is there a reason for not mounting the two antennas "back to back"?
>> Is there an amplifier at one antenna *before* the combiner? If so,
>> why?
>>
>> Jerry
>
> Hi Jerry,
>
> It would be difficult for me to mount them back to back based on the
> space where they are mounted, but if this would help our situation
> then I'd be open to trying it.
>
> There is not an amplifier before the combiner. Basically, I have the
> coax feeds running directly from each antenna to the combiner, which
> goes to the preamp, which runs down to a splitter, and then to a
> couple receivers.
>
> Thank you!
> --
> Chris

Hi Chris

The best way to mount your two antennas sure would be to locate each in the region of least sensitivity of the other. That will afford the least amount of influence of one to the other.

As I understand it, you have an amplifier that is common to both antennas. You probably have a good reason for doing that. But, why is the amplifier neded between the antenna and the receiver. It appears that you now have "one antenna" that is made in two parts. And there is an amplifier somewhere between the antenna and the receivers.

Jerry

3786. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 21:15:18 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9976910FEDD05doldridgsprintca@64.59.135.159>
Source record: 38096

Richard Clark <kb7qhc@comcast.net> wrote in
news:agn9a3d6jq3s1cjh939j7351mrukdqila6@4ax.com:

> On Mon, 23 Jul 2007 07:07:40 -0700, art <aunwin@insightbb.com> wrote:
>
>> will put to bed the negative comments from the naysayers.
>
> Hi Arthur,
>
> You mean like the -64 dBi gain reported by others?

Hey, I've got an antenna here that does way better than that on 2m. And
its SWR is dead flat up to 3ghz.

--
Dave Oldridge+
ICQ 1800667

3787. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 21:26:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99774BA541C49nonenowhere@61.9.191.5>
Source record: 38097

"amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
@KNOLOGY.NET:

> I built the circuit from the page below.
>
> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>
> The I get 0v out when held near my wireless router, if
> I put it near the microwave oven, the high input impedance
> meter bounces up and down between 7mv and 80mv and
> everything in between.
> I used a 1N416E diode and a 1500pf filter capacitor. The
> tuning cap doesn't have any affect.
> Should this circuit work? If so what could I be doing wrong?
>
> Mike
>
>

Mike,

In this part of the world, WLAN equipment at 2400MHz is restricted to 10dBm EIRP. (A microwave oven delivers almost 60dBm to its load, leakage is hopefully much less.)

If you were to place your quad at 1m (meaning 1 metre) from the router, and lets assume your router had 0dBi gain, that your quad is actually optimised (including impedance matched to the load) and delivering 7dBi gain, you would expect to develop around -23dBm in a 50 ohm load. That is a pretty small voltage, and you would expect to get around 1mV DC from a microwave detector if the source was a continuous source... but is it?

Owen

3788. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 22:56:07 UTC
From: dplatt@radagast.org
Message-ID: <79ofn4-qt9.ln1@radagast.org>
Source record: 38098

In article <slrnf9vsdb.15ck.bit-bucket@shell.config.com>,
Allodoxaphobia <Reply_to@my.sig.adr> wrote:

>So all this bu$$sh!t about freeing up spectrum, or improving reception,
>or yaa-daa yaa-daa yaa-daa is just that - BU$$SH!T!

The transition _does_ free up spectrum. The UHF spectrum between 700
and 800 MHz is being taken back from TV broadcasting, and is being
reallocated for other purposes. Public-safety users get a bunch,
commercial users get a bunch.

As to "improving reception", that's debatable. It's probably a win
for most urban users, and likely a big lose for rural users who are
already in fringe-reception areas (they'll get no picture, rather than
a snowy/ghosty analog picture).

It just turns out to be the case that the FCC is not attempting to
force _all_ stations up into the remaining UHF-band, and reclaim all
of the VHF TV band. Doing so would probably have forced some stations
off of the air or greatly reduced their broadcast coverage area, due
to the fact that some urban areas have so many TV stations that there
wouldn't be good conflict-free UHF channel assignments for all of the
VHF stations. It'd also have cost the existing VHF stations more
money to move, since they'd have been forced to scrap their existing
antenna systems.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3789. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 23:12:04 UTC
From: amdx <amdx@knology.net>
Message-ID: <e77b8$46a535e0$18d6b40c$18192@KNOLOGY.NET>
Source record: 38099

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:Ih5pi.1716$9A6.1649@trnddc01...
>
> "amdx" <amdx@knology.net> wrote in message
> news:4f6f2$46a49e2b$18d6b40c$11917@KNOLOGY.NET...
>> I built the circuit from the page below.
>>
>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>> The I get 0v out when held near my wireless router, if
>> I put it near the microwave oven, the high input impedance
>> meter bounces up and down between 7mv and 80mv and
>> everything in between.
>> I used a 1N416E diode and a 1500pf filter capacitor. The
>> tuning cap doesn't have any affect.
>> Should this circuit work? If so what could I be doing wrong?
>>
>> Mike
>
> Hi Mike
>
> That device looks so interesting to me that I will build one.
> Have you thought about the reason for using the Quad? It seems that
> complexity of the Quad+Reflector with the tuning capacitor might be used
> for some reason other than gain. A dipole over a piece of copper would
> be about the same "gain".
> And, since the output of this device never needs to connect to a coax,
> why do you suppose the *right angle* BNC is used?
> I'll learn something from this project.
>
> Jerry
I skipped the BNC connector altogether, soldered directly to the banana
plug connector.
I thought the Quad+Reflector was just for more gain and he says it is
horiz and vert polarized.
I have got a more stable output now, I tried it on my older microwave
(1988 model) and I got a more stable signal of as high as .8V, yea I had
to switch from the 200mv scale to the 2V scale. I decided to put a glass
of water in the microwave, then I could only get about 350mv. BTW the
measurements were taken on the outside of the oven at the door :-)
I need to go back to my tuning capacitor, I just grabbed a tiny air
variable from a
scrap pcb thinking it would be big enough, I'm questioning that decision
now.

Mike

3790. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 23:16:00 UTC
From: amdx <amdx@knology.net>
Message-ID: <e8ae$46a536d0$18d6b40c$20096@KNOLOGY.NET>
Source record: 38100

"Owen Duffy" <none@no.where> wrote in message
news:Xns99774BA541C49nonenowhere@61.9.191.5...
> "amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
> @KNOLOGY.NET:
>
>> I built the circuit from the page below.
>>
>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>> The I get 0v out when held near my wireless router, if
>> I put it near the microwave oven, the high input impedance
>> meter bounces up and down between 7mv and 80mv and
>> everything in between.
>> I used a 1N416E diode and a 1500pf filter capacitor. The
>> tuning cap doesn't have any affect.
>> Should this circuit work? If so what could I be doing wrong?
>>
>> Mike
>>
>>
>
> Mike,
>
> In this part of the world, WLAN equipment at 2400MHz is restricted to
> 10dBm EIRP. (A microwave oven delivers almost 60dBm to its load, leakage
> is hopefully much less.)
>
> If you were to place your quad at 1m (meaning 1 metre) from the router,
> and lets assume your router had 0dBi gain, that your quad is actually
> optimised (including impedance matched to the load) and delivering 7dBi
> gain, you would expect to develop around -23dBm in a 50 ohm load. That is
> a pretty small voltage, and you would expect to get around 1mV DC from a
> microwave detector if the source was a continuous source... but is it?
>
> Owen
I don't know but, I'll go fire up the laptop and see if I get more signal
while
I'm loading my homepage.
Mike

3791. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 23:21:40 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2CA8614.710ED%dbowey@comcast.net>
Source record: 38101
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.internet.wireless

On 7/23/07 7:24 AM, in article 13a9ehfgv6l9b2c@corp.supernews.com, "msg"
<msg@_cybertheque.org_> wrote:

> Don Bowey wrote:
>
>>
>> I have a new, old-stock printer for the HP85, still in it's bag and box.
>>
>> Is there any interest in it or is it junk?
>>
> Some many years ago now, I organized a group purchase from PIC of
> drive belts for the printer and also developed a technique for
> re-rubbering the capstan roller in the tape drive. I would
> appreciate getting your printer ;)
>
> Regards,
>
> Michael
> msg _at_ cybertheque _dot_ org

Where are you located?

3792. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-23 23:31:24 UTC
From: mike <amdx@knology.net>
Message-ID: <4f46b$46a53a53$18d6b40c$21308@KNOLOGY.NET>
Source record: 38102

"amdx" <amdx@knology.net> wrote in message
news:e8ae$46a536d0$18d6b40c$20096@KNOLOGY.NET...
>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns99774BA541C49nonenowhere@61.9.191.5...
>> "amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
>> @KNOLOGY.NET:
>>
>>> I built the circuit from the page below.
>>>
>>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>>
>>> The I get 0v out when held near my wireless router, if
>>> I put it near the microwave oven, the high input impedance
>>> meter bounces up and down between 7mv and 80mv and
>>> everything in between.
>>> I used a 1N416E diode and a 1500pf filter capacitor. The
>>> tuning cap doesn't have any affect.
>>> Should this circuit work? If so what could I be doing wrong?
>>>
>>> Mike
>>>
>>>
>>
>> Mike,
>>
>> In this part of the world, WLAN equipment at 2400MHz is restricted to
>> 10dBm EIRP. (A microwave oven delivers almost 60dBm to its load, leakage
>> is hopefully much less.)
>>
>> If you were to place your quad at 1m (meaning 1 metre) from the router,
>> and lets assume your router had 0dBi gain, that your quad is actually
>> optimised (including impedance matched to the load) and delivering 7dBi
>> gain, you would expect to develop around -23dBm in a 50 ohm load. That is
>> a pretty small voltage, and you would expect to get around 1mV DC from a
>> microwave detector if the source was a continuous source... but is it?
>>
>> Owen
> I don't know but, I'll go fire up the laptop and see if I get more signal
> while
> I'm loading my homepage.
> Mike much more than
Ok, I have the field strength meter about 1ft from the router and it reads
about 3mv,

while loading the homepage it jumped to 15mv and loading a pdf file caused
it to go to
25mv. However I get 0v if I move much more than a foot away.

3793. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 00:03:09 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185235389.666345.177200@j4g2000prf.googlegroups.com>
Source record: 38103
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 4:13 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> "szilagyic" <ch...@groupinfo.com> wrote in message
>
> news:1185220808.287039.228250@m3g2000hsh.googlegroups.com...
>
>
>
> > On Jul 23, 2:28 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> "szilagyic" <ch...@groupinfo.com> wrote in message
> >
> >>news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
> >
> >> > On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
> >> >> Since both antennas cover UHF, point in opposite directions, and are
> >> >> spaced
> >> >> within a fraction of a wavelength at UHF frequencies and below, it is
> >> >> extremely likely that the phase cancellations of the two antennas
> >> >> causes
> >> >> the
> >> >> drop in signal strength when mixed in a combiner. The solutions are
> >> >> far
> >> >> as I
> >> >> can tell would be to bring both feed lines (coax lines) down to the
> >> >> receiver
> >> >> and switch when you need one or the other, or to filter out UHF
> >> >> content
> >> >> from
> >> >> the log periodic with a step low pass filter, or separate the 2
> >> >> antennas
> >> >> more, since you appear to be creating a phased array even though you
> >> >> never
> >> >> intended to by the way you are configuring them. Phased arrays
> >> >> deliberately
> >> >> add and subtract RF energy to gain directivity at the expense of
> >> >> attenuation
> >> >> in other directions.
> >
> >> >> Smarty
> >
> >> > Thanks for the quick reply. Right now the best alternative is the
> >> > spacing as I only have one downfeed that uses a preamp. What would be
> >> > the minimum distance between the two antennas that I should use for
> >> > UHF considering VHF doesn't appear to be a problem, or is

> >> > it better to stack these instead, and if so what would be the minimum
> >> > distance that should be used? Or, would a metal barrier between the
> >> > two fix this issue with spacing??
>
> >> > I really appreciate the help.
> >> > --
> >> > Chris
>
> >> Hi Chris
>
> >> Is there a reason for not mounting the two antennas "back to back"?
> >> Is there an amplifier at one antenna *before* the combiner? If so,
> >> why?
>
> >> Jerry
>
> > Hi Jerry,
>
> > It would be difficult for me to mount them back to back based on the
> > space where they are mounted, but if this would help our situation
> > then I'd be open to trying it.
>
> > There is not an amplifier before the combiner. Basically, I have the
> > coax feeds running directly from each antenna to the combiner, which
> > goes to the preamp, which runs down to a splitter, and then to a
> > couple receivers.
>
> > Thank you!
> > --
> > Chris
>
> Hi Chris
>
> The best way to mount your two antennas sure would be to locate each in
> the region of least sensitivity of the other. That will afford the least
> amount of influence of one to the other.
>
> As I understand it, you have an amplifier that is common to both antennas.
> You probably have a good reason for doing that. But, why is the amplifier
> neded between the antenna and the receiver. It appears that you now have
> "one antenna" that is made in two parts. And there is an amplifier
> somewhere between the antenna and the receivers.
>
> Jerry

Hi Jerry,

I have the preamp connected to send the signal from the two antennas
down a length of coax and to a 4-way splitter that will supply a few
receivers. When I have everything hooked up except for the second
antenna, it works out well.

What would be your guestimation on how far apart the two antennas
should be, if we put them back to back???

Thank you!!
--
Chris

3794. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 00:21:49 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <xCbpi.168$ax1.162@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38104

Dave Platt wrote:
> In article <slrnf9vsdb.15ck.bit-bucket@shell.config.com>,
> Allodoxaphobia <Reply_to@my.sig.adr> wrote:
>
>> So all this bu$$sh!t about freeing up spectrum, or improving reception,
>> or yaa-daa yaa-daa yaa-daa is just that - BU$$SH!T!
>
> The transition _does_ free up spectrum. The UHF spectrum between 700
> and 800 MHz is being taken back from TV broadcasting, and is being
> reallocated for other purposes. Public-safety users get a bunch,
> commercial users get a bunch.
>
> As to "improving reception", that's debatable. It's probably a win
> for most urban users, and likely a big lose for rural users who are
> already in fringe-reception areas (they'll get no picture, rather than
> a snowy/ghosty analog picture).
>
> It just turns out to be the case that the FCC is not attempting to
> force _all_ stations up into the remaining UHF-band, and reclaim all
> of the VHF TV band. Doing so would probably have forced some stations
> off of the air or greatly reduced their broadcast coverage area, due
> to the fact that some urban areas have so many TV stations that there
> wouldn't be good conflict-free UHF channel assignments for all of the
> VHF stations. It'd also have cost the existing VHF stations more
> money to move, since they'd have been forced to scrap their existing
> antenna systems.
>

I think the freeing of spectrum has been partly mis-understood. Yes,
there appears to be some new efficiency in the upper UHF. However, real
issue is that the spectrum for both analog and digital will not be
supported in parallel. The broadcasts are not compatible, unlike
previous transitions such as adding color. Digital is inevitable. The
"freeing" of spectrum is primarily resulting from the killing of analog,
not from the fact that digital may be more spectrum efficient.

73,
Gene
W4SZ

3795. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 00:23:22 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <_Dbpi.2104$9A6.987@trnddc01>
Source record: 38105
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185235389.666345.177200@j4g2000prf.googlegroups.com...
> On Jul 23, 4:13 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> "szilagyic" <ch...@groupinfo.com> wrote in message
>>
>> news:1185220808.287039.228250@m3g2000hsh.googlegroups.com...
>>
>>
>>
>> > On Jul 23, 2:28 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
>> >> "szilagyic" <ch...@groupinfo.com> wrote in message
>> >>
>> >>news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
>> >>
>> >> > On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
>> >> >> Since both antennas cover UHF, point in opposite directions, and
>> >> >> are
>> >> >> spaced
>> >> >> within a fraction of a wavelength at UHF frequencies and below, it
>> >> >> is
>> >> >> extremely likely that the phase cancellations of the two antennas
>> >> >> causes
>> >> >> the
>> >> >> drop in signal strength when mixed in a combiner. The solutions are
>> >> >> far
>> >> >> as I
>> >> >> can tell would be to bring both feed lines (coax lines) down to the
>> >> >> receiver
>> >> >> and switch when you need one or the other, or to filter out UHF
>> >> >> content
>> >> >> from
>> >> >> the log periodic with a step low pass filter, or separate the 2
>> >> >> antennas
>> >> >> more, since you appear to be creating a phased array even though
>> >> >> you
>> >> >> never
>> >> >> intended to by the way you are configuring them. Phased arrays
>> >> >> deliberately
>> >> >> add and subtract RF energy to gain directivity at the expense of
>> >> >> attenuation
>> >> >> in other directions.
>> >>
>> >> >> Smarty

>>
>> >> > Thanks for the quick reply. Right now the best alternative is the
>> >> > spacing as I only have one downfeed that uses a preamp. What would
>> >> > be
>> >> > the minimum distance between the two antennas that I should use for
>> >> > UHF considering VHF doesn't appear to be a problem, or is
>> >> > it better to stack these instead, and if so what would be the
>> >> > minimum
>> >> > distance that should be used? Or, would a metal barrier between the
>> >> > two fix this issue with spacing??
>>
>> >> > I really appreciate the help.
>> >> > --
>> >> > Chris
>>
>> >> Hi Chris
>>
>> >> Is there a reason for not mounting the two antennas "back to back"?
>> >> Is there an amplifier at one antenna *before* the combiner? If so,
>> >> why?
>>
>> >> Jerry
>>
>> > Hi Jerry,
>>
>> > It would be difficult for me to mount them back to back based on the
>> > space where they are mounted, but if this would help our situation
>> > then I'd be open to trying it.
>>
>> > There is not an amplifier before the combiner. Basically, I have the
>> > coax feeds running directly from each antenna to the combiner, which
>> > goes to the preamp, which runs down to a splitter, and then to a
>> > couple receivers.
>>
>> > Thank you!
>> > --
>> > Chris
>>
>> Hi Chris
>>
>> The best way to mount your two antennas sure would be to locate each in
>> the region of least sensitivity of the other. That will afford the
>> least
>> amount of influence of one to the other.
>>
>> As I understand it, you have an amplifier that is common to both
>> antennas.
>> You probably have a good reason for doing that. But, why is the
>> amplifier
>> neded between the antenna and the receiver. It appears that you now

>> have
>> "one antenna" that is made in two parts. And there is an amplifier
>> somewhere between the antenna and the receivers.
>>
>> Jerry
>
> Hi Jerry,
>
> I have the preamp connected to send the signal from the two antennas
> down a length of coax and to a 4-way splitter that will supply a few
> receivers. When I have everything hooked up except for the second
> antenna, it works out well.
>
> What would be your guestimation on how far apart the two antennas
> should be, if we put them back to back???
>
> Thank you!!
> --
> Chris

Hi Chris

I am no expert on TV and FM antennas. I do have some experience with signal splitters and combiners.
It just seems logical that you will get the best antenna performance by mounting them "back to back" and as far apart as you can without making a BigJob of it.
As I understand the system connections you are using, both antennas are being fed from one amplifier thru a signal splitter. That will be as though you have one antenna thats physically two antennas fed in parallel with a phase lead or lag dependent on the lengths of their coax. If both antennas are well matched, the receiver's signal would drop 3 dB when the second antenna is connected thru that "Signal Splitter", even if the radiation pattern wasnt effected by that second antenna.

I think you have a very interesting project here. I also think you will be lucky to solve the "sometimes weak signal" problem using the components you now have.

How long is the coax and what kind is it?

Jerry

3796. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 00:33:53 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99776B77DF1B3nonenowhere@61.9.191.5>
Source record: 38106

"amdx" <amdx@knology.net> wrote in
news:e77b8$46a535e0$18d6b40c$18192@KNOLOGY.NET:
...
> I thought the Quad+Reflector was just for more gain and he says it is
> horiz and vert polarized.

That is not the only thing in the article that doesn't make sense.

Owen

3797. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 01:14:07 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46a5bdaf$0$4720$4c368faf@roadrunner.com>
Source record: 38115

"amdx" <amdx@knology.net> wrote in message
news:c6427$46a4b683$18d6b40c$17891@KNOLOGY.NET...
>
> "John Passaneau" <w3jxp@arrl.net> wrote in message
> news:Xns99765D96F48AEjxp16psuedu@128.118.141.40...
>> "amdx" <amdx@knology.net> wrote in news:4f6f2$46a49e2b$18d6b40c$11917
>> @KNOLOGY.NET:
>>
>>> http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm
>>
>> Hi:
>> That circuit should work. The exact value of the filter capacitor is not
>> critical. Lead length is important. If your copy look EXACTLY like the
>> pictures then it could work. The diode pictured is important. A common
>> glass type diode will not work well. Also the pictured diode type is very
>> static sensitive and should come to you wrapped in metal foil. If it
>> wasn't
>> likely the problem is a bad diode. Building things for this high of
>> frequency is tricky and if any short cuts are taken it will probably stop
>> the device from working well.
>>
>> John Passaneau
>> W3JXP
>
> Hi John,
> I tried to keep leads short, I built it per the pictures and dimensions.
> I did use a microwave diode (1N416E) I did ruin one diode soldering
> #14 wire to it (I think). So I just soldered a small diameter wire to the
> next diode and attached the small wire to the circuit.
> The problem is the erratic reading near the microwave oven. Seems like
> the filter cap would smooth that.
> Mike
>

An erratic reading near a microwave oven doesnt surprise me. The oven uses a
stirrer to move the beam around inside the oven.

Jimmie

3798. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 01:25:30 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185240330.751338.222310@e9g2000prf.googlegroups.com>
Source record: 38107
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 8:23 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> "szilagyic" <ch...@groupinfo.com> wrote in message
>
> news:1185235389.666345.177200@j4g2000prf.googlegroups.com...
>
>
>
> > On Jul 23, 4:13 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> "szilagyic" <ch...@groupinfo.com> wrote in message
> >
> >>news:1185220808.287039.228250@m3g2000hsh.googlegroups.com...
> >
> >> > On Jul 23, 2:28 pm, "Jerry Martes" <j.jmar...@verizon.net> wrote:
> >> >> "szilagyic" <ch...@groupinfo.com> wrote in message
> >>
> >> >>news:1185214357.954167.55720@57g2000hsv.googlegroups.com...
> >>
> >> >> > On Jul 23, 10:42 am, "Smarty" <nob...@nobody.com> wrote:
> >> >> >> Since both antennas cover UHF, point in opposite directions, and
> >> >> >> are
> >> >> >> spaced
> >> >> >> within a fraction of a wavelength at UHF frequencies and below, it
> >> >> >> is
> >> >> >> extremely likely that the phase cancellations of the two antennas
> >> >> >> causes
> >> >> >> the
> >> >> >> drop in signal strength when mixed in a combiner. The solutions are
> >> >> >> far
> >> >> >> as I
> >> >> >> can tell would be to bring both feed lines (coax lines) down to the
> >> >> >> receiver
> >> >> >> and switch when you need one or the other, or to filter out UHF
> >> >> >> content
> >> >> >> from
> >> >> >> the log periodic with a step low pass filter, or separate the 2
> >> >> >> antennas
> >> >> >> more, since you appear to be creating a phased array even though
> >> >> >> you
> >> >> >> never
> >> >> >> intended to by the way you are configuring them. Phased arrays
> >> >> >> deliberately
> >> >> >> add and subtract RF energy to gain directivity at the expense of
> >> >> >> attenuation

> >> >> >> in other directions.
>
> >> >> >> Smarty
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> >> >> > Thanks for the quick reply. Right now the best alternative is the
> >> >> > spacing as I only have one downfeed that uses a preamp. What would
> >> >> > be
> >> >> > the minimum distance between the two antennas that I should use for
> >> >> > UHF considering VHF doesn't appear to be a problem, or is
> >> >> > it better to stack these instead, and if so what would be the
> >> >> > minimum
> >> >> > distance that should be used? Or, would a metal barrier between the
> >> >> > two fix this issue with spacing??
>
> >> >> > I really appreciate the help.
> >> >> > --
> >> >> > Chris
>
> >> >> Hi Chris
>
> >> >> Is there a reason for not mounting the two antennas "back to back"?
> >> >> Is there an amplifier at one antenna *before* the combiner? If so,
> >> >> why?
>
> >> >> Jerry
>
> >> > Hi Jerry,
>
> >> > It would be difficult for me to mount them back to back based on the
> >> > space where they are mounted, but if this would help our situation
> >> > then I'd be open to trying it.
>
> >> > There is not an amplifier before the combiner. Basically, I have the
> >> > coax feeds running directly from each antenna to the combiner, which
> >> > goes to the preamp, which runs down to a splitter, and then to a
> >> > couple receivers.
>
> >> > Thank you!
> >> > --
> >> > Chris
>
> >> Hi Chris
>
> >> The best way to mount your two antennas sure would be to locate each in
> >> the region of least sensitivity of the other. That will afford the
> >> least
> >> amount of influence of one to the other.
>
> >> As I understand it, you have an amplifier that is common to both
> >> antennas.

> >> You probably have a good reason for doing that. But, why is the
> >> amplifier
> >> neded between the antenna and the receiver. It appears that you now
> >> have
> >> "one antenna" that is made in two parts. And there is an amplifier
> >> somewhere between the antenna and the receivers.
>
> >> Jerry
>
> > Hi Jerry,
>
> > I have the preamp connected to send the signal from the two antennas
> > down a length of coax and to a 4-way splitter that will supply a few
> > receivers. When I have everything hooked up except for the second
> > antenna, it works out well.
>
> > What would be your guestimation on how far apart the two antennas
> > should be, if we put them back to back???
>
> > Thank you!!
> > --
> > Chris
>
> Hi Chris
>
> I am no expert on TV and FM antennas. I do have some experience with
> signal splitters and combiners.
> It just seems logical that you will get the best antenna performance by
> mounting them "back to back" and as far apart as you can without making a
> BigJob of it.
> As I understand the system connections you are using, both antennas are
> being fed from one amplifier thru a signal splitter. That will be as
> though you have one antenna thats physically two antennas fed in parallel
> with a phase lead or lag dependent on the lengths of their coax. If both
> antennas are well matched, the receiver's signal would drop 3 dB when the
> second antenna is connected thru that "Signal Splitter", even if the
> radiation pattern wasnt effected by that second antenna.
>
> I think you have a very interesting project here. I also think you will
> be lucky to solve the "sometimes weak signal" problem using the components
> you now have.
>
> How long is the coax and what kind is it?
>
> Jerry

We will see what happens, I'll be sure to post the results. I am
still debating whether I need a better combiner or if they are pretty
universal for quality.

The coax from both antennas to the combiner is 6 ft RG-6, with the combiner attached to the preamp with a coupler. Then from the preamp to the 4-way splitter is about 15 ft of RG-6 QS + 20 ft RG-6. From the 4-way splitter to each device is about 15-20 ft RG-6.

--
Chris

3799. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 02:11:05 UTC
From: valvejob <me@privacy.net>
Message-ID: <omnaa3pt1h80ovc948v8dtete1bm9hrimk@4ax.com>
Source record: 38108
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Mon, 23 Jul 2007 14:27:48 -0000, szilagyic <chris@groupinfo.com>
wrote:

>Hello,
>
>I have two antennas that I am trying to combine, and have a question
>in regards to the best way to do this. The first antenna is a
>Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
>tuned in perfectly. I want to add my other antenna (Winegard PR-8800
>UHF bowtie) that is also tuned in and points in the opposite direction
>(almost 180 degrees) to pick up some UHF stations. The two antennas
>are side by side, but the ends of the elements are about 4 feet
>apart. When I disconnect the HD7084P from the preamp and connect the
>combiner and hook the HD7084P to the combiner, the signal strength for
>HD stations maintains about the same. But when I hook up the second
>antenna to the combiner, the HD signal strength from the HD7084P drops
>by 10-40% (depending on the channel). I tried two combiners/splitters
>and got the same results, one is a RCA brand splitter, the other is a
>Radio Shack hybrid splitter/combiner. Would something like the
>Channel Master 0538 or the Winegard CC-7870 work better for this?? I
>read up and these models mention "high isolation" which I can't seem
>to find any information on. It seems like a powered combiner would be
>ideal so that there is no loss at all, but I haven't seen anything
>like that. I am looking for any suggestions or ideas that anybody
>might have.
>
>I really appreciate all of the help and feedback.
>
>Thank you very much,

When you join two antennas, the wavelengths are different for the
different channels. Some may cancel each other on your favorite
channel and some may be additive on channels you don't care about.

You can adjust the lengths of the leads going to the two antennas and
change which channels/wavelengths are additive. Try a shorter cable
on one of the two antennas.

3800. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 02:26:23 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185243983.907164.317650@m37g2000prh.googlegroups.com>
Source record: 38109
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 10:11 pm, valvejob <m...@privacy.net> wrote:
> On Mon, 23 Jul 2007 14:27:48 -0000, szilagyic <ch...@groupinfo.com>
> wrote:
>
>
>
> >Hello,
>
> >I have two antennas that I am trying to combine, and have a question
> >in regards to the best way to do this. The first antenna is a
> >Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> >tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> >UHF bowtie) that is also tuned in and points in the opposite direction
> >(almost 180 degrees) to pick up some UHF stations. The two antennas
> >are side by side, but the ends of the elements are about 4 feet
> >apart. When I disconnect the HD7084P from the preamp and connect the
> >combiner and hook the HD7084P to the combiner, the signal strength for
> >HD stations maintains about the same. But when I hook up the second
> >antenna to the combiner, the HD signal strength from the HD7084P drops
> >by 10-40% (depending on the channel). I tried two combiners/splitters
> >and got the same results, one is a RCA brand splitter, the other is a
> >Radio Shack hybrid splitter/combiner. Would something like the
> >Channel Master 0538 or the Winegard CC-7870 work better for this?? I
> >read up and these models mention "high isolation" which I can't seem
> >to find any information on. It seems like a powered combiner would be
> >ideal so that there is no loss at all, but I haven't seen anything
> >like that. I am looking for any suggestions or ideas that anybody
> >might have.
>
> >I really appreciate all of the help and feedback.
>
> >Thank you very much,
>
> When you join two antennas, the wavelengths are different for the
> different channels. Some may cancel each other on your favorite
> channel and some may be additive on channels you don't care about.
>
> You can adjust the lengths of the leads going to the two antennas and
> change which channels/wavelengths are additive. Try a shorter cable
> on one of the two antennas.

This makes sense, but does this apply for antennas that are pointed in
opposite directions? I just want to clarify, you are basically saying

to alter the cable length by say, a portion of a wavelength (a half of
a wavelength?), for one of our favorite channels that is having issues?

3801. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 02:53:51 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <3Rdpi.12267$U47.3415@trnddc08>
Source record: 38110
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

>>
>> I am no expert on TV and FM antennas. I do have some experience with
>> signal splitters and combiners.
>> It just seems logical that you will get the best antenna performance by
>> mounting them "back to back" and as far apart as you can without making a
>> BigJob of it.
>> As I understand the system connections you are using, both antennas
>> are
>> being fed from one amplifier thru a signal splitter. That will be as
>> though you have one antenna thats physically two antennas fed in parallel
>> with a phase lead or lag dependent on the lengths of their coax. If
>> both
>> antennas are well matched, the receiver's signal would drop 3 dB when the
>> second antenna is connected thru that "Signal Splitter", even if the
>> radiation pattern wasnt effected by that second antenna.
>>
>> I think you have a very interesting project here. I also think you
>> will
>> be lucky to solve the "sometimes weak signal" problem using the
>> components
>> you now have.
>>
>> How long is the coax and what kind is it?
>>
>> Jerry
>
> We will see what happens, I'll be sure to post the results. I am
> still debating whether I need a better combiner or if they are pretty
> universal for quality.
>
> The coax from both antennas to the combiner is 6 ft RG-6, with the
> combiner attached to the preamp with a coupler. Then from the preamp
> to the 4-way splitter is about 15 ft of RG-6 QS + 20 ft RG-6. From
> the 4-way splitter to each device is about 15-20 ft RG-6.
>
> --
> Chris

Hi Chris

I'm surprised that the amplifier is needed. But, you have determined that
it does improve reception so I have nothing to add to what you have done.
I do submit to you that the high quality splitter/combiner isnt likely to
provide you with any improvement in TV reception.

When you connect two seperate antennas to one output terminal, like with a splitter, you then have One Antenna that has two feed points. Mount the two antennas "back to back", and dont spend too much money on high quality splitters.

Good luck
Jerry

3802. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 03:19:00 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-F987C1.20190023072007@newsclstr02.news.prodigy.com>
Source record: 38111
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

In article <labolide-DEA51B.08301123072007@news.giganews.com>,
Kurt <labolide@spacegmail.com> wrote:

> In article
> <telamon_spamshield-71FBBA.22001022072007@newsclstr02.news.prodigy.com>,
> Telamon <telamon_spamshield@pacbell.net.is.invalid> wrote:
>
> > In article <46A407C0.21AA2C75@earthlink.net>,
> > "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
> >
> > > Kurt wrote:
> > > >
> > > > In article <346324481020070722181912elecconnec@AmericaOnLine.com>,
> > > > Todd Allcock <elecconnec@AmericaOnLine.com> wrote:
> > > > >
> > > > > > At 21 Jul 2007 19:40:38 -0700 Kurt wrote:
> > > > > >
> > > > > > > Bottom line - People want products that work for them. Period.
> > > > > > > Mac delivers, like them or not.
> > > > > >
> > > > > >
> > > > > > Yet Macs have been around for 20 years and still only have a 5%
> > > > > > market
> > > > > > share- clearly they "deliver" something those 5% want, but not
> > > > > > something
> > > > > > "everyone" wants.
> > > > > >
> > > > Haven't me from running a good-sized design advertising design studio.
> > > > Never got what everyone else liked about PCs (and forget the "PCS are
> > > > cheaper" excuse - you pay more in time and virus prevention later).
> > > > Use Virtual PC about once a week to test on IE browser and access a
> > > > couple ActiveX powered control panels.
> > >
> > >
> > > More lies from the mac community. There are excellent anti virus
> > > programs that are free for private use AVG is my favorite.
> > >
> > > Have you EVER seen any instrumentation cards for a MAC? I've seen
> > > ISA, EISA, PCI and the pc-104 industrial variant os the EISA buss.
> >
> > < Snip >
> >
> > Yes. National Instruments.

> >
> > --
> > Telamon
> > Ventura, California
>
> Hey, neighbor (also Ventura)

There are a few people from Ventura, Oxnard, and LA that post to this
news group.

--
Telamon
Ventura, California

3803. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 03:25:01 UTC
From: nm5k@wt.net
Message-ID: <1185247501.058084.170310@e16g2000pri.googlegroups.com>
Source record: 38112

On Jul 23, 9:07 am, art <aun...@insightbb.com> wrote:
>A single element can ofcourse be used
> as a
> a separate antenna and will put to bed the negative comments from the
> naysayers.

Well of course.. people have been running dipoles for years.
I've heard few negative comments about dipoles though.
Are people having trouble running those these days?

> Google keywords: antenna english gaussian array
> Art

As usual... A big nada...
I see links, but nothing from you, except a link to this post
already...
http://www.google.com/search?hl=en&q=antenna+english+gaussian+array&btnG=Google+Search
Most rational people give a direct link to whatever it is they are
pawning off to the public... Not a google search adventure.
Actually here in Tejas, they usually describe directing people to
something like that as "sending people on a turdhunt". :/
You have to realize that most rational people out in google land that
use
the name "gaussian antenna" are talking about a whole different animal
than whatever it is you are talking about. Links to their jibber
jabber is
not useful to your cause. Please reboot and try again.
BTW, how would an "English" gaussian array differ from say
a "French" gaussian array? Do they make "Indonesian" gaussian arrays?
Would they have inferior efficiency vs an "English" gaussian array?
How bout "Australian" gaussian arrays? Do they cluster backwards,
and a few hours ahead of everyone else? Would those work better
if you poured some of that nasty tasting Fosters beer on them?
Demented minds wanna know the answers to these imposing
questions.
MK

3804. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 05:32:18 UTC
From: nospam@w6yx.stanford.edu
Message-ID: <f842t2$i06$1@news.Stanford.EDU>
Source record: 38113
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In article <1185243983.907164.317650@m37g2000prh.googlegroups.com> szilagyic <chris@groupinfo.com> writes:
>On Jul 23, 10:11 pm, valvejob <m...@privacy.net> wrote:

>> When you join two antennas, the wavelengths are different for the
>> different channels. Some may cancel each other on your favorite
>> channel and some may be additive on channels you don't care about.
>>
>> You can adjust the lengths of the leads going to the two antennas and
>> change which channels/wavelengths are additive. Try a shorter cable
>> on one of the two antennas.
>
>This makes sense, but does this apply for antennas that are pointed in
>opposite directions? I just want to clarify, you are basically saying
>to alter the cable length by say, a portion of a wavelength (a half of
>a wavelength?), for one of our favorite channels that is having issues?

Yes, it applies then, too.

You may want to look at the result for frequency cancellation with a good spectrum analyzer.

Lacking that, and the knowledge of how to understand the results, you may just have to try things and see how they work.

Alan

3805. Re: How I would like to change the *digital* cell phone industry.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 08:07:01 UTC
From: DaveC <me@bogusdomain.net>
Message-ID: <0001HW.C2CB013500CF7137F01826C8@news.sf.sbcglobal.net>
Source record: 38114
Cross-posted to: sci.electronics.basics,rec.radio.shortwave,rec.radio.amateur.antenna,alt.cellular.cingular,alt.internet.wireless

> I see you don't believe the government's stated primary goal of making E911
> available to cell users..

I don't believe or disbelieve. The OP asked a question. I offered my
contribution.
--
DaveC
me@bogusdomain.net
This is an invalid return address
Please reply in the news group

3806. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 09:07:19 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46a5c13e$0$4710$4c368faf@roadrunner.com>
Source record: 38116

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns997575064FA9Dspectrumhogstarbandn@198.186.192.196...
>
>> A 23 ft antenna should be easy and cheap. I would get one of those old
>> Antron antenas that was so popular for CB. They are nearly as long as
>> you want and add a full length CB whip to the top replacing the
>> origonal whip should get you there or awful close. These were end fed
>> half wave antennas so you could remove the matching network at the
>> bottom and replace it with your own.
>>
>>
>
> Another interesting possibility. Unfortunately, I live inthe boonies.
> Will look at those CB antennas on the WEB, but purchasing such an antenna
> new would probably negate the money savings I'm trying to accomplish by
> building a copy of a marine HF antenna to begin with!
>
>
> Ed

They are pretty cheap, You gave me an idea. I have one and think I will
extend the length of it from the bottom with some conduit and make a 40
meter vertical.

3807. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 12:07:36 UTC
From: phil-news-nospam@ipal.net
Message-ID: <f84q28020nc@news4.newsguy.com>
Source record: 38117
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In alt.tv.tech.hdtv szilagyic <chris@groupinfo.com> wrote:

| I have two antennas that I am trying to combine, and have a question
| in regards to the best way to do this. The first antenna is a
| Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
| tuned in perfectly. I want to add my other antenna (Winegard PR-8800
| UHF bowtie) that is also tuned in and points in the opposite direction
| (almost 180 degrees) to pick up some UHF stations. The two antennas
| are side by side, but the ends of the elements are about 4 feet
| apart. When I disconnect the HD7084P from the preamp and connect the
| combiner and hook the HD7084P to the combiner, the signal strength for
| HD stations maintains about the same. But when I hook up the second
| antenna to the combiner, the HD signal strength from the HD7084P drops
| by 10-40% (depending on the channel). I tried two combiners/splitters
| and got the same results, one is a RCA brand splitter, the other is a
| Radio Shack hybrid splitter/combiner. Would something like the
| Channel Master 0538 or the Winegard CC-7870 work better for this?? I
| read up and these models mention "high isolation" which I can't seem
| to find any information on. It seems like a powered combiner would be
| ideal so that there is no loss at all, but I haven't seen anything
| like that. I am looking for any suggestions or ideas that anybody
| might have.

The simple resistive combiner, which can also be a splitter when wired in reverse, intentionally loses 3db of signal as part of its simple circuitry to be sure the impedances are matched. If the impedances are not matched, things get worse because the joint becomes a point where signals can be reflected, resulting in a number of signal abberations. In addition, a combiner should also isolate the branches from each other. The importance of having this depends on other factors in your design, such as how well the antenna feedpoints match across the frequencies you want to receive. You can get away with a mismatch on the source end if the target end (amplifier) is well matched. But unless the combiner has very high isolation, the two antennas form "ends" opposing each other on the wire, and can result in signal reflections between them. A combiner with 6 db isolation (very simple) will at least reduce those reflections between antennas somewhat.

The proximity of the antennas to each other may also warp the pattern they receive in, depending on their design, the exact distance, etc.

Even with a combiner of high isolation, when one antenna is picking up the signal only the other antenna should (e.g. the "back lobe" in such a case with antennas almost 180 degrees apart), that can result in two

sources of the same signal being merged. Depending on phase difference, that can combine or cancel-out. Both can happen at different frequencies depending on the exact length.

The ideal combiner system involves frequency isolation. That is, channel filters only allow each channel to come from one or the other antenna. This is common in well engineered cable headends. But these usually also involve lots of large single channel antennas.

If one direction were VHF and the other were UHF, this would be easy as the frequency isolation could be done via a VHF band filter and a UHF band filter. I take it your case does not involve that.

Losing signal is almost certainly going to be a part of combining two antennas. Larger antennas can compensate for it. Amplifiers per each antenna may help as well (especially with reflections along the coax). If your channels are intermingled, frequency isolation is going to be very expensive.

Your last resort for full signal is two separate feeds to a switch. That can be a nearby switch manually operated, or a switch on the mast that is remotely controlled. But either way, your TV will never see both sets of signals at the same time, and apparently most modern digital tuner systems need to see the whole channel lineup at once on the one RF feed. If an STB is part of your setup, you might consider a 2nd STB for the 2nd feedline, and switch between them.

--
|---------------------------------------/----------------------------------|
| Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
| first name lower case at ipal.net / spamtrap-2007-07-24-0649@ipal.net |
|---------------------------------------/----------------------------------|

3808. Re: Building a marine type HF whip

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 13:26:30 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <17vba35cu632dmvc3mscc8j0g5qmg5j70l@4ax.com>
Source record: 38118

>They are pretty cheap, You gave me an idea. I have one and think I will
>extend the length of it from the bottom with some conduit and make a 40
>meter vertical.
>
My current 40 meter vertical is two 10 foot sections of steel TV mast
with an 18 foot CB antenna to total 28 feet. On the project list is to
add another 5 feet of mast but I will still use a tuner to get to 80 &
160 any way!

It is pretty sturdy.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3809. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 14:05:18 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <NqidnWwY7ObRmjvbnZ2dnUVZ_iydnZ2d@comcast.com>
Source record: 38119
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

"szilagyic" <chris@groupinfo.com> wrote in message
news:1185200868.515062.114440@o61g2000hsh.googlegroups.com...
> Hello,
>
> I have two antennas that I am trying to combine, and have a question
> in regards to the best way to do this. The first antenna is a
> Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> UHF bowtie) that is also tuned in and points in the opposite direction
> (almost 180 degrees) to pick up some UHF stations.
.....

Over the past 50 years several antenna manufacturers have come up with kluged arrangements to do what you propose. None worked, except in a few special cases where the signals were very strong. What you need is an antenna rotator, or a second antenna with its own feedline. When you combine the outputs of two antennas without appropriate filters, not only is there a chance of signal cancellation, but you will also quite likely have a severe echo problem.

Tam

3810. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 15:26:39 UTC
From: Mike Ray <mer1@cornell.edu>
Message-ID: <f855nf$7l3$1@ruby.cit.cornell.edu>
Source record: 38120
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Tam/WB2TT wrote:
> "szilagyic" <chris@groupinfo.com> wrote in message
> news:1185200868.515062.114440@o61g2000hsh.googlegroups.com...
>
>>Hello,
>>
>>I have two antennas that I am trying to combine, and have a question
>>in regards to the best way to do this. The first antenna is a
>>Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
>>tuned in perfectly. I want to add my other antenna (Winegard PR-8800
>>UHF bowtie) that is also tuned in and points in the opposite direction
>>(almost 180 degrees) to pick up some UHF stations.
>
> .....
>
> Over the past 50 years several antenna manufacturers have come up with
> kluged arrangements to do what you propose. None worked, except in a few
> special cases where the signals were very strong. What you need is an
> antenna rotator, or a second antenna with its own feedline. When you combine
> the outputs of two antennas without appropriate filters, not only is there a
> chance of signal cancellation, but you will also quite likely have a severe
> echo problem.
>
> Tam
>
>
I wanted the same set up as you did using a Winegard HD8200P (combo) &
HD9095P (UHF). In the end I unhooked the UHF in the HD8200 and get VHF
(from the 8200) from one direction and UHF from another direction. I
could not combine the two and receive a good UHF signal. I will say that
my HD9095P does recieve one channel 180 deg from where it is pointed.
You might want to play with the UHF reflectors (try folding them down
some maybe) to get more 180 deg. signal.

3811. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 15:27:49 UTC
From: Mike Ray <mer1@cornell.edu>
Message-ID: <f855pl$7l3$2@ruby.cit.cornell.edu>
Source record: 38121
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

szilagyic wrote:
> Hello,
>
> I have two antennas that I am trying to combine, and have a question
> in regards to the best way to do this. The first antenna is a
> Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> UHF bowtie) that is also tuned in and points in the opposite direction
> (almost 180 degrees) to pick up some UHF stations. The two antennas
> are side by side, but the ends of the elements are about 4 feet
> apart. When I disconnect the HD7084P from the preamp and connect the
> combiner and hook the HD7084P to the combiner, the signal strength for
> HD stations maintains about the same. But when I hook up the second
> antenna to the combiner, the HD signal strength from the HD7084P drops
> by 10-40% (depending on the channel). I tried two combiners/splitters
> and got the same results, one is a RCA brand splitter, the other is a
> Radio Shack hybrid splitter/combiner. Would something like the
> Channel Master 0538 or the Winegard CC-7870 work better for this?? I
> read up and these models mention "high isolation" which I can't seem
> to find any information on. It seems like a powered combiner would be
> ideal so that there is no loss at all, but I haven't seen anything
> like that. I am looking for any suggestions or ideas that anybody
> might have.
>
> I really appreciate all of the help and feedback.
>
> Thank you very much,
> --
> Chris
>
I wanted the same set up as you did using a Winegard HD8200P (combo) &
HD9095P (UHF). In the end I unhooked the UHF in the HD8200 and get VHF
(from the 8200) from one direction and UHF from another direction. I
could not combine the two and receive a good UHF signal. I will say that
my HD9095P does recieve one channel 180 deg from where it is pointed.
You might want to play with the UHF reflectors (try folding them down
some maybe) to get more 180 deg. signal.

3812. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 18:18:49 UTC
From: Smarty <nobody@nobody.com>
Message-ID: <NYednUHjKb0U3zvbnZ2dnUVZ_u2mnZ2d@adelphia.com>
Source record: 38122
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

Chris,
"Back to Back" mounting only makes sense if you either can rotate the entire array with a rotor or if the signals you are trying to receive are coincidentally 180 degrees apart on the compass from your receiving location using a fixed (non rotating) array. The log periodic array you are using no doubt is highly directive, and the bow tie at UHF is, even with a reflector element added to the UHF bowtie dipole, an asymmetrical figure eight. The cancellation effects will still occur at UHF until you get the two antennas physically separated, either horizontally or vertically.

The combiner and coax length / mismatch issue is far less important.

Smarty

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:3Rdpi.12267$U47.3415@trnddc08...
>
>>>
>>> I am no expert on TV and FM antennas. I do have some experience with
>>> signal splitters and combiners.
>>> It just seems logical that you will get the best antenna performance
>>> by
>>> mounting them "back to back" and as far apart as you can without making
>>> a
>>> BigJob of it.
>>> As I understand the system connections you are using, both antennas
>>> are
>>> being fed from one amplifier thru a signal splitter. That will be as
>>> though you have one antenna thats physically two antennas fed in
>>> parallel
>>> with a phase lead or lag dependent on the lengths of their coax. If
>>> both
>>> antennas are well matched, the receiver's signal would drop 3 dB when
>>> the
>>> second antenna is connected thru that "Signal Splitter", even if the
>>> radiation pattern wasnt effected by that second antenna.
>>>
>>> I think you have a very interesting project here. I also think you
>>> will
>>> be lucky to solve the "sometimes weak signal" problem using the
>>> components
>>> you now have.
>>>
>>> How long is the coax and what kind is it?

>>>
>>> Jerry
>>
>> We will see what happens, I'll be sure to post the results. I am
>> still debating whether I need a better combiner or if they are pretty
>> universal for quality.
>>
>> The coax from both antennas to the combiner is 6 ft RG-6, with the
>> combiner attached to the preamp with a coupler. Then from the preamp
>> to the 4-way splitter is about 15 ft of RG-6 QS + 20 ft RG-6. From
>> the 4-way splitter to each device is about 15-20 ft RG-6.
>>
>> --
>> Chris
>
> Hi Chris
>
> I'm surprised that the amplifier is needed. But, you have determined
> that it does improve reception so I have nothing to add to what you have
> done.
> I do submit to you that the high quality splitter/combiner isnt likely to
> provide you with any improvement in TV reception.
> When you connect two seperate antennas to one output terminal, like with
> a splitter, you then have One Antenna that has two feed points. Mount
> the two antennas "back to back", and dont spend too much money on high
> quality splitters.
>
> Good luck
> Jerry
>
>
>

3813. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 20:24:26 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <henca31fbp0h2r38ufptfvn8sknt6vf1g1@4ax.com>
Source record: 38123

On 26 May 2007 01:31:14 -0700, 4nec2 <4nec2@gmx.net> wrote:

>Thanks all, for the input and observational feedback.
>
>I also found my own 'small' reference back again. For others
>interested in antenna design it could also be of use:
>
>http://sujan.hallikainen.org/BroadcastHistory/uploads/RadioAntenna1952Handbook.pdf
>
>Greetings from (at the moment) rainy Netherlands,
>
>Arie.

Hi Arie,

Just a short note to let you know that I worked with Jess Epstein, the Epstein of BL&E while working at the
RCA Antenna Lab (at David Sarnoff Research Center) I was also personally acquainted with George Brown, the
Brown of BL&E. While at the RCA Lab I also became acquainted with Ed Laport, as he stopped in to consult with
us on various occasions. Of course I have his book, 'Radio Antenna Engineering' in my library. I also knew Bob
Lewis, the Lewis of BL&E, through ham activities, although he had left RCA to go with IT&T before I came to
RCA.

Walt, W2DU

3814. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 21:34:15 UTC
From: BigD@DaveMorris.com
Message-ID: <1185312855.898646.8420@r34g2000hsd.googlegroups.com>
Source record: 38124

You guys crack me up. The poor guy wanted a simple longwire solution.

I want one too, and that's how I found this thread.

I read in W1FB's Antenna Notebook that you can take a 1 wavelength piece of wire, feed it with 75 Ohm coax 1/4 wavelength in from one end, with the hot side going to the 3/4 wavelength piece and the shield going to the 1/4 wavelength piece. It looks like you don't need any type of tuner.

Has anybody tried that? I'm looking for a simple antenna for PSK-31 QRP that the homeowners association won't even see, and this looks like the deal, but I can't find any corroboration for the concept.

Dave Morris
N5UP
www.eQSL.cc

3815. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 22:36:00 UTC
From: dplatt@radagast.org
Message-ID: <gfbin4-glq.ln1@radagast.org>
Source record: 38126

In article <1185312855.898646.8420@r34g2000hsd.googlegroups.com>,
<BigD@DaveMorris.com> wrote:

>I read in W1FB's Antenna Notebook that you can take a 1 wavelength
>piece of wire, feed it with 75 Ohm coax 1/4 wavelength in from one
>end, with the hot side going to the 3/4 wavelength piece and the
>shield going to the 1/4 wavelength piece. It looks like you don't
>need any type of tuner.
>
>Has anybody tried that? I'm looking for a simple antenna for PSK-31
>QRP that the homeowners association won't even see, and this looks
>like the deal, but I can't find any corroboration for the concept.

That sounds like a form of off-center-fed resonant doublet. Since the
radiator is 1 wavelength long, it will have current maxima 1/4 away
from each end (which is where you're feeding it).

I'd guess that it will provide a reasonable (although imperfect) match
to a 75-ohm coax... you might see an SWR of 2:1 or so on the coax.
The impedance seen by the rig will depend on the length of the
feedline, and a rig designed to drive a 50-ohm load might see a fairly
low SWR, or perhaps one as high as 3:1 or 4:1 (at a guess). If your
rig has a built-in ATU, it's probably adequate to flatten this sort of
SWR down to the point where the rig's finals are happy with it.

There's likely to be some amount of RF current present on the outside
of the coaxial feedline, due both to conduction at the feedpoint and
to induction from the wire (since the feedline is not located
symmetrically in the center of the radiating element). If this causes
sufficient "RF in the shack" to be a problem, you might want to add an
isolating choke where the feedline enters the building... and if there
isn't enough RF in the shack to cause problems, then don't worry about
it. In either case, it's probably going to be less RF-in-the-shack
than you'd get with an end-fed longwire, fed against the station
ground or a counterpoise.

Seems like a reasonable candidate for a "stealth" antenna, if you can
conceal the coax running up to the feedpoint, and use a thin-gauge
wire as a radiator (e.g. thin-gauge enamel-insulated magnet wire).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3816. TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 22:45:10 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <46A680EB.3090105@worldnet.att.net>
Source record: 38125

I am thinking it may finally be time to replace my old tribander. Based on size, weight, mast size and power handling capability, I found two popular models that are good candidates. Looking for comments and comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
73
John

3817. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 23:42:18 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <%3wpi.16011$6K3.11361@newsfe10.phx>
Source record: 38127

"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
news:46A680EB.3090105@worldnet.att.net...
>I am thinking it may finally be time to replace my old tribander. Based on
>size, weight, mast size and power handling capability, I found two popular
>models that are good candidates. Looking for comments and comparisons
>between the HyGain TH3MK4 and the Cushcraft A3s.
> 73
> John
>

John I would try to put up an HF beam that also covers 17M and 12M as well
as 10, 15, and 20M These are great bands.

Lamont

3818. Screwdriver controller

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-24 23:45:02 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <iaidnY-qQ59jEzvbnZ2dnUVZ_rSinZ2d@comcast.com>
Source record: 38128

I don't remember if this subject has been covered here or not.
I am LQQKing for a controller to use with my little Tarheel II.
Any and all suggestions welcome.
TIA

de Howard W3CQH

3819. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 00:44:44 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <y_wpi.39312$dI1.35381@newsfe08.phx>
Source record: 38129

"The Shadow" <Repose@Zilch.com> wrote in message
news:%3wpi.16011$6K3.11361@newsfe10.phx...
>
> "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
> news:46A680EB.3090105@worldnet.att.net...
>>I am thinking it may finally be time to replace my old tribander. Based
>>on size, weight, mast size and power handling capability, I found two
>>popular models that are good candidates. Looking for comments and
>>comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>> 73
>> John
>>
>
> John I would try to put up an HF beam that also covers 17M and 12M as well
> as 10, 15, and 20M These are great bands.
>
> Lamont
Is the Cushcraft MA5B too big? Covers 12 and 17M as 10, 15, and 20M

URL:
http://www.cushcraft.com/Wireless_Product_Details.asp?group_id=1717

Lamont

3820. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 00:47:10 UTC
From: gb <w9gbnospam@arrl.nospan.net>
Message-ID: <LP2dncKeyMwNADvbnZ2dnUVZ_tSknZ2d@comcast.com>
Source record: 38130

"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
news:46A680EB.3090105@worldnet.att.net...
>I am thinking it may finally be time to replace my old tribander. Based on
>size, weight, mast size and power handling capability, I found two popular
>models that are good candidates. Looking for comments and comparisons
>between the HyGain TH3MK4 and the Cushcraft A3s.
> 73
> John
>

What is an "old tribander" -- Wilson? Mosley? Homemade?

gb

3821. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 00:48:51 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <46a69de9$0$16529$4c368faf@roadrunner.com>
Source record: 38131

"The Shadow" <Repose@Zilch.com> wrote in message
news:%3wpi.16011$6K3.11361@newsfe10.phx...
>
> "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
> news:46A680EB.3090105@worldnet.att.net...
>>I am thinking it may finally be time to replace my old tribander. Based
>>on size, weight, mast size and power handling capability, I found two
>>popular models that are good candidates. Looking for comments and
>>comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>> 73
>> John
>>
>
> John I would try to put up an HF beam that also covers 17M and 12M as well
> as 10, 15, and 20M These are great bands.
>
> Lamont
>I remeber my friend replacing his tri-bander about 5 years ago with a
>multi-band quad(2 elemnts on each band). The quad while being a pain in the
>butt to get on the tower was a much superior performing antenna per he.

Jimmie

3822. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 02:50:16 UTC
From: phil-news-nospam@ipal.net
Message-ID: <f86dp845gq@news5.newsguy.com>
Source record: 38032
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

In alt.tv.tech.hdtv szilagyic <chris@groupinfo.com> wrote:

| This makes sense, but does this apply for antennas that are pointed in
| opposite directions? I just want to clarify, you are basically saying
| to alter the cable length by say, a portion of a wavelength (a half of
| a wavelength?), for one of our favorite channels that is having issues?

No antenna perfectly eliminates the back lobe. Some just do better than
others (like a solid parabolic dish). The bow tie antenns will receive
some signal in the reverse direction. If that back lobe reception on one
combines out of phase with the front lobe of the other, it will reduce
the total sign somewhat.

--
|-------------------------------------/---------------------------------|
| Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
| first name lower case at ipal.net / spamtrap-2007-07-24-2148@ipal.net |
|-------------------------------------/---------------------------------|

3823. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 03:16:51 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfadg53.185.bit-bucket@shell.config.com>
Source record: 38033

On Mon, 23 Jul 2007 21:14:07 -0400, Jimmie D wrote:
>
> An erratic reading near a microwave oven doesnt surprise me. The oven
> uses a stirrer to move the beam around inside the oven.

Do you normally read earlier followups and post those answers as yours?

Message-ID: <slrnfa9jvs.2bvm.bit-bucket@shell.config.com>

3824. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 04:15:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4aida3d7dnpnlelcv8ceoj3j164tjo74uc@4ax.com>
Source record: 38034

On Mon, 23 Jul 2007 10:11:01 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Mon, 23 Jul 2007 07:07:40 -0700, art <aunwin@insightbb.com> wrote:
>
>> will put to bed the negative comments from the naysayers.
>
>Hi Arthur,
>
>You mean like the -64 dBi gain reported by others?
>
>73's
>Richard Clark, KB7QHC

The actual details:

"antenna element circuit must be a TANK CIRCUIT"

Nothing said as to why (especially when other radiators work fine
without being a TANK CIRCUIT).

"element that has equal amounts of inductance and capacitance"

Notable in the violation of simple units (Henry does not equal Farad)

"requires a conductive length of insulated wire
(insulated from other windings) wound helically"

The notorious air cooled resistor - hence the -64 dBi gain.

Arthur even admits a special construction technique necessary for the:
"removal of the excessive heat from the radiator"

Further evidence of the poor results (i.e. -64 dBi gain).

"For a radiator in the 2 Mhz region
dimensions of the radiator will be in the order of
20 inches in diameter and
25 inches in height
tho these dimensions can be varied with respect to each other
dependent on frequency and materials used."

Classic dummy load.

"a tank circuit max radiation will occur when the capacitive
and inductive components are as large as possible ...

Called a conventional dipole?

... to achieve speeder release of energy."

Faster than light anyone? Or faster than friction? I would hate to think the Neanderthals died out because they lacked a TANK CIRCUIT to start a fire (although I am sure they could spell better).

73's
Richard Clark, KB7QHC

3825. matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 04:20:52 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <46a6cf9b$1@clear.net.nz>
Source record: 38035

Good day all.
Have run into a bit of a problem matching my G5RV's support mast as a vertical on 20 metres.
The mast is 7.5 metres high and insulated from ground with 4 radials at ground level but insulated from ground by installation along fence lines.
Obviously a typical 1/4 wave vertical would be ~5.1 metres high, but I had hopes of base loading the 7.5 metre mast to act as a sort of "short 5/8 wave" vertical on 20. Feed is 50 Ohm coax buried up to the matching box.
After a lot of research both in books and on the web I have found very little information on the design of an antenna like this.
Anyone had any experience of such an idea?
I have plenty of airspaced inductor stock and TX type capacitors for the network, and as I usually only run about 150 watts here that shouldn't be too critical.
Any ideas gratefully received!

73's Cliff Wright ZL1BDA ex G3NIA.

3826. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 04:32:49 UTC
From: G-squared <stratus46@yahoo.com>
Message-ID: <1185337969.507120.120460@g12g2000prg.googlegroups.com>
Source record: 38036
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 24, 7:50 pm, phil-news-nos...@ipal.net wrote:
> In alt.tv.tech.hdtv szilagyic <ch...@groupinfo.com> wrote:
>
> | This makes sense, but does this apply for antennas that are pointed in
> | opposite directions? I just want to clarify, you are basically saying
> | to alter the cable length by say, a portion of a wavelength (a half of
> | a wavelength?), for one of our favorite channels that is having issues?
>
> No antenna perfectly eliminates the back lobe. Some just do better than
> others (like a solid parabolic dish). The bow tie antenns will receive
> some signal in the reverse direction. If that back lobe reception on one
> combines out of phase with the front lobe of the other, it will reduce
> the total sign somewhat.
>
> --
> |-------------------------------------/---------------------------------|
> | Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
> | first name lower case at ipal.net / spamtrap-2007-07-24-2...@ipal.net |
> |-------------------------------------/---------------------------------|

Would some of these 'jointennas" reduce the interference /
interaction? They're not cheap but as much a s a cable bill.

http://www.warrenelectronics.com/antennas/Jointennas.htm

Did I miss it or did nobody ask what the actual channels in question
are? Any idea of the relative signal strengths? How far away? I would
think if the antennas are "spectally separated" via diplexers, the
cable lengths woun't be all that critical. It also depends on how far
apart the channel frequencies are. If you have a 28 and 30 in front
and are trying to get a 29 from the back, that will be tough but if
it's several channel numbers apart, it is less tough. SO, what are the
channels in question?

GG

3827. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 04:45:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l4lda3pjaamnirk7975qdv19trncgali8l@4ax.com>
Source record: 38037

On Wed, 25 Jul 2007 16:20:52 +1200, cliff wright
<c.c.wright@paradise.net.nz> wrote:

>Any ideas gratefully received!

Hi Cliff,

Strip out all the extraneous material like caps and inductors (however they are applied) and simply drive the vertical against your four radials. Tell us where it resonates, and give us a few SWR readings around that point (plus/minus 250 Khz in 50 Khz increments).

Do you have the transmission line choked at the feedpoint?

73's
Richard Clark, KB7QHC

3828. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 04:59:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9978988513AFFnonenowhere@61.9.191.5>
Source record: 38038

cliff wright <c.c.wright@paradise.net.nz> wrote in
news:46a6cf9b$1@clear.net.nz:

> Good day all.
> Have run into a bit of a problem matching my G5RV's support mast as a
> vertical on 20 metres.
> The mast is 7.5 metres high and insulated from ground with 4 radials
> at ground level but insulated from ground by installation along fence
> lines. Obviously a typical 1/4 wave vertical would be ~5.1 metres
> high, but I had hopes of base loading the 7.5 metre mast to act as a
> sort of "short 5/8 wave" vertical on 20. Feed is 50 Ohm coax buried up
> to the matching box. After a lot of research both in books and on the
> web I have found very little information on the design of an antenna
> like this. Anyone had any experience of such an idea?
> I have plenty of airspaced inductor stock and TX type capacitors for
> the network, and as I usually only run about 150 watts here that
> shouldn't be too critical.
> Any ideas gratefully received!
>
> 73's Cliff Wright ZL1BDA ex G3NIA.

Cliff,

I have written an article on unloaded verticals as a multiband antenna,
it is at http://www.vk1od.net/multibandunloadedvertical/index.htm .

If I scale the model results for a 13m vertical to 7.5m, it suggests that
you would have a base feed point impedance around 150+j300. You could
start by designing a matching network for that sort of impedance and fine
tune the network for low VSWR.

I am not clear on whether you are using this vertical as a mast for
something else. If so, all bets are off.

Owen

3829. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 11:23:17 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1185362597.825301.185700@l70g2000hse.googlegroups.com>
Source record: 38039

On Jul 24, 5:34 pm, B...@DaveMorris.com wrote:
> You guys crack me up. The poor guy wanted a simple longwire solution.
>
> I want one too, and that's how I found this thread.
>
> I read in W1FB's Antenna Notebook that you can take a 1 wavelength
> piece of wire, feed it with 75 Ohm coax 1/4 wavelength in from one
> end, with the hot side going to the 3/4 wavelength piece and the
> shield going to the 1/4 wavelength piece. It looks like you don't
> need any type of tuner.
>
> Has anybody tried that? I'm looking for a simple antenna for PSK-31
> QRP that the homeowners association won't even see, and this looks
> like the deal, but I can't find any corroboration for the concept.
>
> Dave Morris
> N5UPwww.eQSL.cc

Be sure and coil 7 or 8 turns the coax as a choke, at the feed
point... Other than that it will work fine... Don't let the
technical types here discourage you with their analysis of your
impedence, etc......
Get on the air and make Q's...
denny / k8do

3830. Re: Where to find the 120 radial study ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 11:40:25 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1185363625.756586.209120@b79g2000hse.googlegroups.com>
Source record: 38040
Body handling: HTML body converted to readable text

On May 26, 8:30 am, Danny Richardson wrote:
> On 26 May 2007 01:31:14 -0700, 4nec2 <4n...@gmx.net> wrote:
>
> >Thanks all, for the input and observational feedback.
>
> >I also found my own 'small' reference back again. For others
> >interested in antenna design it could also be of use:
>
> >http://sujan.hallikainen.org/BroadcastHistory/uploads/RadioAntenna195...
>
> >Greetings from (at the moment) rainy Netherlands,
>
> >Arie.
>
> Hi Arie,
>
> For those interested that book can also be obtained printed and bound
> for a very reasonable price from an on demand printer.
>
> http://www.lulu.com/content/159004
>
> Danny, K6MHE

I enjoy reading these books as well as anyone (don't always understand
the calculus, but that's another issue).. The reality for us is that
after roughly 50 radials it becomes academic... I have over a
hundred (roughly half wave long - varies) radials under my 160
tower... This was done over an entire year of crawling through dense,
nearly impenetrable thorn bushes, ripping my skin, wrecking my knees,
and convincing my wife she was correct all along ... After roughly 25 radials I could not
discern any improvement
in performance ...

Anyway, theoretical discussions are enjoyable but you have to keep in
mind this is a real world hobby, not a physics lab...

denny / k8do

3831. Re: extended double zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 12:34:54 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <f87g1dcug1@news.netins.net>
Source record: 38041

Another thing to consider when using the EDZ on higher bands (to get multi-band perfomance) is that it will not do well if you have constructed this as an inverted vee instead of a flat top. If you model the EDZ on higher freq in an inverted vee configuration, you will see the predominance of higher lobes (higher take-off-angle).

I ran a 20m EDZ for years and found that I had to make it a flat top for it to perform best, even on the design band. On higher bands it was a disaster in the inverted vee configuration. Some playing around with EZNEC showed me why (3-D view). The gain was still there, but it was all in the wrong direction (highly elevated).

Once I took care to go flat-top or to have very, very slight vee'ing, the antenna worked wonderfully on 20m and decently on the bands above.

...hasan, N0AN
"Walter Maxwell" <walt@w2du.com> wrote in message
news:lqok93hqmplpvfo2978lj1mnil07tirbs5@4ax.com...
> On Sun, 15 Jul 2007 15:53:48 GMT, "Amerigo Vespucci" <eat@italian.res>
> wrote:
>
> snip
>>The way I understood it was the best way to feed it was with ladderline or
>>something equal to it. I looked at the wireman website and saw their 450
>>ohm
>>ladderline is only like 26 cents a foot so I'll order 80 feet of it and
>>send
>>the antenna up higher and take it from there. The reason I built the EDZ
>>is
>>it has 3 db over a dipole and it will also work for other bands with a
>>tuner.Another reason I made the EDZ is a real estate issue(lacking) so
>>something monsterous would be out of the question, but hey that's what
>>makes
>>ameteur radio such a great hobby,the experimentation that goes along with
>>it.
>>
> Hi Amerigo,
>
> The transmission line you constucted should work just fine--don't go
> buying any more line, because the
> difference will be insignificant.
>
> And another point you should be aware of is that the 3dB improvement using
> the EDZ is only in the direction at
> right angles to the antenna, because the broadside lobe of the EDZ is

> somewhat narrower than that of the 1/2
> wave dipole, and as a result, the gain in all other directions is LESS
> than that of the 1/2 wave dipole.
>
> Walt, W2DU

3832. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 12:43:23 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <f87gh7dsi1@news.netins.net>
Source record: 38042

"Duane Allen" <computeruser@sprintmail.com> wrote in message
news:LvHni.9031$Od7.2923@newsread1.news.pas.earthlink.net...
> John wrote:
>> Gents,
>> Bit of a "ring in" question here but I cant think of
>> anywhere/anyone else who may know. I,ve put up a yagi TV antenna with
>> from memory about 19 elements plus reflector. It seems to be too
>> directional so I can get one signal source perfectly and one poorly
>> because they are in slightly different directions. Question is, if I
>> remove some of the elements (the way the thing is made I can unscrew the
>> front seven or so) will that make the antenna less directional?. Or if
>> not, is it able to be done?
>> Cheers
>> John
>
> If your using the antenna for HDTV, you need only the UHF elements, which
> for many TV antennas are the shorter elements at the front end of the
> antenna. The VHF elements will not be needed when all OTA TV stations go
> to HDTV.

That information could be more incorrect, but not much. When the switch-over to all-digital takes place, there will still be VHF and UHF stations. There is no mandate for TV stations to go UHF only, in fact, 2 of our 4 locals will be going BACK to VHF when the switch-over date hits. Depending on your area, you may have UHF only or a mix of VHF and UHF when the all-digital switch is mandated. This makes it important to know what your locals plans are before spending money on an antenna for HD (actually for digital, HD has nothing to do with it)

3833. Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 15:13:26 UTC
From: amdx <amdx@knology.net>
Message-ID: <e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET>
Source record: 38043
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Please see subject line-- Help, Wifi Antenna-- on
alt.binaires.schematics.electronic
for a picture of my concept.
Looking to combine Helical antenna and Wifi adapter card in one unit.
My experience is limited to MW bcb. I know there are many pitfalls at
2.4Ghz, so I'm looking for feedback on how to do this properly.
I'm using the following page as my guide.
http://www.wlan.org.uk/jhecker.html

This is to extend the range of my laptop computer.

Mike

3834. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 15:42:00 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <cbKpi.3766$7w.1151@trnddc05>
Source record: 38044

"cliff wright" <c.c.wright@paradise.net.nz> wrote in message
news:46a6cf9b$1@clear.net.nz...
> Good day all.
> Have run into a bit of a problem matching my G5RV's support mast as a
> vertical on 20 metres.
> The mast is 7.5 metres high and insulated from ground with 4 radials at
> ground level but insulated from ground by installation along fence lines.
> Obviously a typical 1/4 wave vertical would be ~5.1 metres high, but I had
> hopes of base loading the 7.5 metre mast to act as a sort of "short 5/8
> wave" vertical on 20. Feed is 50 Ohm coax buried up to the matching box.
> After a lot of research both in books and on the web I have found very
> little information on the design of an antenna like this.
> Anyone had any experience of such an idea?
> I have plenty of airspaced inductor stock and TX type capacitors for the
> network, and as I usually only run about 150 watts here that shouldn't be
> too critical.
> Any ideas gratefully received!
>
> 73's Cliff Wright ZL1BDA ex G3NIA.

You might try the matching system used on the old "Gotham Vertical". This uses a tapped coil from the base of the mast to ground. The top of the coil is tapped down until resonance is found. Coax braid is to ground, and the coax center conductor is tapped up from the bottom of the coil for best match.

Repeat the tapping, and measuring for best settings, as there is interaction. Then you can consider removing unused turns off the coil. Or you can find the taps that match other bands. This same matching method is often used on mobile antennas, and may still be in the ARRL handbook.

3835. Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 15:47:18 UTC
From: Bam Bam <bamyili@hotmail.com>
Message-ID: <1185378438.821899.91570@z28g2000prd.googlegroups.com>
Source record: 38045

I am making a simple 1/4 wave ground plane antenna and have two rather silly question regarding its measurements.

1. I've attached an SO-239 connecter to a 5x5 inch aluminum plate. When measuring the length of the radials, I measure from the center conductor of the SO-239 to the end of the radial taking into account the plate, correct?

2. If I make a loop in the vertical radiating element so that I may hang the antenna, does the circumference of the loop count in the measurement of the element or the diameter? (e.g., if I need 20 inches for the element, do I measure from the bottom of the SO-239 to the top of the loop or do I take a 20 inch wire and make a loop not caring that it has shortened the element slightly?)

Thanks

Bam Bam

3836. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 16:04:02 UTC
From: gsm@mendelson.com
Message-ID: <slrnfaet0e.r44.gsm@cable.mendelson.com>
Source record: 38046
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

amdx wrote:
> alt.binaires.schematics.electronic
> for a picture of my concept.
> Looking to combine Helical antenna and Wifi adapter card in one unit.
> My experience is limited to MW bcb. I know there are many pitfalls at
> 2.4Ghz, so I'm looking for feedback on how to do this properly.
> I'm using the following page as my guide.
> http://www.wlan.org.uk/jhecker.html

Note that in almost all places there are legal limitations on EIRP
(Effective Incident Radiated Power). In plain English, the more
you narrow a signal, the stronger it becomes.

Since you did not say where you are, I'll mention the two places I
know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
mobile/portable use (e.g. laptops) and 4 watts for fixed links.

With a 100mW source and a reasonablyshort cable the famous Pringles can
antenna would be illegal for mobile/portable use and probably illegal
for fixed links. It happened to be developed by an FBI agent in the
process of an investigation, so he was covered, you may not be.

Here in Israel it is limited to 100mw EIRP, so unless you have
a very long cable, any gain antenna would be illegal. Someone wrote
up (in Hebrew) and posted on a web site his use of a similar
antenna. It's not obvious to the casual reader that he did it
in an area under the jursidiction of the IDF (Israeli Army) and
got permission from them.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

3837. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 16:15:38 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <KGKpi.5345$Da.3887@trnddc07>
Source record: 38047
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"amdx" <amdx@knology.net> wrote in message
news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
> Please see subject line-- Help, Wifi Antenna-- on
> alt.binaires.schematics.electronic
> for a picture of my concept.
> Looking to combine Helical antenna and Wifi adapter card in one unit.
> My experience is limited to MW bcb. I know there are many pitfalls at
> 2.4Ghz, so I'm looking for feedback on how to do this properly.
> I'm using the following page as my guide.
> http://www.wlan.org.uk/jhecker.html
>
> This is to extend the range of my laptop computer.
>
> Mike

Hi Mike

You sure find some great information on the Web.

I consider this article Jason Hecker publishes
http://www.wlan.org.uk/jhecker.html to be ALL the instructions anyone
would need for constructing a 20 dB directivity WiFi antenna. I am looking
for some feedback from you on its performance.

If you plan to investigate basic effects of changing size and shape of
Helix antennas, EZNEC sure makes Helix antenna investigation easy.

I am just curious, what kind of coax and connectors are you using, and,
?how much coax?.

Jerry

3838. Re: Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 16:24:42 UTC
From: DeanO <dxblake@tecoenergy.com>
Message-ID: <1185380682.667402.122260@w3g2000hsg.googlegroups.com>
Source record: 38048

On Jul 25, 11:47 am, Bam Bam <bamy...@hotmail.com> wrote:
> I am making a simple 1/4 wave ground plane antenna and have two rather
> silly question regarding its measurements.
>
> 1. I've attached an SO-239 connecter to a 5x5 inch aluminum plate.
> When measuring the length of the radials, I measure from the center
> conductor of the SO-239 to the end of the radial taking into account
> the plate, correct?
>
> 2. If I make a loop in the vertical radiating element so that I may
> hang the antenna, does the circumference of the loop count in the
> measurement of the element or the diameter? (e.g., if I need 20 inches
> for the element, do I measure from the bottom of the SO-239 to the top
> of the loop or do I take a 20 inch wire and make a loop not caring
> that it has shortened the element slightly?)
>
> Thanks
>
> Bam Bam

You need a grid dip meter or a good SWR bridge and get ready to tune
"a little"
here is why.... The PLATE adds capacitance and that will make the
'need' for your radial lengths to actually wind up shorter than you
would calculate. Also the loop at the top of the antenna will add a
little effective length because of the 'capacitance' of the loop (see
capacitive hats in any antenna book) so rule of thumb ... is go ahead
and use the formulas for 1/4 antenna wire, make the antenna that
length and then 'prune' to get a better match at the frequency you
plan to use. Also, you can change the angle of the radials in respect
to the plate to change the impedance of the antenna. If you lower the
radials (from straight out 90 deg) you will increase the antennas
impedance and vice versa. This is done 'last' after you get the wire
as best match after puning. Then experiment with the radials to
further match the antenna. Donot worry about getting a 1:1 match.
your time will be wasted with little improvement in performance I
found less than 2:1 is usually very good and most solid state finals
work with this well. Good Luck and have fun ... KD4Q Dean

3839. Re: Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 16:29:55 UTC
From: DeanO <dxblake@tecoenergy.com>
Message-ID: <1185380995.439253.125410@d55g2000hsg.googlegroups.com>
Source record: 38049

On Jul 25, 11:47 am, Bam Bam <bamy...@hotmail.com> wrote:
> I am making a simple 1/4 wave ground plane antenna and have two rather
> silly question regarding its measurements.
>
> 1. I've attached an SO-239 connecter to a 5x5 inch aluminum plate.
> When measuring the length of the radials, I measure from the center
> conductor of the SO-239 to the end of the radial taking into account
> the plate, correct?
>
> 2. If I make a loop in the vertical radiating element so that I may
> hang the antenna, does the circumference of the loop count in the
> measurement of the element or the diameter? (e.g., if I need 20 inches
> for the element, do I measure from the bottom of the SO-239 to the top
> of the loop or do I take a 20 inch wire and make a loop not caring
> that it has shortened the element slightly?)
>
> Thanks
>
> Bam Bam
PS I would only measure to the top of the loop... not counting the
'fold over' that makes up the loop. The wire actually folds back down
the main radiator and thus cancels its lenghting effect (except for
the small capacitance I talked about).

3840. Re: Yagi Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 16:35:45 UTC
From: DeanO <dxblake@tecoenergy.com>
Message-ID: <1185381345.847735.271690@r34g2000hsd.googlegroups.com>
Source record: 38050

On Jul 19, 6:35 am, "John" <susa...@aapt.net.au> wrote:
> Gents,
> Bit of a "ring in" question here but I cant think of
> anywhere/anyone else who may know. I,ve put up a yagi TV antenna with from
> memory about 19 elements plus reflector. It seems to be too directional so I
> can get one signal source perfectly and one poorly because they are in
> slightly different directions. Question is, if I remove some of the
> elements (the way the thing is made I can unscrew the front seven or so)
> will that make the antenna less directional?. Or if not, is it able to be
> done?
> Cheers
> John

YUP.... the directivity is related to the number of director elements
and also their spacing. You may effect the gain as well? So, if the
gain is an issue you may wind up defeating your plans. Worth a try
though, since your not hurting the antenna. Good Luck

3841. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 17:12:26 UTC
From: Jeff <jeff@local.host>
Message-ID: <46a784ab$0$1347$834e42db@reader.greatnowhere.com>
Source record: 38051
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

> Note that in almost all places there are legal limitations on EIRP
> (Effective Incident Radiated Power). In plain English, the more
> you narrow a signal, the stronger it becomes.
>
> Since you did not say where you are, I'll mention the two places I
> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
> mobile/portable use (e.g. laptops) and 4 watts for fixed links.

Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!

Jeff

3842. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 17:25:26 UTC
From: szilagyic <chris@groupinfo.com>
Message-ID: <1185384326.052854.35540@k79g2000hse.googlegroups.com>
Source record: 38052
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 25, 12:32 am, G-squared <stratu...@yahoo.com> wrote:
> On Jul 24, 7:50 pm, phil-news-nos...@ipal.net wrote:
>
>
>
> > In alt.tv.tech.hdtv szilagyic <ch...@groupinfo.com> wrote:
>
> > | This makes sense, but does this apply for antennas that are pointed in
> > | opposite directions? I just want to clarify, you are basically saying
> > | to alter the cable length by say, a portion of a wavelength (a half of
> > | a wavelength?), for one of our favorite channels that is having issues?
>
> > No antenna perfectly eliminates the back lobe. Some just do better than
> > others (like a solid parabolic dish). The bow tie antenns will receive
> > some signal in the reverse direction. If that back lobe reception on one
> > combines out of phase with the front lobe of the other, it will reduce
> > the total sign somewhat.
>
> > --
> > |-------------------------------------/----------------------------------|
> > | Phil Howard KA9WGN (ka9wgn.ham.org) / Do not send to the address below |
> > | first name lower case at ipal.net / spamtrap-2007-07-24-2...@ipal.net |
> > |-------------------------------------/----------------------------------|
>
> Would some of these 'jointennas" reduce the interference /
> interaction? They're not cheap but as much a s a cable bill.
>
> http://www.warrenelectronics.com/antennas/Jointennas.htm
>
> Did I miss it or did nobody ask what the actual channels in question
> are? Any idea of the relative signal strengths? How far away? I would
> think if the antennas are "spectally separated" via diplexers, the
> cable lengths woun't be all that critical. It also depends on how far
> apart the channel frequencies are. If you have a 28 and 30 in front
> and are trying to get a 29 from the back, that will be tough but if
> it's several channel numbers apart, it is less tough. SO, what are the
> channels in question?
>
> GG

GG,

I came across those Jointennas and they look very interesting.
Unfortunately the channels (frequencies) we are trying to get are all

spread out. Here's a list anyway:

On the first antenna (VHF/UHF/FM) we get channels
2,4,7,9,20,28,50,56,62 (analog), and 14,21,41,43,44,45,52,58
(digital).

On the second antenna (UHF only) we get channels 18,23,47,53 (analog),
and 34,38,51,57,59 (digital).

Just out of curiousity, what is the average loss in dB when using the
Jointennas, or does it vary? I haven't been able to find any info on
the loss.

Thank you very much. There have been some great ideas posted in this
thread and we will try various things hopefully soon and see what
works.
--
Chris

3843. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 17:36:07 UTC
From: DeanO <dxblake@tecoenergy.com>
Message-ID: <1185384967.093333.105250@22g2000hsm.googlegroups.com>
Source record: 38053

On Jul 24, 6:45 pm, John Siegel <JohnASie...@worldnet.att.net> wrote:
> I am thinking it may finally be time to replace my old tribander. Based
> on size, weight, mast size and power handling capability, I found two
> popular models that are good candidates. Looking for comments and
> comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
> 73
> John

I owned the A4S for about 7 years and it was a replacement for my old
TH3..
I loved the A4!!! Was much better on bandwidth and I got great signal
reports.
Its bigger and more sturdy than the A3. Also costs more but its one
awesome
antenna. When I get my new home it'll be my antenna of choice for a
triband.
Also, the first in a series for Cushcrafts antenna design software
they bought back then
The A4 and A3 were designed on their very expensive program.

3844. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 17:44:42 UTC
From: DeanO <dxblake@tecoenergy.com>
Message-ID: <1185385482.616523.72500@k79g2000hse.googlegroups.com>
Source record: 38054
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 23, 10:27 am, szilagyic <ch...@groupinfo.com> wrote:
> Hello,
>
> I have two antennas that I am trying to combine, and have a question
> in regards to the best way to do this. The first antenna is a
> Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> UHF bowtie) that is also tuned in and points in the opposite direction
> (almost 180 degrees) to pick up some UHF stations. The two antennas
> are side by side, but the ends of the elements are about 4 feet
> apart. When I disconnect the HD7084P from the preamp and connect the
> combiner and hook the HD7084P to the combiner, the signal strength for
> HD stations maintains about the same. But when I hook up the second
> antenna to the combiner, the HD signal strength from the HD7084P drops
> by 10-40% (depending on the channel). I tried two combiners/splitters
> and got the same results, one is a RCA brand splitter, the other is a
> Radio Shack hybrid splitter/combiner. Would something like the
> Channel Master 0538 or the Winegard CC-7870 work better for this?? I
> read up and these models mention "high isolation" which I can't seem
> to find any information on. It seems like a powered combiner would be
> ideal so that there is no loss at all, but I haven't seen anything
> like that. I am looking for any suggestions or ideas that anybody
> might have.
>
> I really appreciate all of the help and feedback.
>
> Thank you very much,
> --
> Chris

The problem is phasing of the signals at the combiner. You only need
to lengthen one feedline
from one source prior to the combiner, this will be done by
experiment. You could also shorten feedline a little at a time and
observe the changing signal levels. You will not get them perfect (due
to slightly different frequencies/wavelenghts). You will also effect
the impedance 'coupling' slightly which may work in your favor.

3845. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 17:59:22 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfaf3rq.2f55.bit-bucket@shell.config.com>
Source record: 38055
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On Wed, 25 Jul 2007 18:12:26 +0100, Jeff wrote:
>
>> Note that in almost all places there are legal limitations on EIRP
>> (Effective Incident Radiated Power). In plain English, the more
>> you narrow a signal, the stronger it becomes.
>>
>> Since you did not say where you are, I'll mention the two places I
>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>
> Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!

Oh , really ?! cite!

3846. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 18:20:50 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <6wMpi.12851$B25.3670@news01.roc.ny>
Source record: 38056
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Jeff wrote:
>>Note that in almost all places there are legal limitations on EIRP
>>(Effective Incident Radiated Power). In plain English, the more
>>you narrow a signal, the stronger it becomes.
>>
>>Since you did not say where you are, I'll mention the two places I
>>know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>
>
> Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!

Only 802.11b/g channels 1-6 fall in the amateur allocation of 2390-2450 MHz.

If operating under amateur regulations you must identify by CW, phone,
RTTY or TV image every 10 minutes or less (see 47CFR97.119), your
transmissions must be intended for reception by another licensed amateur
station or station authorized to communicate with amateur stations (see
47CFR97.111), that has to be the only reasonable way to effectively
communicate, no other radio service available that accomplishes the same
communications (see 47CFR97.113) and you have to use the lowest power
level capable of accomplishing the communications (see 47CFR97.313).

See http://www.access.gpo.gov/nara/cfr/waisidx_01/47cfr97_01.html for
specific regulations.

3847. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 18:25:16 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <gAMpi.12772$ya1.2896@news02.roc.ny>
Source record: 38057
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

gwatts wrote:
> Jeff wrote:
>
>>> Note that in almost all places there are legal limitations on EIRP
>>> (Effective Incident Radiated Power). In plain English, the more
>>> you narrow a signal, the stronger it becomes.
>>>
>>> Since you did not say where you are, I'll mention the two places I
>>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>>
>>
>>
>> Bear in mind that 2.4GHz is also an amateur band where no erp limits
>> exist!!
>
>
> Only 802.11b/g channels 1-6 fall in the amateur allocation of 2390-2450
> MHz.
>
> If operating under amateur regulations you must identify by CW, phone,
> RTTY or TV image every 10 minutes or less (see 47CFR97.119), your
> transmissions must be intended for reception by another licensed amateur
> station or station authorized to communicate with amateur stations (see
> 47CFR97.111), that has to be the only reasonable way to effectively
> communicate, no other radio service available that accomplishes the same
> communications (see 47CFR97.113) and you have to use the lowest power
> level capable of accomplishing the communications (see 47CFR97.313).
>
> See http://www.access.gpo.gov/nara/cfr/waisidx_01/47cfr97_01.html for
> specific regulations.

I forgot to mention amateur communications cannot be encrypted, so no
https, see 47CFR97.113 again.

3848. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 18:35:38 UTC
From: Barry Watzman <WatzmanNOSPAM@neo.rr.com>
Message-ID: <46a7981e$0$30632$4c368faf@roadrunner.com>
Source record: 38058
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

That may be true but to use it that way legally you would need an
amateur license, and this is not just a paperwork exercise, you have to
pass FCC exams covering electronics and radio theory (plus laws and
regulations) to get one. For most people, it's not an option.

Allodoxaphobia wrote:
> On Wed, 25 Jul 2007 18:12:26 +0100, Jeff wrote:
>>> Note that in almost all places there are legal limitations on EIRP
>>> (Effective Incident Radiated Power). In plain English, the more
>>> you narrow a signal, the stronger it becomes.
>>>
>>> Since you did not say where you are, I'll mention the two places I
>>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>> Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!
>
> Oh , really ?! cite!

3849. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:07:09 UTC
From: Joel Kolstad <JKolstad71HatesSpam@yahoo.com>
Message-ID: <13af7qv8ks9e3f3@corp.supernews.com>
Source record: 38059
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"gwatts" <gwatts@frontiernet.net> wrote in message
news:6wMpi.12851$B25.3670@news01.roc.ny...
> If operating under amateur regulations you must identify by CW, phone, RTTY
> or TV image every 10 minutes or less (see 47CFR97.119)

Most amateurs set the SSID of the access point to their call sign, since this is beaconed numerous times per minute. Apparently that's close enough to RTTY to keep most people happy.

> your transmissions must be intended for reception by another licensed
> amateur station or station authorized to communicate with amateur stations
> (see 47CFR97.111)

Sure.

> that has to be the only reasonable way to effectively communicate, no other
> radio service available that accomplishes the same communications (see
> 47CFR97.113)

This particular regulation creates plenty of argument, since realistically the vast majority of activity on amateur radio frequencies these days could be just as readily accomodated by either cell phones or the Internet; I doubt the FCC has cited anyone for violating this rule for decades now.

> and you have to use the lowest power level capable of accomplishing the
> communications (see 47CFR97.313).

Indeed, although this too is subject to debate because people will argue that while, e.g., 1W will get them a bit error rate of 10%, they "need" a near-zero bit errorr rate and therefore transmit at 100W.

You point about not being able to use HTTPS or other encrypted protocols is probably the most significant change in moving from using WiFi in an unlicensed mode to using it under the amateur radio service's rules. However, note that it is perfectly OK to obfuscate *authentication* data such as passwords -- packet BBSes have done this for decades.

---Joel

3850. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:09:30 UTC
From: Joel Kolstad <JKolstad71HatesSpam@yahoo.com>
Message-ID: <13af7ve38vgs10c@corp.supernews.com>
Source record: 38060
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Barry Watzman" <WatzmanNOSPAM@neo.rr.com> wrote in message
news:46a7981e$0$30632$4c368faf@roadrunner.com...
> That may be true but to use it that way legally you would need an amateur
> license, and this is not just a paperwork exercise, you have to pass FCC
> exams covering electronics and radio theory (plus laws and regulations) to
> get one. For most people, it's not an option.

Very few people would have significnat difficulty passing the technician class
license exam that's needed to operate on 2.4GHz. Indeed, there are many
month-long (meet a couple times a week) classes and even weekend "cram"
classes that have near 100% success rates in getting people their tickets. A
passing score is 80%!

3851. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:19:38 UTC
From: mike <amdx@knology.net>
Message-ID: <52fd5$46a7a24c$18d6b40c$21937@KNOLOGY.NET>
Source record: 38061
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:KGKpi.5345$Da.3887@trnddc07...
>
> "amdx" <amdx@knology.net> wrote in message
> news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
>> Please see subject line-- Help, Wifi Antenna-- on
>> alt.binaires.schematics.electronic
>> for a picture of my concept.
>> Looking to combine Helical antenna and Wifi adapter card in one unit.
>> My experience is limited to MW bcb. I know there are many pitfalls at
>> 2.4Ghz, so I'm looking for feedback on how to do this properly.
>> I'm using the following page as my guide.
>> http://www.wlan.org.uk/jhecker.html
>>
>> This is to extend the range of my laptop computer.
>>
>> Mike
>
> Hi Mike
>
> You sure find some great information on the Web.
>
> I consider this article Jason Hecker publishes
> http://www.wlan.org.uk/jhecker.html to be ALL the instructions anyone
> would need for constructing a 20 dB directivity WiFi antenna. I am
> looking for some feedback from you on its performance.
>
> If you plan to investigate basic effects of changing size and shape of
> Helix antennas, EZNEC sure makes Helix antenna investigation easy.
>
> I am just curious, what kind of coax and connectors are you using, and,
> ?how much coax?.
>
> Jerry
Hi Jerry, Please review the picture I posted on
alt.binaires.schematics.electronic
in it you will see I'm trying to avoid connectors and cable carrying 2.4Ghz
R.F.
Thanks for being the only poster to have anything near a response to my
post.
Mike

3852. Re: Gaussian antenna details DIY

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:25:18 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <1185391518.224653.200000@w3g2000hsg.googlegroups.com>
Source record: 38062

On Jul 23, 8:11 am, "Wayne" <mygarbage...@verizon.net> wrote:
> "art" <aun...@insightbb.com> wrote in message
>
> news:1185199660.050387.138050@n2g2000hse.googlegroups.com...> Since there is little interest in the academic details fo the gaussian
> > antenna
> > I have decided to add in depth details of the elements used so one
> > can
> > easily make one in half a day. A single element can ofcourse be used
> > as a
> > a separate antenna and will put to bed the negative comments from the
> > naysayers.
> > Google keywords: antenna english gaussian array
> > Art
>
> OK, I bit. That google search had 94,800 results. Can you narrow it down a
> bit?

Google with Art's suggested keywords didn't do any more for me than it
did for you; I even looked through the first few pages of results,
down to where I was "in the noise". I figured maybe he meant his
short article "Radiation_a_thesis.rtf" that you can get through
http://users.sdsc.edu/~unwin/, but looking at today's version of that
article was no help. Maybe I just haven't learned to read well enough
yet between the lines...

I'm sad that someone who apparently wishes sincerely to communicate
puts so many barriers in the way of communication.

Cheers,
Tom

3853. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:25:41 UTC
From: Gary Tait <classicsat@yahoo.com>
Message-ID: <Xns99789CFB9943Cwonkynillmailnil@142.77.1.194>
Source record: 38063
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Jeff" <jeff@local.host> wrote in
news:46a784ab$0$1347$834e42db@reader.greatnowhere.com:

> Bear in mind that 2.4GHz is also an amateur band where no erp limits
> exist!!
>
> Jeff
>

Not in most civilized countries.

2.4 Ghz is unlicensed, not unregulated.

3854. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:54:27 UTC
From: Don Bowey <dbowey@comcast.net>
Message-ID: <C2CCF883.714D1%dbowey@comcast.net>
Source record: 38064
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On 7/25/07 10:12 AM, in article
46a784ab$0$1347$834e42db@reader.greatnowhere.com, "Jeff" <jeff@local.host>
wrote:

>
>> Note that in almost all places there are legal limitations on EIRP
>> (Effective Incident Radiated Power). In plain English, the more
>> you narrow a signal, the stronger it becomes.
>>
>> Since you did not say where you are, I'll mention the two places I
>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>
> Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!
>
> Jeff
>
>

Hams have a segment of it, but not 2.4 to 2.5.

However, if the wifi ends up in the ham band in a commercial purpose there
will be hell to pay when they get caught, ham or not.

3855. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 19:54:43 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f889q3$t99$1@nntp1.jpl.nasa.gov>
Source record: 38067
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Jeff wrote:
>>Note that in almost all places there are legal limitations on EIRP
>>(Effective Incident Radiated Power). In plain English, the more
>>you narrow a signal, the stronger it becomes.
>>
>>Since you did not say where you are, I'll mention the two places I
>>know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>
>
> Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!
>
> Jeff
>
>

Well.. not all the 802.11b/g channels are in the amateur band, and even there, there is a power limit (transmitter output power, though, not EIRP), so you could conceivably fire up your 1500 Watt transmitter into a 20dBi antenna and blast away.

There is the other rule about minimum power needed for communication, though.

3856. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 20:02:46 UTC
From: davem@cs.ubc.ca
Message-ID: <f88a96nba1@swain.cs.ubc.ca>
Source record: 38066
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"mike" <amdx@knology.net> writes:

>Hi Jerry, Please review the picture I posted on
>alt.binaires.schematics.electronic
>in it you will see I'm trying to avoid connectors and cable carrying 2.4Ghz
>R.F.
> Thanks for being the only poster to have anything near a response to my
>post.

Do note that many people's Usenet servers do not carry any binaries groups, so they will be unable to look at your picture. If you were to place the photo on a server where it can be accessed by HTTP or FTP, these people would be able to get it. Many ISPs provide some web space served by their own web server, and there are free photo hosting sites like flickr.

Dave

3857. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 20:04:08 UTC
From: Chuck Olson <chuckolson01@REMOVETHIScomcast.net>
Message-ID: <M8OdnVWDR5DJMTrbnZ2dnUVZ_r-vnZ2d@comcast.com>
Source record: 38065
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"amdx" <amdx@knology.net> wrote in message
news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
> Please see subject line-- Help, Wifi Antenna-- on
> alt.binaires.schematics.electronic
> for a picture of my concept.
> Looking to combine Helical antenna and Wifi adapter card in one unit.
> My experience is limited to MW bcb. I know there are many pitfalls at
> 2.4Ghz, so I'm looking for feedback on how to do this properly.
> I'm using the following page as my guide.
> http://www.wlan.org.uk/jhecker.html
>
> This is to extend the range of my laptop computer.
>
> Mike

The Wifi Helical antenna is an awful lot of work, and the performance of even long structures on PVC tubing is vastly disappointing. The easiest 15 dBi (my measurement) gain antenna is the Biquad. In fact, if you make the biquad with circular instead of square loops, the construction is even easier, and there's no problem measuring with all those bends - - just one wavelength of straight wire in a circular loop for each section - - http://www.wikarekare.org/Antenna/bicircle.html But try to keep a 50-ohm coaxial configuration all the way to the feed points as in http://homepages.ihug.co.nz/~redwood4/ It isn't necessary to keep the polyethylene insulation - - for a short length of air insulated coax, the tubing ID should be 2.25 times the center conductor OD for 50 ohms impedance.

If you are like me, you will probably want to build the Helical anyway - - just to see, and perhaps to compare against the two easiest wifi antennas with decent performance - Biquad and Waveguide http://www.saunalahti.fi/elepal/antenna2.html The easiest waveguide can is the 83mm ID one you get with the 28oz size of Bush's Baked Beans or any of a number of other products like canned spaghetti sauce or family size Spaghettis.

See if you can get a USB Wi-Spy Spectrum Analyzer module, too - - try to find one of the original (no external antenna - - cheaper) versions, and just put it in your own shielding enclosure and make your own modification to cut the path to the built-in antenna so that you can run a small coax to a connector on the box for your own external antenna connection. This kind of modification has been made by others - - http://www.metageek.net/default.aspx?tabid=463&forumid=11&postid=1395&view=topic scroll down to the post by pe2er on 9/9/06 showing how to connect a coax to

the board. I used a type N connector on my enclosure because it's universal and strong, and filtered the three USB supply and signal wires with feed-thru capacitors so no RF can enter the enclosure through these other paths. Use Metageek.'s Chanalyzer software to run the Wi-Spy module - - preferably version 2.0 before the current 2.1.4 came out, since the need for compatibility with both the $199 Wi-Spy and the $399 Wi-Spy made operation with the $199 Wi-Spy somewhat unsatisfactory. Maybe you can ask Metageek to allow access to previous Chanalyzer 2.0 for owners of the older units. Why do you want all this? So you can make accurate measurement of the differences between antennas, using a reference 1/2-wave dipole, or the standard RPSMA antenna you find on most Wifi Routers. The dB calibration of the Chanalyzer display is very accurate.

Chuck W6PKP

3858. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 20:08:15 UTC
From: miso@sushi.com
Message-ID: <1185394095.898789.232680@i13g2000prf.googlegroups.com>
Source record: 38068
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On Jul 25, 8:13 am, "amdx" <a...@knology.net> wrote:
> Please see subject line-- Help, Wifi Antenna-- on
> alt.binaires.schematics.electronic
> for a picture of my concept.
> Looking to combine Helical antenna and Wifi adapter card in one unit.
> My experience is limited to MW bcb. I know there are many pitfalls at
> 2.4Ghz, so I'm looking for feedback on how to do this properly.
> I'm using the following page as my guide.http://www.wlan.org.uk/jhecker.html
>
> This is to extend the range of my laptop computer.
>
> Mike

>From my previous post on this topic:

FYI, alt.internet.wireless discusses this topic often.

I prefer the biquad antenna, which you can augment with a dish. I have
a short-cut method to build this antenna. With a combination of these
photographs and this link, you should be able to figure it out.

http://martybugs.net/wireless/biquad/
http://www.lazygranch.com/images/wifi/wifi_bq_1.jpg
http://www.lazygranch.com/images/wifi/wifi_bq_2.jpg

Note you don't need to make the loop a square. Use a circle of the
same circumference.

There is a disadvantage to using the helix. It will receive both
horizontal and vertical polarization. Most sites just send in one
polarization. In busy areas, the same channel will be used in
different sites with different polarity. Now if you use the helix to
illuminate a dish, then the circular polarization is fine and perhaps
desirable. That is, you could sniff out signals without the
attenuation associated with having the wrong polarization.

3859. Re: Antenna combiner/joiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 20:56:08 UTC
From: G-squared <stratus46@yahoo.com>
Message-ID: <1185396968.198712.296120@b79g2000hse.googlegroups.com>
Source record: 38069
Cross-posted to: rec.radio.amateur.antenna,alt.tv.tech.hdtv

On Jul 25, 10:44 am, DeanO <dxbl...@tecoenergy.com> wrote:
> On Jul 23, 10:27 am, szilagyic <ch...@groupinfo.com> wrote:
>
>
>
> > Hello,
>
> > I have two antennas that I am trying to combine, and have a question
> > in regards to the best way to do this. The first antenna is a
> > Winegard HD7084P (FM/VHF/UHF lpda) that is hooked to a preamp and
> > tuned in perfectly. I want to add my other antenna (Winegard PR-8800
> > UHF bowtie) that is also tuned in and points in the opposite direction
> > (almost 180 degrees) to pick up some UHF stations. The two antennas
> > are side by side, but the ends of the elements are about 4 feet
> > apart. When I disconnect the HD7084P from the preamp and connect the
> > combiner and hook the HD7084P to the combiner, the signal strength for
> > HD stations maintains about the same. But when I hook up the second
> > antenna to the combiner, the HD signal strength from the HD7084P drops
> > by 10-40% (depending on the channel). I tried two combiners/splitters
> > and got the same results, one is a RCA brand splitter, the other is a
> > Radio Shack hybrid splitter/combiner. Would something like the
> > Channel Master 0538 or the Winegard CC-7870 work better for this?? I
> > read up and these models mention "high isolation" which I can't seem
> > to find any information on. It seems like a powered combiner would be
> > ideal so that there is no loss at all, but I haven't seen anything
> > like that. I am looking for any suggestions or ideas that anybody
> > might have.
>
> > I really appreciate all of the help and feedback.
>
> > Thank you very much,
> > --
> > Chris
>
> The problem is phasing of the signals at the combiner. You only
need
> to lengthen one feedline
> from one source prior to the combiner, this will be done by
> experiment. You could also shorten feedline a little at a time and
> observe the changing signal levels. You will not get them perfect
(due
> to slightly different frequencies/wavelenghts). You will also
effect

> the impedance 'coupling' slightly which may work in your favor.

The whole point of a diplexer (jointenna) is to filter out individual channels so that 'phasing' is no longer an issue for combining the feeds. The actual insertion loss of a jointenna should be aound 1 dB on a pass through channel

GG

3860. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 21:26:41 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <lePpi.8517$Ub7.1313@trnddc04>
Source record: 38070
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"mike" <amdx@knology.net> wrote in message
news:52fd5$46a7a24c$18d6b40c$21937@KNOLOGY.NET...
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:KGKpi.5345$Da.3887@trnddc07...
>>
>> "amdx" <amdx@knology.net> wrote in message
>> news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
>>> Please see subject line-- Help, Wifi Antenna-- on
>>> alt.binaires.schematics.electronic
>>> for a picture of my concept.
>>> Looking to combine Helical antenna and Wifi adapter card in one unit.
>>> My experience is limited to MW bcb. I know there are many pitfalls at
>>> 2.4Ghz, so I'm looking for feedback on how to do this properly.
>>> I'm using the following page as my guide.
>>> http://www.wlan.org.uk/jhecker.html
>>>
>>> This is to extend the range of my laptop computer.
>>>
>>> Mike
>>
>> Hi Mike
>>
>> You sure find some great information on the Web.
>>
>> I consider this article Jason Hecker publishes
>> http://www.wlan.org.uk/jhecker.html to be ALL the instructions anyone
>> would need for constructing a 20 dB directivity WiFi antenna. I am
>> looking for some feedback from you on its performance.
>>
>> If you plan to investigate basic effects of changing size and shape of
>> Helix antennas, EZNEC sure makes Helix antenna investigation easy.
>>
>> I am just curious, what kind of coax and connectors are you using, and,
>> ?how much coax?.
>>
>> Jerry
> Hi Jerry, Please review the picture I posted on
> alt.binaires.schematics.electronic
> in it you will see I'm trying to avoid connectors and cable carrying
> 2.4Ghz R.F.
> Thanks for being the only poster to have anything near a response to my
> post.

> Mike

Hi Mike

My computer skills are really lacking. I dont know how to view your images. I do spend alot of time learning about antennas. One of my buddies tells me that he had poor results with the helix he built from the instructions you cited. This site seems to have been better for my buddy. http://www.pa0hoo.tk/.
Is it practical for you to use a Bridge at the input terminals of your gain antenna so that the coax loss is minimized? That way, the antenna (+Bridge) is connected to the computer with CAT 5 cable.
If it isnt too complicated, tell me how to view your images.

Thanks
Jerry

3861. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 21:49:02 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99794F84BAB44nonenowhere@61.9.191.5>
Source record: 38071

"Wayne" <mygarbagecan@verizon.net> wrote in
news:cbKpi.3766$7w.1151@trnddc05:

...
> You might try the matching system used on the old "Gotham Vertical".
> This uses a tapped coil from the base of the mast to ground. The top
> of the coil is tapped down until resonance is found. Coax braid is
> to ground, and the coax center conductor is tapped up from the bottom
> of the coil for best match.

Whilst this system might work for an antenna with a capacitive feedpoint,
will it work for an inductive feedpoint such as this ~3/8 lambda attena?

Owen

3862. Re: Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 21:51:14 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99794FE40E0BCnonenowhere@61.9.191.5>
Source record: 38072

DeanO <dxblake@tecoenergy.com> wrote in news:1185380995.439253.125410
@d55g2000hsg.googlegroups.com:

...
> PS I would only measure to the top of the loop... not counting the
> 'fold over' that makes up the loop. The wire actually folds back down
> the main radiator and thus cancels its lenghting effect (except for
> the small capacitance I talked about).

Isn't this somewhat similar to linear loading... which does lower the
resonant frequency?

Owen

3863. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 22:29:43 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfafjmn.2l1g.bit-bucket@shell.config.com>
Source record: 38073
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On Wed, 25 Jul 2007 12:09:30 -0700, Joel Kolstad wrote:
> "Barry Watzman" <WatzmanNOSPAM@neo.rr.com> wrote:
>> That may be true but to use it that way legally you would need an amateur
>> license, and this is not just a paperwork exercise, you have to pass FCC
>> exams covering electronics and radio theory (plus laws and regulations) to
>> get one. For most people, it's not an option.
>
> Very few people would have significnat difficulty passing the technician class
> license exam that's needed to operate on 2.4GHz. Indeed, there are many
> month-long (meet a couple times a week) classes and even weekend "cram"
> classes that have near 100% success rates in getting people their tickets. A
> passing score is 80%!

But, I suppose that believing, as did an earlier poster:
"Bear in mind that 2.4GHz is also an amateur band where no erp limits exist!!"
is acceptable for these No-Code, No-Klew Licensees?

3864. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 22:45:57 UTC
From: Chuck Olson <chuckolson01@REMOVETHIScomcast.net>
Message-ID: <1cudnVdt9JbRTzrbnZ2dnUVZ_q6hnZ2d@comcast.com>
Source record: 38074
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Spaghettis should read Spaghettios

"Chuck Olson" <chuckolson01@REMOVETHIScomcast.net> wrote in message
news:M8OdnVWDR5DJMTrbnZ2dnUVZ_r-vnZ2d@comcast.com...
>
> "amdx" <amdx@knology.net> wrote in message
> news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
> > Please see subject line-- Help, Wifi Antenna-- on
> > alt.binaires.schematics.electronic
> > for a picture of my concept.
> > Looking to combine Helical antenna and Wifi adapter card in one unit.
> > My experience is limited to MW bcb. I know there are many pitfalls at
> > 2.4Ghz, so I'm looking for feedback on how to do this properly.
> > I'm using the following page as my guide.
> > http://www.wlan.org.uk/jhecker.html
> >
> > This is to extend the range of my laptop computer.
> >
> > Mike
>
> The Wifi Helical antenna is an awful lot of work, and the performance of
> even long structures on PVC tubing is vastly disappointing. The easiest 15
> dBi (my measurement) gain antenna is the Biquad. In fact, if you make the
> biquad with circular instead of square loops, the construction is even
> easier, and there's no problem measuring with all those bends - - just one
> wavelength of straight wire in a circular loop for each section - -
> http://www.wikarekare.org/Antenna/bicircle.html But try to keep a 50-ohm
> coaxial configuration all the way to the feed points as in
> http://homepages.ihug.co.nz/~redwood4/ It isn't necessary to keep the
> polyethylene insulation - - for a short length of air insulated coax, the
> tubing ID should be 2.25 times the center conductor OD for 50 ohms
> impedance.
>
> If you are like me, you will probably want to build the Helical anyway - -
> just to see, and perhaps to compare against the two easiest wifi antennas
> with decent performance - Biquad and Waveguide
> http://www.saunalahti.fi/elepal/antenna2.html The easiest waveguide can is
> the 83mm ID one you get with the 28oz size of Bush's Baked Beans or any of
a
> number of other products like canned spaghetti sauce or family size
> Spaghettis.
>
> See if you can get a USB Wi-Spy Spectrum Analyzer module, too - - try to

> find one of the original (no external antenna - - cheaper) versions, and
> just put it in your own shielding enclosure and make your own modification
> to cut the path to the built-in antenna so that you can run a small coax
to
> a connector on the box for your own external antenna connection. This kind
> of modification has been made by others - -
>
http://www.metageek.net/default.aspx?tabid=463&forumid=11&postid=1395&view=topic
> scroll down to the post by pe2er on 9/9/06 showing how to connect a coax
to
> the board. I used a type N connector on my enclosure because it's
universal
> and strong, and filtered the three USB supply and signal wires with
> feed-thru capacitors so no RF can enter the enclosure through these other
> paths. Use Metageek.'s Chanalyzer software to run the Wi-Spy module - -
> preferably version 2.0 before the current 2.1.4 came out, since the need
for
> compatibility with both the $199 Wi-Spy and the $399 Wi-Spy made operation
> with the $199 Wi-Spy somewhat unsatisfactory. Maybe you can ask Metageek
to
> allow access to previous Chanalyzer 2.0 for owners of the older units. Why
> do you want all this? So you can make accurate measurement of the
> differences between antennas, using a reference 1/2-wave dipole, or the
> standard RPSMA antenna you find on most Wifi Routers. The dB calibration
of
> the Chanalyzer display is very accurate.
>
> Chuck W6PKP
>
>

3865. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 22:53:29 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <46A7D45E.2010802@worldnet.att.net>
Source record: 38075

The Shadow wrote:
> "The Shadow" <Repose@Zilch.com> wrote in message
> news:%3wpi.16011$6K3.11361@newsfe10.phx...
>
>>"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
>>news:46A680EB.3090105@worldnet.att.net...
>>
>>>I am thinking it may finally be time to replace my old tribander. Based
>>>on size, weight, mast size and power handling capability, I found two
>>>popular models that are good candidates. Looking for comments and
>>>comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>>>73
>>>John
>>>
>>
>>John I would try to put up an HF beam that also covers 17M and 12M as well
>>as 10, 15, and 20M These are great bands.
>>
>>Lamont
>
> Is the Cushcraft MA5B too big? Covers 12 and 17M as 10, 15, and 20M
>
> URL:
> http://www.cushcraft.com/Wireless_Product_Details.asp?group_id=1717
>
> Lamont
>
>
While including 12 and 17 is not a bad idea, the antenna models I have
seen that add these bands are generally
heavier with greater wind area than I want to handle. The MA5B, while
not too big, reduces the 10, 15 and 20 performance significantly and
only gets you a rotatable dipole for 12 and 17. I would rather stay
with the tribander and the vertical I have for 12 and 17.

Moseley has some antennas out there that have the same performance
across all 5 bands but now we are talking quite a bit heavier.
John

3866. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 22:54:11 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <46A7D489.10100@worldnet.att.net>
Source record: 38076

gb wrote:
> "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
> news:46A680EB.3090105@worldnet.att.net...
>
>>I am thinking it may finally be time to replace my old tribander. Based on
>>size, weight, mast size and power handling capability, I found two popular
>>models that are good candidates. Looking for comments and comparisons
>>between the HyGain TH3MK4 and the Cushcraft A3s.
>>73
>>John
>>
>
>
> What is an "old tribander" -- Wilson? Mosley? Homemade?
>
> gb
>
>
TH3Jr Old is approaching 30 years of use.

3867. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 22:55:44 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <46A7D4EF.9010507@worldnet.att.net>
Source record: 38077

Jimmie D wrote:
> "The Shadow" <Repose@Zilch.com> wrote in message
> news:%3wpi.16011$6K3.11361@newsfe10.phx...
>
>>"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
>>news:46A680EB.3090105@worldnet.att.net...
>>
>>>I am thinking it may finally be time to replace my old tribander. Based
>>>on size, weight, mast size and power handling capability, I found two
>>>popular models that are good candidates. Looking for comments and
>>>comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>>>73
>>>John
>>>
>>
>>John I would try to put up an HF beam that also covers 17M and 12M as well
>>as 10, 15, and 20M These are great bands.
>>
>>Lamont
>>I remeber my friend replacing his tri-bander about 5 years ago with a
>>multi-band quad(2 elemnts on each band). The quad while being a pain in the
>>butt to get on the tower was a much superior performing antenna per he.
>
>
>
> Jimmie
>
>
Could be. However I have VHF/UHF antennas above that would not work
with a quad.

3868. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 23:55:33 UTC
From: Joel Kolstad <JKolstad71HatesSpam@yahoo.com>
Message-ID: <13afonll9j6o797@corp.supernews.com>
Source record: 38078
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Allodoxaphobia" <bit-bucket@config.com> wrote in message
news:slrnfafjmn.2l1g.bit-bucket@shell.config.com...
> But, I suppose that believing, as did an earlier poster:
> "Bear in mind that 2.4GHz is also an amateur band where no erp limits
> exist!!"
> is acceptable for these No-Code, No-Klew Licensees?

That's what you get when at least the ARRL seems to be primarily interested in keeping the number of amateurs high even as society in general seems to be less and less willing to work a little for a bit of knowledge.

Significant power is still hard enough to come by at 2.4GHz that most of them will probably run out of interest or money before doing *too* much damage. :-) That being said, it's not like you need that much power to go impressive distances anyway; see: http://www.wifiworldrecord.com/ .

---Joel

3869. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-25 23:55:50 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <46A7E308.EEBD3CAC@earthlink.net>
Source record: 38079
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Dave Martindale wrote:
>
> "mike" <amdx@knology.net> writes:
>
> >Hi Jerry, Please review the picture I posted on
> >alt.binaires.schematics.electronic
> >in it you will see I'm trying to avoid connectors and cable carrying 2.4Ghz
> >R.F.
> > Thanks for being the only poster to have anything near a response to my
> >post.
>
> Do note that many people's Usenet servers do not carry any binaries
> groups, so they will be unable to look at your picture. If you were to
> place the photo on a server where it can be accessed by HTTP or FTP,
> these people would be able to get it. Many ISPs provide some web space
> served by their own web server, and there are free photo hosting sites
> like flickr.
>
> Dave

http://www.usenet-replayer.com/groups/alt.binaries.schematics.electronic.html

--
Service to my country? Been there, Done that, and I've got my DD214 to
prove it.
Member of DAV #85.

Michael A. Terrell
Central Florida

3870. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 00:01:32 UTC
From: amdx <amdx@knology.net>
Message-ID: <93740$46a7e468$18d6b40c$14811@KNOLOGY.NET>
Source record: 38080
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

```
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:lePpi.8517$Ub7.1313@trnddc04...
>
> "mike" <amdx@knology.net> wrote in message
> news:52fd5$46a7a24c$18d6b40c$21937@KNOLOGY.NET...
>>
>> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
>> news:KGKpi.5345$Da.3887@trnddc07...
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>>> "amdx" <amdx@knology.net> wrote in message
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>>>> Please see subject line-- Help, Wifi Antenna-- on
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>>>> for a picture of my concept.
>>>> Looking to combine Helical antenna and Wifi adapter card in one unit.
>>>> My experience is limited to MW bcb. I know there are many pitfalls at
>>>> 2.4Ghz, so I'm looking for feedback on how to do this properly.
>>>> I'm using the following page as my guide.
>>>> http://www.wlan.org.uk/jhecker.html
>>>>
>>>> This is to extend the range of my laptop computer.
>>>>
>>>> Mike
>>>
>>> Hi Mike
>>>
>>> You sure find some great information on the Web.
>>>
>>> I consider this article Jason Hecker publishes
>>> http://www.wlan.org.uk/jhecker.html to be ALL the instructions anyone
>>> would need for constructing a 20 dB directivity WiFi antenna. I am
>>> looking for some feedback from you on its performance.
>>>
>>> If you plan to investigate basic effects of changing size and shape of
>>> Helix antennas, EZNEC sure makes Helix antenna investigation easy.
>>>
>>> I am just curious, what kind of coax and connectors are you using, and,
>>> ?how much coax?.
>>>
>>> Jerry
>> Hi Jerry, Please review the picture I posted on
>> alt.binaires.schematics.electronic
>> in it you will see I'm trying to avoid connectors and cable carrying
```

>> 2.4Ghz R.F.
>> Thanks for being the only poster to have anything near a response to my
>> post.
>> Mike
>
>
> Hi Mike
>
> My computer skills are really lacking. I dont know how to view your
> images. I do spend alot of time learning about antennas. One of my
> buddies tells me that he had poor results with the helix he built from the
> instructions you cited. This site seems to have been better for my buddy.
> http://www.pa0hoo.tk/.
> Is it practical for you to use a Bridge at the input terminals of your
> gain antenna so that the coax loss is minimized? That way, the antenna
> (+Bridge) is connected to the computer with CAT 5 cable.
> If it isnt too complicated, tell me how to view your images.
>
> Thanks
> Jerry
>

Hi Jerry,
I posted the drawing on another newsgroup called
>alt.binaires.schematics.electronic<
Not all ISPs carry binairy files so maybe you can't see it, if your address
is good I'll
email the drawing.
I looked at the site and it discouraged me. One site says 34mm diameter
tube another
42mm, one says a 71mm impedance match strip then another says it's longer. I
have no
way to measure the antenna when finished so I'd like to at least start with
the right
dimensions. I will say at least the site you gave does have some equipment
and his
measurements and reasoning make sense.
What is a bridge? I plan on putting a Usb wifi adapter at the antenna.
I hope to remove the smt antenna on the USB wifi card and attach the helical
antenna.
Thanks, Mike

3871. Re: Malfunctioning homebrew field strength meter

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 00:03:12 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f88oc3ril1@nnrp.linuxfan.it>
Source record: 38081

amdx wrote:

[...]

Interesting; why bother?

You know about "hotspot finders?"

http://www.iogear.com/main.php?loc=product&Item=GWF001
http://www.jiwire.com/detector-shootout-contenders.htm
http://www.pctoday.com/Editorial/article.asp?article=articles/2005/t0308/32t08/32t08.asp&guid=
http://www.trendnet.com/products/TEW-429UB.htm

Most all detectors will give a 1-4 or 1-5 led "readout" of signal
strength. A couple will tell you the type of encryption being used by
the wireless device, signal strength, channel, etc.; and the tew-429ub
is BOTH a "Wireless USB Adapter AND Wifi Detector!"

The iogear unit is available at most walmarts for $19.??

Regards,
JS

3872. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 00:20:18 UTC
From: amdx <amdx@knology.net>
Message-ID: <98aa1$46a7e8cf$18d6b40c$27609@KNOLOGY.NET>
Source record: 37982
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Chuck Olson" <chuckolson01@REMOVETHIScomcast.net> wrote in message
news:M8OdnVWDR5DJMTrbnZ2dnUVZ_r-vnZ2d@comcast.com...
>
> "amdx" <amdx@knology.net> wrote in message
> news:e2a88$46a76893$18d6b40c$7378@KNOLOGY.NET...
>> Please see subject line-- Help, Wifi Antenna-- on
>> alt.binaires.schematics.electronic
>> for a picture of my concept.
>> Looking to combine Helical antenna and Wifi adapter card in one unit.
>> My experience is limited to MW bcb. I know there are many pitfalls at
>> 2.4Ghz, so I'm looking for feedback on how to do this properly.
>> I'm using the following page as my guide.
>> http://www.wlan.org.uk/jhecker.html
>>
>> This is to extend the range of my laptop computer.
>>
>> Mike
>
> The Wifi Helical antenna is an awful lot of work, and the performance of
> even long structures on PVC tubing is vastly disappointing. The easiest 15
> dBi (my measurement) gain antenna is the Biquad. In fact, if you make the
> biquad with circular instead of square loops, the construction is even
> easier, and there's no problem measuring with all those bends - - just one
> wavelength of straight wire in a circular loop for each section - -
> http://www.wikarekare.org/Antenna/bicircle.html But try to keep a 50-ohm
> coaxial configuration all the way to the feed points as in
> http://homepages.ihug.co.nz/~redwood4/ It isn't necessary to keep the
> polyethylene insulation - - for a short length of air insulated coax, the
> tubing ID should be 2.25 times the center conductor OD for 50 ohms
> impedance.
>
> If you are like me, you will probably want to build the Helical anyway - -
> just to see, and perhaps to compare against the two easiest wifi antennas
> with decent performance - Biquad and Waveguide
> http://www.saunalahti.fi/elepal/antenna2.html The easiest waveguide can is
> the 83mm ID one you get with the 28oz size of Bush's Baked Beans or any of
> a
> number of other products like canned spaghetti sauce or family size
> Spaghettis.
>
> See if you can get a USB Wi-Spy Spectrum Analyzer module, too - - try to
> find one of the original (no external antenna - - cheaper) versions, and
> just put it in your own shielding enclosure and make your own modification

> to cut the path to the built-in antenna so that you can run a small coax
> to
> a connector on the box for your own external antenna connection. This kind
> of modification has been made by others - -
> http://www.metageek.net/default.aspx?tabid=463&forumid=11&postid=1395&view=topic
> scroll down to the post by pe2er on 9/9/06 showing how to connect a coax
> to
> the board. I used a type N connector on my enclosure because it's
> universal
> and strong, and filtered the three USB supply and signal wires with
> feed-thru capacitors so no RF can enter the enclosure through these other
> paths. Use Metageek.'s Chanalyzer software to run the Wi-Spy module - -
> preferably version 2.0 before the current 2.1.4 came out, since the need
> for
> compatibility with both the $199 Wi-Spy and the $399 Wi-Spy made operation
> with the $199 Wi-Spy somewhat unsatisfactory. Maybe you can ask Metageek
> to
> allow access to previous Chanalyzer 2.0 for owners of the older units. Why
> do you want all this? So you can make accurate measurement of the
> differences between antennas, using a reference 1/2-wave dipole, or the
> standard RPSMA antenna you find on most Wifi Routers. The dB calibration
> of
> the Chanalyzer display is very accurate.
>
> Chuck W6PKP
>
>
Thanks Chuck,
That BiQuad seems very simple and 14dbi seems like a lot for a simple
small antenna.
As for all the other fun stuff, not now, all I want now is internet access.
But I need some gain.
I'm still waiting for my USB wifi adapter card to arrive. I hope to have an
antenna ready to
connect to the USB wifi adapter card.
Mike

3873. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 00:28:10 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f88pqs$us8$1@nnrp.linuxfan.it>
Source record: 37983
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

amdx wrote:

If you wish to use a router/switch/adapter with a fixed antenna, this
page may be helpful:

http://www.freeantennas.com/projects/template/

Regards,
JS

> Thanks Chuck,
> That BiQuad seems very simple and 14dbi seems like a lot for a simple
> small antenna.
> As for all the other fun stuff, not now, all I want now is internet access.
> But I need some gain.
> I'm still waiting for my USB wifi adapter card to arrive. I hope to have an
> antenna ready to
> connect to the USB wifi adapter card.
> Mike
>
>

3874. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 00:42:48 UTC
From: DMD <dmb@mon_email.com>
Message-ID: <Kw%pi.2163$dp3.11181@weber.videotron.net>
Source record: 37994

Force 12 C-3SS is a good choice also. For 3 bands, 10/15m is 2 elements full size, 20 m is 2 shorted elements and a rotary dipole on 12/17.

Only 26 pounds, 12 ' boom and 24 ' longuest element. Small but very performant antenna.

A bit more expensive. No heavy traps but a lot of aluminium tubing.

DMB

"The Shadow" <Repose@Zilch.com> a crit dans le message de news:y_wpi.39312$dI1.35381@newsfe08.phx...
>
> "The Shadow" <Repose@Zilch.com> wrote in message
> news:%3wpi.16011$6K3.11361@newsfe10.phx...
> >
> > "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
> > news:46A680EB.3090105@worldnet.att.net...
> >>I am thinking it may finally be time to replace my old tribander. Based
> >>on size, weight, mast size and power handling capability, I found two
> >>popular models that are good candidates. Looking for comments and
> >>comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
> >> 73
> >> John
> >>
> >
> > John I would try to put up an HF beam that also covers 17M and 12M as well
> > as 10, 15, and 20M These are great bands.
> >
> > Lamont
> Is the Cushcraft MA5B too big? Covers 12 and 17M as 10, 15, and 20M
>
> URL:
> http://www.cushcraft.com/Wireless_Product_Details.asp?group_id=1717
>
> Lamont
>
>

3875. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 01:04:06 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <aqSpi.3837$7w.79@trnddc05>
Source record: 37984
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

>>
>
> Hi Jerry,
> I posted the drawing on another newsgroup called
> >alt.binaires.schematics.electronic<
> Not all ISPs carry binairy files so maybe you can't see it, if your
> address is good I'll
> email the drawing.
> I looked at the site and it discouraged me. One site says 34mm diameter
> tube another
> 42mm, one says a 71mm impedance match strip then another says it's longer.
> I have no
> way to measure the antenna when finished so I'd like to at least start
> with the right
> dimensions. I will say at least the site you gave does have some equipment
> and his
> measurements and reasoning make sense.
> What is a bridge? I plan on putting a Usb wifi adapter at the antenna.
> I hope to remove the smt antenna on the USB wifi card and attach the
> helical antenna.
> Thanks, Mike

Hi Mike

I am too much 'a beginner' to be a good advisor for how to hook up devices for WiFi reception. So, I wont try to define what a Bridge is. I will do about anything (affordable) that allows the elimination of the coax in a 2.4 GHz system.
I do have some experience with making WiFi systems to extend the distance at which Internet connections can be achieved. On one system I made for a guy in Ranchita Calif, who has an agricultural business about 1/4 mile from his house. I put an access point on a 4 foot diameter dish so he uses only CAT 5 cable from his home Router to illuminate the dish. I then put a Bridge on a smaller dish with CAT 5 cable to connect that dish to his lap top in the field. It worked. My objective was to be able to use highly directive antennas yet minimize coax line losses.
I think the use of a USB wireless adapter (TRENDnet TEW-445UB) Would be easier than the way I made my system. Show Me cables sells reversing polarity adapters that make it possible to use normal SMA connectors to the TRENDnet USB TEW-445UB

Your project interests me. Tell me what you finally decide to do.
I have rejected the Helix. They are more difficult for me to understand than a Yagi. The Helix is circularly polarized, so you loose 3 dB "off the

top" of any gain (directivity) plots. The Yagi is fairly easy to model with EZNEC, so you can be fairly well assured that whatever you build will work like the model.

Jerry

3876. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 01:05:28 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <srSpi.4065$9A6.827@trnddc01>
Source record: 37985

"Owen Duffy" <none@no.where> wrote in message
news:Xns99794F84BAB44nonenowhere@61.9.191.5...
> "Wayne" <mygarbagecan@verizon.net> wrote in
> news:cbKpi.3766$7w.1151@trnddc05:
>
> ...
>> You might try the matching system used on the old "Gotham Vertical".
>> This uses a tapped coil from the base of the mast to ground. The top
>> of the coil is tapped down until resonance is found. Coax braid is
>> to ground, and the coax center conductor is tapped up from the bottom
>> of the coil for best match.
>
> Whilst this system might work for an antenna with a capacitive feedpoint,
> will it work for an inductive feedpoint such as this ~3/8 lambda attena?
>
> Owen

Just add enough coil to bring it to 3/4 lambda resonance. Wouldn't that
work?

3877. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 01:31:53 UTC
From: amdx <amdx@knology.net>
Message-ID: <a590$46a7f995$18d6b40c$29490@KNOLOGY.NET>
Source record: 37986
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:aqSpi.3837$7w.79@trnddc05...
>
>>>
>>
>> Hi Jerry,
>> I posted the drawing on another newsgroup called
>> >alt.binaires.schematics.electronic<
>> Not all ISPs carry binairy files so maybe you can't see it, if your
>> address is good I'll
>> email the drawing.
>> I looked at the site and it discouraged me. One site says 34mm diameter
>> tube another
>> 42mm, one says a 71mm impedance match strip then another says it's
>> longer. I have no
>> way to measure the antenna when finished so I'd like to at least start
>> with the right
>> dimensions. I will say at least the site you gave does have some
>> equipment and his
>> measurements and reasoning make sense.
>> What is a bridge? I plan on putting a Usb wifi adapter at the antenna.
>> I hope to remove the smt antenna on the USB wifi card and attach the
>> helical antenna.
>> Thanks, Mike
>
>
> Hi Mike
>
> I am too much 'a beginner' to be a good advisor for how to hook up
> devices for WiFi reception. So, I wont try to define what a Bridge is.
> I will do about anything (affordable) that allows the elimination of the
> coax in a 2.4 GHz system.
> I do have some experience with making WiFi systems to extend the distance
> at which Internet connections can be achieved. On one system I made for
> a guy in Ranchita Calif, who has an agricultural business about 1/4 mile
> from his house. I put an access point on a 4 foot diameter dish so he
> uses only CAT 5 cable from his home Router to illuminate the dish. I then
> put a Bridge on a smaller dish with CAT 5 cable to connect that dish to
> his lap top in the field. It worked. My objective was to be able to
> use highly directive antennas yet minimize coax line losses.
> I think the use of a USB wireless adapter (TRENDnet TEW-445UB) Would be
> easier than the way I made my system. Show Me cables sells reversing
> polarity adapters that make it possible to use normal SMA connectors to

> the TRENDnet USB TEW-445UB
>
> Your project interests me. Tell me what you finally decide to do.
> I have rejected the Helix. They are more difficult for me to
> understand than a Yagi. The Helix is circularly polarized, so you loose
> 3 dB "off the top" of any gain (directivity) plots. The Yagi is fairly
> easy to model with EZNEC, so you can be fairly well assured that whatever
> you build will work like the model.
>
> Jerry
Jerry, I was thinking you would come back and say a bridge is the same as a
usb wifi adapter, but I guess not. Have you looked at my drawing I sent
you?
Mike

3878. KE5IQM

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 01:53:45 UTC
From: Norman Patrick <normanpatrick@sbcglobal.net>
Message-ID: <K8Tpi.20701$rL1.6647@newssvr19.news.prodigy.net>
Source record: 37990

KE5IQM -check out a new website www.KE5IQM.com Thanks!

3879. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 02:04:43 UTC
From: dplatt@radagast.org
Message-ID: <r2cln4-qee.ln1@radagast.org>
Source record: 37987
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

In article <a590$46a7f995$18d6b40c$29490@KNOLOGY.NET>,
amdx <amdx@knology.net> wrote:

> Jerry, I was thinking you would come back and say a bridge is the same as a
>usb wifi adapter, but I guess not.

Mike,

If I may chime in here...

In somewhat-simplified Ethernet-networking terms, a "bridge" is a
device which joins two Ethernet segments together, by forwarding
Ethernet packets from one network to the other based on the Ethernet
MAC address of the system to which the packet is being sent. It makes
the decision to forward (or not) without changing (or even acting
upon) their contents at any higher protocol level (e.g. IP address).
An Ethernet switch is a form of bridge. In most respects, a bridge is
"invisible" to the systems whose packets it is forwarding - they don't
even know it's there.

This is distinguished from a router, which makes the forwarding
decision based on a higher-level protocol (e.g. IP address), and which
is "known" directly to the systems that are using it.

An 802.11 access point tends to behave like a bridge, from the point
of view of those devices which are connected to its wired-Ethernet
ports. The devices whose packets are being bridged (via radio) out
through the access point don't realize that this is occurring.

In most 802.11 applications, the wireless client systems *do* know
that they're talking to an access point - they do all of the 802.11
protocol stuff (e.g. access-point scanning, requesting association,
the client side of key negotiation, etc.) themselves, in the device
adapter or firmware or driver. The USB or PCI 802.11 interfaces in
these devices are *not* bridges.

However, it's possible to build a device which looks outwardly like an
802.11 access point, in that it has a radio and antenna(s) and an
Ethernet port, but which implements the _client_ side of 802.11 rather
than the access-point side. You can then connect this to a PC (via
wired Ethernet), and *it* will establish an 802.11 connection with an
existing access point, and then start bridging packets from the wired
Ethernet to the access point. The PC plays no direct part in the
wireless connection setup - it simply transmits packets to what it
"thinks" is a hub or switch, and the "wireless bridge" sends them to
the access point.

You'll sometimes see these devices referred to as a form of "gaming adapter", because they often have higher performance than typical USB or PCI 802.11 adapters and don't burden the host CPU as much... and are thus popular with players of high-performance PC videogames.

Many of the newer all-in-one "802.11 access point, router, firewall, and wired-Ethernet switch" products can be configured in this way via software... they'll take the client role in an 802.11 network just as happily as the role of an access point. Most of them cannot do both things at once - they can serve as an outbound bridge, or as an access point for a local WLAN, but not both.

So, I think you have at least three basic alternatives for how you can set up the remote/client end of a longer-distance wireless link:

- Run a big, heavy low-loss coaxial cable from your PC's 802.11 adapter antenna jack, up to your antenna (dish or biquad or helical or waveguide-can). For really low loss over long distances, plan on using something like 2" heliax (which is to say, you really don't want to do this!)

- Run a USB cable (extended as necessary with 15' "active" USB repeater cables) up to the antenna, and connect a USB/802.11 adapter there (e.g. stick the adapter at the focal point of a dish, or at the feedpoint in a waveguide can). Google for "Wok-fi".

- Run a CAT-5 Ethernet cable and DC power up to the dish, install an 802.11 bridge right at the antenna, and connect the Ethernet cable to your PC's wired-Ethernet port.

It's worth noting that most methods of attaching an external antenna to a commercial 802.11 adapter are likely to void the adapter's Part 15 certification, and make the adapter techically illegal to use for transmission. 802.11 radios and their associated antennas are required to be tested and certificated as a complete system.

I've rarely heard of anyone being hassled by the FCC for doing this, though.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

3880. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 02:12:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13ag0p7tj865ga5@corp.supernews.com>
Source record: 37988

Wayne wrote:
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns99794F84BAB44nonenowhere@61.9.191.5...
>> "Wayne" <mygarbagecan@verizon.net> wrote in
>> news:cbKpi.3766$7w.1151@trnddc05:
>>
>> ...
>>> You might try the matching system used on the old "Gotham Vertical".
>>> This uses a tapped coil from the base of the mast to ground. The top
>>> of the coil is tapped down until resonance is found. Coax braid is
>>> to ground, and the coax center conductor is tapped up from the bottom
>>> of the coil for best match.
>> Whilst this system might work for an antenna with a capacitive feedpoint,
>> will it work for an inductive feedpoint such as this ~3/8 lambda attena?
>>
>> Owen
>
> Just add enough coil to bring it to 3/4 lambda resonance. Wouldn't that
> work?

No. Adding a coil won't bring the system to resonance -- you can't
cancel inductive reactance by adding inductive reactance. The fact that
a small coil behaves somewhat like a short piece of wire has fooled some
people into thinking that a large coil acts like a long piece of wire.
It doesn't.

Roy Lewallen, W7EL

3881. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 02:33:07 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns99797FAE8E9CCnonenowhere@61.9.191.5>
Source record: 37989

"Wayne" <mygarbagecan@verizon.net> wrote in
news:srSpi.4065$9A6.827@trnddc01:

>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns99794F84BAB44nonenowhere@61.9.191.5...
>> "Wayne" <mygarbagecan@verizon.net> wrote in
>> news:cbKpi.3766$7w.1151@trnddc05:
>>
>> ...
>>> You might try the matching system used on the old "Gotham
>>> Vertical". This uses a tapped coil from the base of the mast to
>>> ground. The top of the coil is tapped down until resonance is
>>> found. Coax braid is to ground, and the coax center conductor is
>>> tapped up from the bottom of the coil for best match.
>>
>> Whilst this system might work for an antenna with a capacitive
>> feedpoint, will it work for an inductive feedpoint such as this ~3/8
>> lambda attena?
>>
>> Owen
>
> Just add enough coil to bring it to 3/4 lambda resonance. Wouldn't
> that work?

I don't really understand exactly what you mean, though I know it is a
popular proposition.

If the antenna feedpoint is around 100+j300 (see my previous posting),
the simplest matching network is an L network, and there are two
solutions to it, but both L networks in this specific case require an L
and a C, and both use practical values of L and C. For example, a 84pf
capacitor in shunt with the feedpoint, then a 2.4uH inductor in series
from the feedline to the feedpoint will deliver that transformation with
reasonable efficiency and with one side of the capacitor grounded.

Can you propose the values of a two inductor L network, or a tapped
inductor that will transform 100+j300 to 50+j0.

Owen

3882. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 07:37:29 UTC
From: Spajky <Spajky@##volja.net>
Message-ID: <f7gga31seropg0akodb4d5jva4fem8392g@4ax.com>
Source record: 37991
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On Wed, 25 Jul 2007 10:13:26 -0500, "amdx" <amdx@knology.net> wrote:

> Help, Wifi Antenna

>Looking to combine Helical antenna and Wifi adapter card in one unit.
> I know there are many pitfalls at
>2.4Ghz, so I'm looking for feedback on how to do this properly.

>This is to extend the range of my laptop computer.

Why not to use an older 802.11g
Usb Wlan stick (good one w/ onboard chip smd ceramic antenna, much
better than w/ Pcb printed one) & some "metal" DIY "range enhancers"
? :-)

See pics & data & measures in cm
to get some clues & ideas
(text is in my native-slovene, so you won´t understand it;
sorry, still had no time to make an english version of that articles
for those UsbKey active antennas; inside URLs can be also seen at
wish...)

DIY wifi USBkeY range Enhancers-boosters ´4 Dummies´ :-)
http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&p=26476#26476

Ultimate wifi antenna TinCan Enhancers - part-2 ... :-)
http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&t=4782

problems with Usb cable lenght limitation? No more even w/o powered
hubs ... :-) (DIY, custom up to 21m, all data in english there on
schematics!))

http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&t=4216

Have fun! :-)

There is also to check other stuff at wish:

Default Wlan Pci Card antenna_on_cable Enhancer 6dBi
http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&t=3847

Cornet enhancers for some different type antennas up to 12dBi
http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&t=4241

& also parabolic pot or wok cover (+ bucket shape add-on) "passive"
antenna experiment with at least 20dBi gain:
ST™-maxX antena (= project-X) 21dbi
http://www.wlan-sat.com/modules.php?name=Forums&file=viewtopic&t=3993

well, I think that now you´ve got enough material (pics &
drawings/sketches) to check & maybe try some stuff by yourself :-))
--
Regards , SPAJKY ®
mail addr. @ my site @ http://www.spajky.vze.com
5y - "Tualatin OC-ed / BX-Slot1 / inaudible setup!"

3883. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 08:13:02 UTC
From: Jeff <jeff@local.host>
Message-ID: <46a857bf$0$1340$834e42db@reader.greatnowhere.com>
Source record: 37992
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"> Well.. not all the 802.11b/g channels are in the amateur band, and even
> there, there is a power limit (transmitter output power, though, not
> EIRP), so you could conceivably fire up your 1500 Watt transmitter into a
> 20dBi antenna and blast away.
>

That is what the moonbounce operators do, but with more antenna gain!!

> There is the other rule about minimum power needed for communication,
> though.

Again moonbounce is not uncommon in the 13cms band.

Jeff

3884. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 08:15:44 UTC
From: Jeff <jeff@local.host>
Message-ID: <46a85861$0$1340$834e42db@reader.greatnowhere.com>
Source record: 37993
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Allodoxaphobia" <bit-bucket@config.com> wrote in message
news:slrnfaf3rq.2f55.bit-bucket@shell.config.com...
> On Wed, 25 Jul 2007 18:12:26 +0100, Jeff wrote:
>>
>>> Note that in almost all places there are legal limitations on EIRP
>>> (Effective Incident Radiated Power). In plain English, the more
>>> you narrow a signal, the stronger it becomes.
>>>
>>> Since you did not say where you are, I'll mention the two places I
>>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>>
>> Bear in mind that 2.4GHz is also an amateur band where no erp limits
>> exist!!
>
> Oh , really ?! cite!

Channels 1 to 6 lie with the 13cms amateur band, which does vary a little
from country to country nut in the UK is 2310-2450MHz, and there is no ERP
restriction in this band just a max power to the antenna, which can have as
much gain as you can muster.

Jeff

3885. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 11:39:57 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <46a88808@clear.net.nz>
Source record: 37995

```
Owen Duffy wrote:
> "Wayne" <mygarbagecan@verizon.net> wrote in
> news:srSpi.4065$9A6.827@trnddc01:
>
>
>>"Owen Duffy" <none@no.where> wrote in message
>>news:Xns99794F84BAB44nonenowhere@61.9.191.5...
>>
>>>"Wayne" <mygarbagecan@verizon.net> wrote in
>>>news:cbKpi.3766$7w.1151@trnddc05:
>>>
>>>...
>>>
>>>>You might try the matching system used on the old "Gotham
>>>>Vertical". This uses a tapped coil from the base of the mast to
>>>>ground. The top of the coil is tapped down until resonance is
>>>>found. Coax braid is to ground, and the coax center conductor is
>>>>tapped up from the bottom of the coil for best match.
>>>
>>>Whilst this system might work for an antenna with a capacitive
>>>feedpoint, will it work for an inductive feedpoint such as this ~3/8
>>>lambda attena?
>>>
>>>Owen
>>
>>Just add enough coil to bring it to 3/4 lambda resonance. Wouldn't
>>that work?
>
>
> I don't really understand exactly what you mean, though I know it is a
> popular proposition.
>
> If the antenna feedpoint is around 100+j300 (see my previous posting),
> the simplest matching network is an L network, and there are two
> solutions to it, but both L networks in this specific case require an L
> and a C, and both use practical values of L and C. For example, a 84pf
> capacitor in shunt with the feedpoint, then a 2.4uH inductor in series
> from the feedline to the feedpoint will deliver that transformation with
> reasonable efficiency and with one side of the capacitor grounded.
>
> Can you propose the values of a two inductor L network, or a tapped
> inductor that will transform 100+j300 to 50+j0.
>
> Owen
```

Thanks Guys!
That has already given me a few ideas.
The G5RV is supported by the mast but it is electrically isolated and about 300 mm away from the mast itself.
Of course there will be coupling effects but the idea is to tune them out as much as possible for single band use. Operation is mainly on CW at the low end of the band.
This then might give me 2 antennas on a rather restricted section, and an alternative especially for receiving.
Many years ago I got very good results with a pair of 1/4 waves verticals on a bonded iron roof fed with tapped coax to give a cardioid pattern. It was a superb 20M rx antenna and I worked a lot of "antipodean" stations in the western Med area even when the band was apparently dead back in the 1970's.
Can anyone suggest a good text on matching network design?
Now I'm retired I no longer have easy access to Auckland University's library for reference and will need to make special arrangements.

73's
Cliff Wright ZL1BDA ex G3NIA

3886. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 12:08:13 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <l33ha395c5kjmcsai1a46tmmqm54ljr065@4ax.com>
Source record: 37996

On Wed, 25 Jul 2007 16:20:52 +1200, cliff wright
<c.c.wright@paradise.net.nz> wrote:

>Good day all.
>Have run into a bit of a problem matching my G5RV's support mast as a
>vertical on 20 metres.
>The mast is 7.5 metres high and insulated from ground with 4 radials at
>ground level but insulated from ground by installation along fence lines.
>Obviously a typical 1/4 wave vertical would be ~5.1 metres high, but I
>had hopes of base loading the 7.5 metre mast to act as a sort of "short
>5/8 wave" vertical on 20. Feed is 50 Ohm coax buried up to the matching box.
>After a lot of research both in books and on the web I have found very
>little information on the design of an antenna like this.
>Anyone had any experience of such an idea?
>I have plenty of airspaced inductor stock and TX type capacitors for the
>network, and as I usually only run about 150 watts here that shouldn't
>be too critical.
>Any ideas gratefully received!
>
>73's Cliff Wright ZL1BDA ex G3NIA.
My approach to this situation would be to download the demo version of
EZNEC, model the vertical with the objective of de terming the needed
reactance for tuning, acquire (or have someone else run their copy) of
TLW (ARRL Antenna Handbook software) and pick the easiest matching
setup for you. If you fabricate the matching device and it is not even
close to matching then you don't have an accurate model of the antenna
in EZNEC.

Four radials will work but not real well.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

3887. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 16:55:07 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <Ll4qi.15820$U47.4532@trnddc08>
Source record: 37997

```
"Owen Duffy" <none@no.where> wrote in message
news:Xns99797FAE8E9CCnonenowhere@61.9.191.5...
> "Wayne" <mygarbagecan@verizon.net> wrote in
> news:srSpi.4065$9A6.827@trnddc01:
>
>>
>> "Owen Duffy" <none@no.where> wrote in message
>> news:Xns99794F84BAB44nonenowhere@61.9.191.5...
>>> "Wayne" <mygarbagecan@verizon.net> wrote in
>>> news:cbKpi.3766$7w.1151@trnddc05:
>>>
>>> ...
>>>> You might try the matching system used on the old "Gotham
>>>> Vertical". This uses a tapped coil from the base of the mast to
>>>> ground. The top of the coil is tapped down until resonance is
>>>> found. Coax braid is to ground, and the coax center conductor is
>>>> tapped up from the bottom of the coil for best match.
>>>
>>> Whilst this system might work for an antenna with a capacitive
>>> feedpoint, will it work for an inductive feedpoint such as this ~3/8
>>> lambda attena?
>>>
>>> Owen
>>
>> Just add enough coil to bring it to 3/4 lambda resonance. Wouldn't
>> that work?
>
> I don't really understand exactly what you mean, though I know it is a
> popular proposition.
>
> If the antenna feedpoint is around 100+j300 (see my previous posting),
> the simplest matching network is an L network, and there are two
> solutions to it, but both L networks in this specific case require an L
> and a C, and both use practical values of L and C. For example, a 84pf
> capacitor in shunt with the feedpoint, then a 2.4uH inductor in series
> from the feedline to the feedpoint will deliver that transformation with
> reasonable efficiency and with one side of the capacitor grounded.
>
> Can you propose the values of a two inductor L network, or a tapped
> inductor that will transform 100+j300 to 50+j0.
>
> Owen
I spent some time pondering this with EZNEC and a smith chart. No, I can't
come up with an inductive way to match it. I learned somthing
```

today...thanks!

3888. Re: Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 17:09:29 UTC
From: Bam Bam <bamyili@hotmail.com>
Message-ID: <1185469769.761166.285260@m37g2000prh.googlegroups.com>
Source record: 37998

On Jul 25, 9:24 am, DeanO <dxbl...@tecoenergy.com> wrote:

Thanks very much for the advice Dean! I took your advice and just cut
everything as per the normal calculations. As luck would have it, the
first time I fired it up I had a 1:3 SWR.

Thanks again.

> On Jul 25, 11:47 am, Bam Bam <bamy...@hotmail.com> wrote:
>
>
>
>
>
> > I am making a simple 1/4 wave ground plane antenna and have two rather
> > silly question regarding its measurements.
>
> > 1. I've attached an SO-239 connecter to a 5x5 inch aluminum plate.
> > When measuring the length of the radials, I measure from the center
> > conductor of the SO-239 to the end of the radial taking into account
> > the plate, correct?
>
> > 2. If I make a loop in the vertical radiating element so that I may
> > hang the antenna, does the circumference of the loop count in the
> > measurement of the element or the diameter? (e.g., if I need 20 inches
> > for the element, do I measure from the bottom of the SO-239 to the top
> > of the loop or do I take a 20 inch wire and make a loop not caring
> > that it has shortened the element slightly?)
>
> > Thanks
>
> > Bam Bam
>
> You need a grid dip meter or a good SWR bridge and get ready to tune
> "a little"
> here is why.... The PLATE adds capacitance and that will make the
> 'need' for your radial lengths to actually wind up shorter than you
> would calculate. Also the loop at the top of the antenna will add a
> little effective length because of the 'capacitance' of the loop (see
> capacitive hats in any antenna book) so rule of thumb ... is go ahead
> and use the formulas for 1/4 antenna wire, make the antenna that
> length and then 'prune' to get a better match at the frequency you
> plan to use. Also, you can change the angle of the radials in respect
> to the plate to change the impedance of the antenna. If you lower the
> radials (from straight out 90 deg) you will increase the antennas

> impedance and vice versa. This is done 'last' after you get the wire
> as best match after puning. Then experiment with the radials to
> further match the antenna. Donot worry about getting a 1:1 match.
> your time will be wasted with little improvement in performance I
> found less than 2:1 is usually very good and most solid state finals
> work with this well. Good Luck and have fun ... KD4Q Dean- Hide quoted text -
>
> - Show quoted text -

3889. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 17:29:10 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <KR4qi.26789$6K3.14649@newsfe10.phx>
Source record: 37999

"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
news:46A680EB.3090105@worldnet.att.net...
>I am thinking it may finally be time to replace my old tribander. Based on
>size, weight, mast size and power handling capability, I found two popular
>models that are good candidates. Looking for comments and comparisons
>between the HyGain TH3MK4 and the Cushcraft A3s.
> 73
> John
>
Just a comment John on Antennas - here comes the brag tape.

I worked the last 150+ countries to make Honor Roll with a Vertical -
Cushcraft R-7000 and an Ameritron AL-80B.

The first 150 countries was on a Hy-Gain TH-3Jr and barefoot.

Also Worked DXCC-QRP including Mozambique with the vertical and 5 Watts.

So a multi-band covering 20 - 10M + 17 and 12M should do ya just fine
Love dem 12M AND 17M bands

Just a thought

Lamont

3890. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 17:34:27 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns99798A25D7C4Ajxp16psuedu@128.118.141.40>
Source record: 38000

"DMD" <dmb@mon_email.com> wrote in
news:Kw%pi.2163$dp3.11181@weber.videotron.net:

> Force 12 C-3SS is a good choice also. For 3 bands, 10/15m is 2
> elements full size, 20 m is 2 shorted elements and a rotary dipole
> on 12/17.
>
>
>
> Only 26 pounds, 12 ' boom and 24 ' longuest element. Small but very
> performant antenna.
>
>
>
> A bit more expensive. No heavy traps but a lot of aluminium tubing.
>
>
>
> DMB
>
>
>
>
> "The Shadow" <Repose@Zilch.com> a crit dans le message de
> news:y_wpi.39312$dI1.35381@newsfe08.phx...
>>
>> "The Shadow" <Repose@Zilch.com> wrote in message
>> news:%3wpi.16011$6K3.11361@newsfe10.phx...
>> >
>> > "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
>> > news:46A680EB.3090105@worldnet.att.net...
>> >>I am thinking it may finally be time to replace my old tribander.
>> >>Based on size, weight, mast size and power handling capability, I
>> >>found two popular models that are good candidates. Looking for
>> >>comments and comparisons between the HyGain TH3MK4 and the
>> >>Cushcraft A3s.
>> >> 73
>> >> John
>> >>
>> >
>> > John I would try to put up an HF beam that also covers 17M and 12M
>> > as
> well

>> > as 10, 15, and 20M These are great bands.
>> >
>> > Lamont
>> Is the Cushcraft MA5B too big? Covers 12 and 17M as 10, 15, and 20M
>>
>> URL:
>> http://www.cushcraft.com/Wireless_Product_Details.asp?group_id=1717
>>
>> Lamont
>>
>>
>
>
>

Hi:
I have the Tennadyne 6 el Log periodic antenna. Covers 13 to 30Mhz with an SWR of under 2:1. It has a 12' boom and the longest element is 38'. No traps or any other trickery and weighs 37lb. I've had it up since 2002 and have worked DXCC on all bands and have about 1500 band countries. Which means nothing in reality as it's more of a mark of my persistence than antenna performance. The fact is the antenna performs just as the specs say and it stays up even with 1/2" of ice. I would look carefully at this antenna if you are looking for an all band high performance antenna.

John Passaneau, W3JXP

3891. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 18:54:05 UTC
From: nm5k@wt.net
Message-ID: <1185476045.317446.10860@d55g2000hsg.googlegroups.com>
Source record: 38001

On Jul 26, 11:55 am, "Wayne" <mygarbage...@verizon.net> wrote:

>
> I spent some time pondering this with EZNEC and a smith chart. No, I can't
> come up with an inductive way to match it. I learned somthing
> today...thanks!

A 3/8 wave radiator is easily matched with a single variable cap..
Or should be anyway...
MK

3892. Advantage in cancellation of radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 19:14:10 UTC
From: David <nospam@nospam>
Message-ID: <O6mdnS1nVI3hbzXbnZ2dnUVZ8sCsnZ2d@bt.com>
Source record: 38002

If the elevated radials on a quarterwave vertical antenna are horizontal, the radials cancel out the most for the far field. The impedance will probably be away from 50 ohms and therefore need matching.

If the radials are drooping, the antenna feedpoint impedance is close to 50 ohms.

Is there any advantage in having the radials horizontal to cancel out? Would there be any advantage for field pattern or for the near field? Would there be a dissipative effect? The field of the radials only cancels out in the far field and not the near field, so the radials are still live with RF and dangerous to touch.

3893. Re: Advantage in cancellation of radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 20:56:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g72ia39ptpvhf8p0bj9m3tobhjkbfnhkmr@4ax.com>
Source record: 38003

On Thu, 26 Jul 2007 20:14:10 +0100, "David" <nospam@nospam> wrote:

>Is there any advantage in having the radials horizontal to cancel out? Would
>there be any advantage for field pattern or for the near field?

Hi David,

Radials are a choice for matching more than radiation. Advantages to
radiating or not radiating are largely won or lost by accident. The
sloping radials do tend to improve match and provide more signal -
however, neither is earthshaking as an advantage.

>Would there be a dissipative effect?

Would it heat the air for any particular configuration? No. Drooping
radials being closer to the ground may lend to higher losses there;
but the "advantage" would be wider bandwidth.

73's
Richard Clark, KB7QHC

3894. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 22:14:18 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997A53CCE3F36nonenowhere@61.9.191.5>
Source record: 38004

nm5k@wt.net wrote in
news:1185476045.317446.10860@d55g2000hsg.googlegroups.com:

> On Jul 26, 11:55 am, "Wayne" <mygarbage...@verizon.net> wrote:
>
>>
>> I spent some time pondering this with EZNEC and a smith chart. No, I
>> can't come up with an inductive way to match it. I learned somthing
>> today...thanks!
>
> A 3/8 wave radiator is easily matched with a single variable cap..

Details?

> Or should be anyway...
> MK
>
>

3895. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 22:30:12 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997A567F624E6nonenowhere@61.9.191.5>
Source record: 38005

"Wayne" <mygarbagecan@verizon.net> wrote in
news:Ll4qi.15820$U47.4532@trnddc08:

...
>> Owen
> I spent some time pondering this with EZNEC and a smith chart. No, I
> can't come up with an inductive way to match it. I learned somthing
> today...thanks!

The components for a L matching network may both be L for some range of loads, but not in the case discussed.

There will also be loads where only a shunt component is required, and this is often achieved on a short vertical by using less inductive loading than needed to bring the feedpoint to a purely resistive load. You can think of it as an L network where the series element is supplied by the antenna. For example, a short antenna on 3.5MHz with a feedpoint resistance of say 20 ohms, and a large capacitive reactance can be inductively loaded to deliver 20-j24.5, and it will require only a shunt inductor of about 0.9uH to match it to 50 ohms.

(Neither of these are solutions to the original questions, but interesting sidepaths that show why some configurations work in some situations.)

Owen

3896. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 23:14:56 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <46A92AEF.6030707@worldnet.att.net>
Source record: 38006

The Shadow wrote:
>
> "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
> news:46A680EB.3090105@worldnet.att.net...
>
>> I am thinking it may finally be time to replace my old tribander.
>> Based on size, weight, mast size and power handling capability, I
>> found two popular models that are good candidates. Looking for
>> comments and comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>> 73
>> John
>>
> Just a comment John on Antennas - here comes the brag tape.
>
> I worked the last 150+ countries to make Honor Roll with a Vertical -
> Cushcraft R-7000 and an Ameritron AL-80B.
>
> The first 150 countries was on a Hy-Gain TH-3Jr and barefoot.
>
> Also Worked DXCC-QRP including Mozambique with the vertical and 5 Watts.
>
> So a multi-band covering 20 - 10M + 17 and 12M should do ya just fine
> Love dem 12M AND 17M bands
>
> Just a thought
>
> Lamont
I have decided to go with the Th3. I feel that it is better
mechanically than the A3.
Actually, except for the Beta match, it is built almost identically to
my current antenna with some beefier parts. If it lasts at all like the
Th3Jr did it will outlast me.

I haven't done much DX chasing in recent years but I did have about 280
using the Th3Jr so it does work. I expect the new one to do as well.
I can load the Th3Jr on 12 and 17 using the tuner built into the
transceiver; no idea what the pattern would look like. I normally use
the vertical on those bands and have not really tried using the beam -
it might be negative gain relative to the vertical.
John

3897. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-26 23:58:58 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <Ab6dncT1vZShqDTbnZ2dnUVZ_gOdnZ2d@comcast.com>
Source record: 38007

"John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
news:46A92AEF.6030707@worldnet.att.net...
>
>
> The Shadow wrote:
>>
>> "John Siegel" <JohnASiegel@worldnet.att.net> wrote in message
>> news:46A680EB.3090105@worldnet.att.net...
>>
>>> I am thinking it may finally be time to replace my old tribander. Based
>>> on size, weight, mast size and power handling capability, I found two
>>> popular models that are good candidates. Looking for comments and
>>> comparisons between the HyGain TH3MK4 and the Cushcraft A3s.
>>> 73
>>> John
>>>
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>> Cushcraft R-7000 and an Ameritron AL-80B.
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>> The first 150 countries was on a Hy-Gain TH-3Jr and barefoot.
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>>
>> Just a thought
>>
>> Lamont
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> than the A3.
> Actually, except for the Beta match, it is built almost identically to my
> current antenna with some beefier parts. If it lasts at all like the
> Th3Jr did it will outlast me.
>
> I haven't done much DX chasing in recent years but I did have about 280
> using the Th3Jr so it does work. I expect the new one to do as well.
> I can load the Th3Jr on 12 and 17 using the tuner built into the
> transceiver; no idea what the pattern would look like. I normally use the
> vertical on those bands and have not really tried using the beam - it
> might be negative gain relative to the vertical.
> John

>
Good choice. I have found it to work like gangbusters. HUGE improvement over
TA33JR that it replaces. If you want a 5 bander to work as well on 15/20,
you are probably into something with a 20+ foot boom.

Tam/WB2TT

3898. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 00:17:02 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.27.00.18.06.821088@example.net>
Source record: 38008
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

```
On Thu, 26 Jul 2007 09:15:44 +0100, Jeff wrote:
> "Allodoxaphobia" <bit-bucket@config.com> wrote in message
> news:slrnfaf3rq.2f55.bit-bucket@shell.config.com...
>> On Wed, 25 Jul 2007 18:12:26 +0100, Jeff wrote:
>>>
>>>> Note that in almost all places there are legal limitations on EIRP
>>>> (Effective Incident Radiated Power). In plain English, the more you
>>>> narrow a signal, the stronger it becomes.
>>>>
>>>> Since you did not say where you are, I'll mention the two places I
>>>> know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>>> mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>>>
>>> Bear in mind that 2.4GHz is also an amateur band where no erp limits
>>> exist!!
>>
>> Oh , really ?! cite!
>
> Channels 1 to 6 lie with the 13cms amateur band, which does vary a little
> from country to country nut in the UK is 2310-2450MHz, and there is no ERP
> restriction in this band just a max power to the antenna, which can have
> as much gain as you can muster.

For amateur radio, it's a limit on DC power to the final amplifier, which
you can make as efficient as you want; it's average power, so you can
run 2 KW PEP (peak envelope power) SSB, and gawd knows what kinds of
pulses you're allowed to transmit on the UHF, SHF, and EHF bands, as long
as the average isn't over 1 KW input to the final.

I'm sure it's all covered in the FCC regs, which should be easy to look up
for anyone who's really that interested. ;-)

Cheers!
Rich
```

3899. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 00:24:05 UTC
From: Rich Grise <rich@example.net>
Message-ID: <pan.2007.07.27.00.25.04.290327@example.net>
Source record: 38009
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

On Thu, 26 Jul 2007 09:13:02 +0100, Jeff wrote:
>
> "> Well.. not all the 802.11b/g channels are in the amateur band, and even
>> there, there is a power limit (transmitter output power, though, not
>> EIRP), so you could conceivably fire up your 1500 Watt transmitter into
>> a 20dBi antenna and blast away.
>>
> That is what the moonbounce operators do, but with more antenna gain!!
>
>> There is the other rule about minimum power needed for communication,
>> though.
>
> Again moonbounce is not uncommon in the 13cms band.

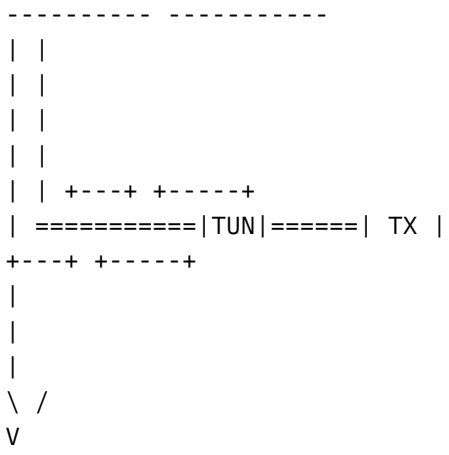
Yikes! I was just doing a little calculating, and you could put a 20 dB
Yagi in your shirt pocket! =:-O

;-)
Rich
(OK, my shirts have big pockets... ;-))

3900. Grounding parallel feed (ladder line) ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 01:09:20 UTC
From: Rob Roschewsk <nospam@nospam.com>
Message-ID: <ca6dndtgjKlc2DTbnZ2dnUVZ_rSinZ2d@comcast.com>
Source record: 38010

If I feed an antenna with a parallel feed where do I ground the
station?? At the transceiver after the tuner??



Or should I be grounding at the tuner or one side of the feed line??

I intend to build a "spark plug" type lighting arrestor.

Thanks,

de ka2pbt

3901. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 01:19:21 UTC
From: dplatt@radagast.org
Message-ID: <pptnn4-ejn.ln1@radagast.org>
Source record: 38011
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

In article <pan.2007.07.27.00.18.06.821088@example.net>,
Rich Grise <rich@example.net> wrote:

>> Channels 1 to 6 lie with the 13cms amateur band, which does vary a little
>> from country to country nut in the UK is 2310-2450MHz, and there is no ERP
>> restriction in this band just a max power to the antenna, which can have
>> as much gain as you can muster.
>
>For amateur radio, it's a limit on DC power to the final amplifier, which
>you can make as efficient as you want; it's average power, so you can
>run 2 KW PEP (peak envelope power) SSB, and gawd knows what kinds of
>pulses you're allowed to transmit on the UHF, SHF, and EHF bands, as long
>as the average isn't over 1 KW input to the final.
>
>I'm sure it's all covered in the FCC regs, which should be easy to look up
>for anyone who's really that interested. ;-)

I thought that the FCC had abandoned the "DC input power to the final"
standard quite some time ago (a decade or more, I think).

Most of the transmitter power standards for hams are in in 97.313,
which describes all of the limits in terms of PEP. Duty cycle,
modulation, and final efficiency are apparently no longer relevant in
most cases.

For most bands, and most operator classes, "legal limit" is 1500 watts
PEP. There are plenty of exceptions based on band, operator class,
and modulation (spread spectrum in particular) but these limits are
almost always defined in terms of PEP, which is referenced at the
transmitter->feedline connection.

There are some time-averaged and/or ERP limits described elsewhere in
Part 97, but these all seem to have to do with deciding when a
particular station must go through an evaluation for just how much RF
it's exposing humans in the area to.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3902. Re: Grounding parallel feed (ladder line) ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 01:22:15 UTC
From: dplatt@radagast.org
Message-ID: <7vtnn4-f4p.ln1@radagast.org>
Source record: 38012

In article <ca6dndtgjKlc2DTbnZ2dnUVZ_rSinZ2d@comcast.com>,
Rob Roschewsk <nospam@nospam.com> wrote:

>If I feed an antenna with a parallel feed where do I ground the
>station?? At the transceiver after the tuner??
>
>---------- ----------
> | |
> | |
> | |
> | |
> | | +---+ +-----+
> | ==========|TUN|======| TX |
> +---+ +-----+
> |
> |
> |
> \ /
> V
>
>Or should I be grounding at the tuner or one side of the feed line??

Most authorities I've read say that the transceiver, and the tuner
chassis, should both be securely bonded to the same grounding point.

You don't want to ground either side of the balanced feedline, as this
would deliberately un-balance it, and defeat the purpose/function of
the balun at the output of the tuner.

>I intend to build a "spark plug" type lighting arrestor.

A worthwhile precaution!

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3903. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 01:39:37 UTC
From: Gary Tait <classicsat@yahoo.com>
Message-ID: <Xns9979DC61A6B6Bwonkynillmailnil@142.77.1.194>
Source record: 38013
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Barry Watzman <WatzmanNOSPAM@neo.rr.com> wrote in news:46a7981e$0$30632
$4c368faf@roadrunner.com:

> That may be true but to use it that way legally you would need an
> amateur license, and this is not just a paperwork exercise, you have to
> pass FCC exams covering electronics and radio theory (plus laws and
> regulations) to get one. For most people, it's not an option.
>

And when you do get that license, you are, by lay, limited on what you can
communicate.

IMO. boosting your home wi-fi unser the auspices of an Amateur Radio
License is a no-no.

3904. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 01:47:52 UTC
From: Gary Tait <classicsat@yahoo.com>
Message-ID: <Xns9979DDC756642wonkynillmailnil@142.77.1.194>
Source record: 38014
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"amdx" <amdx@knology.net> wrote in
news:a590$46a7f995$18d6b40c$29490@KNOLOGY.NET:

> Jerry, I was thinking you would come back and say a bridge is the
> same as a
> usb wifi adapter, but I guess not. Have you looked at my drawing I
> sent you?
>

In a nutshell, a bringe in the wi-fi sense as you should get, is a box that has an ethernet adapter and a wi-fi adapter. It is kinda like a WAP, but backwards. It allows you to use an ethernet device like your computer, on a wireless network using its ethernet connection. You would want to use that as you can locate the bridge at the antenna, and connect your computer to the bridge with as long as an ethernet cable (up to 330 ft though) as you need. USB would be quite limited.

3905. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 04:41:06 UTC
From: nm5k@wt.net
Message-ID: <1185511266.972385.111260@z28g2000prd.googlegroups.com>
Source record: 38015

On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
> n...@wt.net wrote innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:

>
> > A 3/8 wave radiator is easily matched with a single variable cap..
>
> Details?

Place cap at the feedpoint in series . Viola...
This is fairly common really.. IE: feeding "extended"
Inv L's where the length is appx 3/8 wave.
The usual reason for that is to raise the maximum current
point up off the ground a bit to lower ground losses..
BTW, once you find the best match, and find the cap value
needed, you could replace the variable with a fixed cap.
MK

3906. Re: Grounding parallel feed (ladder line) ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 10:45:39 UTC
From: Edward Feustel <efeustel@hughes.net>
Message-ID: <w8idnZ7zbdaVwTfbnZ2dnUVZ_tSknZ2d@giganews.com>
Source record: 38028

"Rob Roschewsk" <nospam@nospam.com> wrote in message
news:ca6dndtgjKlc2DTbnZ2dnUVZ_rSinZ2d@comcast.com...
> I intend to build a "spark plug" type lighting arrestor.
>
These are available commercially. I have one but have not installed it.
Part of the difficulty is the voltage at which they fire! Imagine what
it could do to tuner and possibly transceiver. Best to ground the
antenna directly outside the shack when it is not in use and hope!

Ed, N5EI
> Thanks,
>
> de ka2pbt

3907. Need Manuals for McKay Dymek DA9

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 14:08:49 UTC
From: jvcactus@yahoo.com
Message-ID: <4453e$46a9fc91$4b594e4d$29310@ALLTEL.NET>
Source record: 38016
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.swap

I need manual/s or a copy of the manuals for the McKay Dymek DA9 Active antennas and the 5 Antennas modules. If you have any of these I will pay for a copy and postage. If you know of a source please email me at

wn5a@sbcglobal.net
Thanks
Jack

3908. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 15:13:49 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f8d23d$1bgi$1@f04n12.cac.psu.edu>
Source record: 38017

BigD@DaveMorris.com wrote:
> You guys crack me up. The poor guy wanted a simple longwire solution.

We gots dummies like me here, and we gots really smart folks here.
Sometimes the threads veer off into discussions of how many angels can
dance on the head of a pin. But everyone means well.

> I want one too, and that's how I found this thread.
>
> I read in W1FB's Antenna Notebook that you can take a 1 wavelength
> piece of wire, feed it with 75 Ohm coax 1/4 wavelength in from one
> end, with the hot side going to the 3/4 wavelength piece and the
> shield going to the 1/4 wavelength piece. It looks like you don't
> need any type of tuner.

I'd be pretty skeptical that no tuner was needed, but see above for my
dummy status... ;^)

> Has anybody tried that? I'm looking for a simple antenna for PSK-31
> QRP that the homeowners association won't even see, and this looks
> like the deal, but I can't find any corroboration for the concept.

You might want to try 2 20 meter mobile whips arranged as a dipole.
Quick and easy to set up and tear down.

That of course is assuming you are doing 20 meter psk, where most of
the activity is.

- 73 de Mike KB3EIA -

3909. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 16:33:06 UTC
From: Joel Kolstad <JKolstad71HatesSpam@yahoo.com>
Message-ID: <13ak7i48chu3518@corp.supernews.com>
Source record: 38018
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

"Gary Tait" <classicsat@yahoo.com> wrote in message
news:Xns9979DC61A6B6Bwonkynillmailnil@142.77.1.194...
> And when you do get that license, you are, by lay, limited on what you can
> communicate.

Well, the main one is (paraphrased) that you can't be using the amateur bands for making money on a regular basis... although on-the-air swap meets, ordering pizza at Pizza Hut via the Internet, books through Amazon, etc. is certainly all kosher. Were there other exceptions you were thinking of?

> IMO. boosting your home wi-fi unser the auspices of an Amateur Radio
> License is a no-no.

As long as you don't use encryption and aren't running your business through it, in my opinion it's a perfectly reasaonble use. Heck, even QST has articles on doing so.

3910. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 17:22:58 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8d9lj$7rg$1@nntp1.jpl.nasa.gov>
Source record: 38019
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Rich Grise wrote:
> On Thu, 26 Jul 2007 09:15:44 +0100, Jeff wrote:
>
>>"Allodoxaphobia" <bit-bucket@config.com> wrote in message
>>news:slrnfaf3rq.2f55.bit-bucket@shell.config.com...
>>
>>>On Wed, 25 Jul 2007 18:12:26 +0100, Jeff wrote:
>>>
>>>>>Note that in almost all places there are legal limitations on EIRP
>>>>>(Effective Incident Radiated Power). In plain English, the more you
>>>>>narrow a signal, the stronger it becomes.
>>>>>
>>>>>Since you did not say where you are, I'll mention the two places I
>>>>>know for sure. In the U.S. WiFi EIRP is limited to 1 watt for
>>>>>mobile/portable use (e.g. laptops) and 4 watts for fixed links.
>>>>
>>>>Bear in mind that 2.4GHz is also an amateur band where no erp limits
>>>>exist!!
>>>
>>>Oh , really ?! cite!
>>
>>Channels 1 to 6 lie with the 13cms amateur band, which does vary a little
>>from country to country nut in the UK is 2310-2450MHz, and there is no ERP
>>restriction in this band just a max power to the antenna, which can have
>>as much gain as you can muster.
>
>
> For amateur radio, it's a limit on DC power to the final amplifier, which
> you can make as efficient as you want; it's average power, so you can
> run 2 KW PEP (peak envelope power) SSB, and gawd knows what kinds of
> pulses you're allowed to transmit on the UHF, SHF, and EHF bands, as long
> as the average isn't over 1 KW input to the final.

So in the UK, they still regulate on the basis of DC power?
Interesting. I've always liked that philosophy because it promotes
design of efficient amplifiers.

>
> I'm sure it's all covered in the FCC regs, which should be easy to look up
> for anyone who's really that interested. ;-)

1.5 kW PEP, except in certain bands with lower limits (5 MHz, 430-450
MHz (depending on what your location is), etc.)

no averaging for pulses.. 97.3(b)(6)
PEP (peak envelope power). The average power supplied to the antenna
transmission line by a transmitter during one RF cycle at the crest of
the modulation envelope taken under normal operating conditions.

You can transmit pulses on 900 MHz and 2300 MHz and all higher bands,
but not 1.2 GHz (although you might be able to do pulses as part of a
data or spread spectrum modulation).

Clearly, if you want to operate a radar with your amateur license,
you're better off with one using pulse compression and long pulses.

>
> Cheers!
> Rich
>

3911. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 17:31:34 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8da5n$81r$1@nntp1.jpl.nasa.gov>
Source record: 38020
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Joel Kolstad wrote:
> "Gary Tait" <classicsat@yahoo.com> wrote in message
> news:Xns9979DC61A6B6Bwonkynillmailnil@142.77.1.194...
>
>>And when you do get that license, you are, by lay, limited on what you can
>>communicate.
>
>
> Well, the main one is (paraphrased) that you can't be using the amateur bands
> for making money on a regular basis... although on-the-air swap meets,
> ordering pizza at Pizza Hut via the Internet, books through Amazon, etc. is
> certainly all kosher. Were there other exceptions you were thinking of?
>
>
>>IMO. boosting your home wi-fi unser the auspices of an Amateur Radio
>>License is a no-no.
>
>
> As long as you don't use encryption and aren't running your business through
> it, in my opinion it's a perfectly reasaonble use. Heck, even QST has
> articles on doing so.
>

Indeed? Which issue? I recall some articles about HSMM and building a slotted array with gain, but not wholesale use for extension of your internet connection.

I think that if you start to stray too far from incidental commercial use, you could get into trouble, especially if lots folks start doing it. The classic pizza over the autopatch is the example, and I suppose the occasional ordering from Amazon fits in the same category. But, if were to, for instance, check your work email, or watch pay-per-view content, you might be pushing it. In particular, if you but a PA on your access point and a directional antenna, so that your neighbor can use it too, you're likely to be stepping over the line.

It's all a judgement call, but the intent is that amateur radio not be used where there is a commercial service that can provide the same functions. This is so the commercial entities can't claim that someone using amateur frequencies is getting an unfair competitive advantage (among other reasons)

>

3912. Open wire feeders and proximity to other metal ....

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 18:15:35 UTC
From: Rob Roschewsk <nospam@nospam.com>
Message-ID: <V8ednT7mb6naqzfbnZ2dnUVZ_oOnnZ2d@comcast.com>
Source record: 38021

OK .... here is another newbie question :)

I want to run an open wire feed to a 160M Dipole .... I need to bring the feed in and across my basement. I want to run along the floor joists but like most basements there are pipes and duct work all over.

What would be the minimal acceptable separation between other metal object and the open wire feed???

For an idea of what I'm up against:
http://pabut.org/feedline.jpg

Thanks,

de ka2pbt

3913. Re: Need help... End-fed, long wire or ????

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 18:21:04 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns997A920D95020jxp16psuedu@128.118.141.40>
Source record: 38022

Michael Coslo <mjc5@psu.edu> wrote in
news:f8d23d$1bgi$1@f04n12.cac.psu.edu:

> BigD@DaveMorris.com wrote:
>> You guys crack me up. The poor guy wanted a simple longwire
>> solution.
>
> We gots dummies like me here, and we gots really smart folks
> here.
> Sometimes the threads veer off into discussions of how many angels can
> dance on the head of a pin. But everyone means well.
>
>
>
>> I want one too, and that's how I found this thread.
>>
>> I read in W1FB's Antenna Notebook that you can take a 1 wavelength
>> piece of wire, feed it with 75 Ohm coax 1/4 wavelength in from one
>> end, with the hot side going to the 3/4 wavelength piece and the
>> shield going to the 1/4 wavelength piece. It looks like you don't
>> need any type of tuner.
>
> I'd be pretty skeptical that no tuner was needed, but see above for my
> dummy status... ;^)
>
>
>> Has anybody tried that? I'm looking for a simple antenna for PSK-31
>> QRP that the homeowners association won't even see, and this looks
>> like the deal, but I can't find any corroboration for the concept.
>
>
> You might want to try 2 20 meter mobile whips arranged as a
> dipole.
> Quick and easy to set up and tear down.
>
> That of course is assuming you are doing 20 meter psk, where most
> of
> the activity is.
>
> - 73 de Mike KB3EIA -
>
Hi All:

Just out of curiosity, I modeled a one wavelength antenna, on 14.07MHz at
32' high over average ground. The wire, #12 was 68.75' long feed 17.2 feet

from one end. The antenna was resonant at the design frequency, IE no reactance with an impedance of 105 ohms. This would give about a 2:1 SWR. The pattern is typical for a 1 wave length antenna. 4 lobes with the peak gain at about 45 deg angles to the wire. The gain was 6.9dbi at a vertical angle of 33 deg.
Two things to note about this design, at the time it was proposed a 2:1 SWR was considered quite OK. The radios of the day could handle it just fine. Also the feed line will radiate like mad. This is severely unbalanced antenna and would benefit from a choke balun. A 2 to 1 balun would give a good match.
It's a usable antenna, maybe not the best antenna for today station, but usable.
In fact the off center feed make it a nice antenna for a hidden antenna.

John Passaneau W3JXP

3914. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 18:38:58 UTC
From: Jeff <jeff@local.host>
Message-ID: <46aa3c28$0$1347$834e42db@reader.greatnowhere.com>
Source record: 38023
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

> So in the UK, they still regulate on the basis of DC power? Interesting.
> I've always liked that philosophy because it promotes design of efficient
> amplifiers.
>

Not for many years.

The normal UK limit, for a full licence, is 400W pep into the antenna on
most bands.

Jeff

3915. Re: Open wire feeders and proximity to other metal ....

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 18:49:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <a7rqi.15$Lu4.12@trndny03>
Source record: 38024

think coax. or put a balun at the entrance to the house and go coax from
there.

"Rob Roschewsk" <nospam@nospam.com> wrote in message
news:V8ednT7mb6naqzfbnZ2dnUVZ_oOnnZ2d@comcast.com...
> OK .... here is another newbie question :)
>
> I want to run an open wire feed to a 160M Dipole .... I need to bring the
> feed in and across my basement. I want to run along the floor joists but
> like most basements there are pipes and duct work all over.
>
> What would be the minimal acceptable separation between other metal object
> and the open wire feed???
>
> For an idea of what I'm up against:
> http://pabut.org/feedline.jpg
>
> Thanks,
>
> de ka2pbt

3916. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 19:12:03 UTC
From: Joel Kolstad <JKolstad71HatesSpam@yahoo.com>
Message-ID: <13akgs46k92id26@corp.supernews.com>
Source record: 38025
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Hi Jim,

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:f8da5n$81r$1@nntp1.jpl.nasa.gov...
> Indeed? Which issue?

A quick Googling shows July 2005 ("IEEE 802.11 Experiments in Virginia's Shenandoah Valley"), but there was also one in the last 3 months or so that was really just an overview of how 802.11 worked (aimed very much at beginners, actually, with an eye towards amateur usage, e.g., "Making your SSID your call sign is a good idea...").

> It's all a judgement call, but the intent is that amateur radio not be used
> where there is a commercial service that can provide the same functions.
> This is so the commercial entities can't claim that someone using amateur
> frequencies is getting an unfair competitive advantage (among other reasons)

Agreed, although as I've mentioned previously, these days most of what happens on the amateur frequencies *could* just as readily be done with cell phones or your DSL/cable modem/POTS Internet connection. I think the commercial entities are much more interested in getting the *spectrum* that hams have rather than trying to force the local Elks to quite using a 2m repeater to coordinate their meetings. :-)

There is a long history of amateur radio being used to avoid expensive commercial services: People used it for years as a replacement for long distance telephone calls prior to those rates becoming dirt cheap. It's almost ironic to what extent this motivates people -- international calls that were $5/minute in 1970 are now often no more than $0.05/minute, yet there's still plenty of interest in, e.g., Skype to reduce that to "free!" (after you pay your fixed monthly Internet bill). Heck, these days I think that satellite phones cost less per minute than many international calls 35 years ago!

One area that isn't readily available commercially yet is "reasonably" high-speed Internet connections (e.g., 256kbps or better) for folks who are mobile out in the boonies (i.e., somewhere there's no modern cell phone coverage); that's where I'd really like to see some progress in amateur radio (on UHF frequencies, I would imagine). WiMax might offer a viable commercial solution here, but I imagine there are going to be large stretches of the western and central U.S. where it'll be many decades before it's profitable to deploy WiMax or high-speed cell phone networks; in such places a hilltop amateur system could let amateurs with the typical 50W mobile radio "check their e-mail" for many tens of miles in all directions.

I also think it would be cool to build something like an HF PSK31 gateway back to the popular Internet instant-messaging services (Yahoo!, MSN!, etc.) -- I figure the way to approach this would be to hack together the bits of PSK31 code out there with the bits of a multi-protocol messaging program such as Pidgin (formerly GAIM).

---Joel

3917. Re: Open wire feeders and proximity to other metal ....

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 19:43:32 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns997AA00957194jxp16psuedu@128.118.141.40>
Source record: 38026

Rob Roschewsk <nospam@nospam.com> wrote in
news:V8ednT7mb6naqzfbnZ2dnUVZ_oOnnZ2d@comcast.com:

> OK .... here is another newbie question :)
>
> I want to run an open wire feed to a 160M Dipole .... I need to bring
> the feed in and across my basement. I want to run along the floor
> joists but like most basements there are pipes and duct work all over.
>
> What would be the minimal acceptable separation between other metal
> object and the open wire feed???
>
> For an idea of what I'm up against:
> http://pabut.org/feedline.jpg
>
> Thanks,
>
> de ka2pbt

Hi:

The rule of thumb I've heard is 2 times the wire spacing is the minimum but I would just get it as far away as possible. Just remember with a high SWR on the line there could be a high voltage node almost any were on the line which can be a RF burn or a fire hazard so try and keep it way from people and things that can burn. If you don't run high power (<200 watts) one way to handle the problem is to use an auto tuner outside the house and run coax into the house. There are ones available for high power but they cost a great deal. Some one will suggest a balun and coax to the tuner in the shack. This can work if the coax is quite short (<12') as the SWR on the coax could be quite high and the loss due to high SWR could be a problem. I've done this also and it works too. The auto tuner outside gets by the high SWR problem as the coax is working in the matched condition and will have low loss.

John Passaneau W3JXP

3918. Re: Open wire feeders and proximity to other metal ....

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 20:45:22 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997A8C0CAD091spectrumhogstarbandn@198.186.192.196>
Source record: 38027

>
> I want to run an open wire feed to a 160M Dipole .... I need to bring
> the feed in and across my basement. I want to run along the floor
joists
> but like most basements there are pipes and duct work all over.
>
> What would be the minimal acceptable separation between other metal
> object and the open wire feed???
>
> For an idea of what I'm up against:
> http://pabut.org/feedline.jpg
>

So far, no one has mentioned using a short section of balanced coax. Rather than using baluns and a single coax, you could use two lengths of coax to get past the metal. Use the center conductors of both parallel pieces, and just connect the two shields together. You will still have high losses in the coax, but shouldn't be significant if you keep the coax run short. Doing it this way will at least avoid the possible high voltage node / fire hazzard problem of having open ladderline near wood and metal fixtures, and also avoid needing to use baluns.

good luck.

Ed K7AAT

3919. Re: Grounding parallel feed (ladder line) ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 22:05:38 UTC
From: "Juan M." <jdmollanNOSPAMPLEASE@juno.com>
Message-ID: <R6SdnX-h6aSp8TfbnZ2dnUVZ_tGonZ2d@centurytel.net>
Source record: 38029

>> I intend to build a "spark plug" type lighting arrestor.
>>
> These are available commercially. I have one but have not installed it.
> Part of the difficulty is the voltage at which they fire! Imagine what
> it could do to tuner and possibly transceiver. Best to ground the
> antenna directly outside the shack when it is not in use and hope!
>
> Ed, N5EI
>> Thanks,
>>
>> de ka2pbt

The use of a Balun, whether in the tuner or not, will allow your twinlead to actually be at DC ground.

3920. RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 22:33:02 UTC
From: "wizard12342002@yahoo.com" <wizard12342002@yahoo.com>
Message-ID: <1185575582.227458.193200@19g2000hsx.googlegroups.com>
Source record: 38030

I am curious as to whether RF exposure concerns are greater for a small transmitting loop [like the MFJ tuned loop] compared to a dipole radiating the same power. It would seem that close to the loop, the RF power density may be greater [than it would be at the same distance from the dipole apex] since the radiating volume is smaller. Can I just assume that the power is evenly distributed on the surface of a sphere having a radius equal to my distance from the loop antenna, calculate the power density on the sphere surface, and use that number for evaluation - or are there some near-field considerations not captured using this approach?

Thanks,

-JJ

3921. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-27 23:21:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13akvgegp19aj06@corp.supernews.com>
Source record: 38031

wizard12342002@yahoo.com wrote:
> I am curious as to whether RF exposure concerns are greater for a
> small transmitting loop [like the MFJ tuned loop] compared to a dipole
> radiating the same power. It would seem that close to the loop, the
> RF power density may be greater [than it would be at the same distance
> from the dipole apex] since the radiating volume is smaller. Can I
> just assume that the power is evenly distributed on the surface of a
> sphere having a radius equal to my distance from the loop antenna,
> calculate the power density on the sphere surface, and use that number
> for evaluation - or are there some near-field considerations not
> captured using this approach?
>
> Thanks,
>
> -JJ

The method you describe is valid only in the far field. There are higher order terms to the field strength (field relative to distance) in the near field, and they're strongly a function of the distance and the antenna geometry. Using the method you propose can produce very erroneous results close to the antenna.

Roy Lewallen, W7EL

3922. Wind Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 00:01:39 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <DHvqi.24696$RX.10595@newssvr11.news.prodigy.net>
Source record: 37940

Hi, Everybody,

I have read many times here about how noise is generated when wind strikes an antenna made of bare conductors.

Does the same effect occur on a mobile antenna? At highway speeds, that would be the equivalent of very high wind speed. But I have never heard anyone talking about this.

Regards,

Al W6LX

3923. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 00:03:34 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <46aa87cc@clear.net.nz>
Source record: 37932

nm5k@wt.net wrote:
> On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
>
>>n...@wt.net wrote innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:
>
>
>>>A 3/8 wave radiator is easily matched with a single variable cap..
>>
>>Details?
>
>
>
> Place cap at the feedpoint in series . Viola...
> This is fairly common really.. IE: feeding "extended"
> Inv L's where the length is appx 3/8 wave.
> The usual reason for that is to raise the maximum current
> point up off the ground a bit to lower ground losses..
> BTW, once you find the best match, and find the cap value
> needed, you could replace the variable with a fixed cap.
> MK
>
>
>
G'Day!
Well I have tried the series cap idea of course first.
It is set up at the moment with a 500 pF TX type variable in the
matching box. However according to my SWR bridge it has quite a high
VSWR and varying the 500 pF had very little effect. And yes, the coax is
OK. 50 Ohm foam dielectric type which I have used up to 70 cM OK.
My phased verticals that I mentioned did use capacitive matching in this
case 1000 pF RX variables. But they were just a little too long.
Unfortunately because of space restrictions I am limited to 4 radials.
Thats one reason why I was trying for more than 1/4 wave.

73's Cliff wright ZL1BDA.

3924. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 00:28:29 UTC
From: who knows <noone@nowhere.nohow.notime>
Message-ID: <46aa8db2$1@dnews.tpgi.com.au>
Source record: 37933

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:13akvgegp19aj06@corp.supernews.com...
> wizard12342002@yahoo.com wrote:
>> I am curious as to whether RF exposure concerns are greater for a
>> small transmitting loop [like the MFJ tuned loop] compared to a dipole
>> radiating the same power. It would seem that close to the loop, the
>> RF power density may be greater [than it would be at the same distance
>> from the dipole apex] since the radiating volume is smaller. Can I
>> just assume that the power is evenly distributed on the surface of a
>> sphere having a radius equal to my distance from the loop antenna,
>> calculate the power density on the sphere surface, and use that number
>> for evaluation - or are there some near-field considerations not
>> captured using this approach?
>>
>> Thanks,
>>
>> -JJ
>
> The method you describe is valid only in the far field. There are higher
> order terms to the field strength (field relative to distance) in the near
> field, and they're strongly a function of the distance and the antenna
> geometry. Using the method you propose can produce very erroneous results
> close to the antenna.
>
> Roy Lewallen, W7EL

A good question and an interesting, but not very helpful response.

It seems to me that there are elements of truth in both the original proposition and in the response comment, but that each is only a partial truth. The essential aspect is surely the separation distance relative to the size of the loop antenna.

However, the obvious comment is that the small physical size of a loop is likely to lead to use in a situation (for example, indoors and close to the operating point) that would/could lead to excessive levels of RF exposure. For an electrically small loop (the typical loaded loop less than 0.1 wavelength), then it is probably fair to assume that all of the input power is radiated through the sphere surrounding the loop provided that the separation is reasonably large, however, for a large loop (eg half-wave or larger) its probably best to approach the RF exposure issue as you would with any other antenna such as a dipole or vertical.

Keith G Malcolm
VK1ZKM

28 July 2007

3925. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 01:21:46 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997B7395F93FAnonenowhere@61.9.191.5>
Source record: 37934

cliff wright <c.c.wright@paradise.net.nz> wrote in
news:46aa87cc@clear.net.nz:

> nm5k@wt.net wrote:
>> On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
>>
>>>n...@wt.net wrote
>>>innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:
>>
>>
>>>>A 3/8 wave radiator is easily matched with a single variable cap..
>>>
>>>Details?
>>
>>
>>
>> Place cap at the feedpoint in series . Viola...
>> This is fairly common really.. IE: feeding "extended"
>> Inv L's where the length is appx 3/8 wave.
>> The usual reason for that is to raise the maximum current
>> point up off the ground a bit to lower ground losses..
>> BTW, once you find the best match, and find the cap value
>> needed, you could replace the variable with a fixed cap.
>> MK
>>
>>
>>
> G'Day!
> Well I have tried the series cap idea of course first.
> It is set up at the moment with a 500 pF TX type variable in the
> matching box. However according to my SWR bridge it has quite a high
> VSWR and varying the 500 pF had very little effect. And yes, the coax
> is OK. 50 Ohm foam dielectric type which I have used up to 70 cM OK.
> My phased verticals that I mentioned did use capacitive matching in
> this case 1000 pF RX variables. But they were just a little too long.
> Unfortunately because of space restrictions I am limited to 4 radials.
> Thats one reason why I was trying for more than 1/4 wave.
>
> 73's Cliff wright ZL1BDA.
>

Well, it isn't quite "viola" or even "voila!" is it. MK didn't state the
limitations to his method.

The proposed series capacitor will only achieve a reasonable match if the series resistance component of the feedpoint is around 50 ohms, and the reactance is inductive and within range of a practical capacitor.

If indeed the antenna had a feedpoint impedance around 100+j300, the series capacitor would not achieve a match better than VSWR~=2 (which may or may not be good enough). Your observation that it was bad (whatever "quite a high VSWR" means), suggests that it has a higher feedpoint R (it is unlikely to be lower than 50 ohms), or that your capacitor did not tune out the inductive reactance (unlikely since you used a 500pF variable).

If you can't match it with a series cap (and no surprises for me there), you could always try an L network starting with the values that I previously gave you.

Owen

3926. Test

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 02:10:34 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <uAxqi.53438$5j1.26771@newssvr21.news.prodigy.net>
Source record: 37941

Oo ee oo ah-ah.

3927. Mind Control and Directed Energy Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 02:28:28 UTC
From: soleilmavis <soleilmavis@yahoo.com>
Message-ID: <1185589708.566029.48650@j4g2000prf.googlegroups.com>
Source record: 37935

Mind Control and Directed Energy Weapons

Do you know Mind Control Weapons and Brain Washing (such as CIA Mind Control Project : MKULTRA) ? Do you know voice can be transmitted to human's head from long distance(V2K)? (In 2002, the Air Force Research Laboratory patented precisely such a technology: using microwaves to send words into someone's head.)Do you know Directed Energy Weapons(such as: Electromagnetic weapons) and Non-lethal Weapons? Do you know that people's thoughts can be read now? Do you know Nano technology weapons (such as British MI5 Nano technology spy weapons which can control little spy mice from long distance)?

Such kinds of weapons have already been used covertly to torture and harass innocent, legal, unarmed and defenseless civilians for many years all over the world.

There are more than 1500 people who are suffering terribly from mind control and electromagnetic weapons torturing and harassment. Some victims were only 21-22 years old when the first time they were seriously tortured and harassed.

Have you ever imagined that there even was not one happy and peace day in the life, but only suffering for 5,10 or 20 years? Yes! Some victims died, but at the last minutes in their lives, the only thing belongs to them was still suffering.

Please come to help us by signing your support to stop these kinds of weapons torturing and harassing lawful citizens. Our goals:

(1) We wish a resolution from United Nations to stop Mind Control and Directed Energy weapons torturing and harassing. (2) We wish all government cooperate together to sentence those torturers according to law.

More Information, please come to http://soleilmavis.googlepages.com
Blog: http://soleilmavis.spaces.live.com

3928. Re: Question re: 1/4 Wave Ground Plane Measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 03:15:50 UTC
From: scrook <dingiswayo324_at_yahoo.com>
Message-ID: <L6udnXLYg-p4KTfbnZ2dnUVZ_rignZ2d@comcast.com>
Source record: 37936

You mean 1.3:1 SWR?

"Bam Bam" <bamyili@hotmail.com> wrote in message
news:1185469769.761166.285260@m37g2000prh.googlegroups.com...
> On Jul 25, 9:24 am, DeanO <dxbl...@tecoenergy.com> wrote:
>
> Thanks very much for the advice Dean! I took your advice and just cut
> everything as per the normal calculations. As luck would have it, the
> first time I fired it up I had a 1:3 SWR.
>
> Thanks again.
>
>
>> On Jul 25, 11:47 am, Bam Bam <bamy...@hotmail.com> wrote:
>>
>>
>>
>>
>>
>> > I am making a simple 1/4 wave ground plane antenna and have two rather
>> > silly question regarding its measurements.
>>
>> > 1. I've attached an SO-239 connecter to a 5x5 inch aluminum plate.
>> > When measuring the length of the radials, I measure from the center
>> > conductor of the SO-239 to the end of the radial taking into account
>> > the plate, correct?
>>
>> > 2. If I make a loop in the vertical radiating element so that I may
>> > hang the antenna, does the circumference of the loop count in the
>> > measurement of the element or the diameter? (e.g., if I need 20 inches
>> > for the element, do I measure from the bottom of the SO-239 to the top
>> > of the loop or do I take a 20 inch wire and make a loop not caring
>> > that it has shortened the element slightly?)
>>
>> > Thanks
>>
>> > Bam Bam
>>
>> You need a grid dip meter or a good SWR bridge and get ready to tune
>> "a little"
>> here is why.... The PLATE adds capacitance and that will make the
>> 'need' for your radial lengths to actually wind up shorter than you
>> would calculate. Also the loop at the top of the antenna will add a
>> little effective length because of the 'capacitance' of the loop (see

>> capacitive hats in any antenna book) so rule of thumb ... is go ahead
>> and use the formulas for 1/4 antenna wire, make the antenna that
>> length and then 'prune' to get a better match at the frequency you
>> plan to use. Also, you can change the angle of the radials in respect
>> to the plate to change the impedance of the antenna. If you lower the
>> radials (from straight out 90 deg) you will increase the antennas
>> impedance and vice versa. This is done 'last' after you get the wire
>> as best match after puning. Then experiment with the radials to
>> further match the antenna. Donot worry about getting a 1:1 match.
>> your time will be wasted with little improvement in performance I
>> found less than 2:1 is usually very good and most solid state finals
>> work with this well. Good Luck and have fun ... KD4Q Dean- Hide quoted
>> text -
>>
>> - Show quoted text -
>
>

3929. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 03:23:47 UTC
From: Anonymous <anyone@no-spam-please.com>
Message-ID: <270720072323470070%anyone@no-spam-please.com>
Source record: 37937

In article <46aa8db2$1@dnews.tpgi.com.au>, who knows
<noone@nowhere.nohow.notime> wrote:

> However, the obvious comment is that the small physical size of a loop is
> likely to lead to use in a situation (for example, indoors and close to the
> operating point) that would/could lead to excessive levels of RF exposure.

Does it really matter? What are the odds of serious health consequences
from RF exposure? If I quit smoking and avoid RF over-exposure will I
live forever, or will I be dead as a doornail 100 years from now just
like everyone else currently participating in this newsgroup?

--
-30-

3930. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 03:27:37 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <46aab7a9@clear.net.nz>
Source record: 37938

Owen Duffy wrote:
> cliff wright <c.c.wright@paradise.net.nz> wrote in
> news:46aa87cc@clear.net.nz:
>
>
>>nm5k@wt.net wrote:
>>
>>>On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
>>>
>>>
>>>>n...@wt.net wrote
>>>>innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:
>>>
>>>
>>>>>A 3/8 wave radiator is easily matched with a single variable cap..
>>>>
>>>>Details?
>>>
>>>
>>>
>>>Place cap at the feedpoint in series . Viola...
>>>This is fairly common really.. IE: feeding "extended"
>>>Inv L's where the length is appx 3/8 wave.
>>>The usual reason for that is to raise the maximum current
>>>point up off the ground a bit to lower ground losses..
>>>BTW, once you find the best match, and find the cap value
>>>needed, you could replace the variable with a fixed cap.
>>>MK
>>>
>>>
>>>
>>
>>G'Day!
>>Well I have tried the series cap idea of course first.
>>It is set up at the moment with a 500 pF TX type variable in the
>>matching box. However according to my SWR bridge it has quite a high
>>VSWR and varying the 500 pF had very little effect. And yes, the coax
>>is OK. 50 Ohm foam dielectric type which I have used up to 70 cM OK.
>>My phased verticals that I mentioned did use capacitive matching in
>>this case 1000 pF RX variables. But they were just a little too long.
>>Unfortunately because of space restrictions I am limited to 4 radials.
>>Thats one reason why I was trying for more than 1/4 wave.
>>
>>73's Cliff wright ZL1BDA.

>>
>
>
> Well, it isn't quite "viola" or even "voila!" is it. MK didn't state the
> limitations to his method.
>
> The proposed series capacitor will only achieve a reasonable match if the
> series resistance component of the feedpoint is around 50 ohms, and the
> reactance is inductive and within range of a practical capacitor.
>
> If indeed the antenna had a feedpoint impedance around 100+j300, the
> series capacitor would not achieve a match better than VSWR~=2 (which may
> or may not be good enough). Your observation that it was bad (whatever
> "quite a high VSWR" means), suggests that it has a higher feedpoint R (it
> is unlikely to be lower than 50 ohms), or that your capacitor did not
> tune out the inductive reactance (unlikely since you used a 500pF
> variable).
>
> If you can't match it with a series cap (and no surprises for me there),
> you could always try an L network starting with the values that I
> previously gave you.
>
> Owen
>
Yes Owen I reckon you are right!
Tried it out again today and the VSWR is a bit worse than 2:1, not good
enough for me at all.
Now all I need is a good reference work to brush up my complex
impeadnaces that I haven't looked at for about 30 years!
73's ZL1BDA

3931. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 03:55:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <j0rqn4-g2n.ln1@mail.specsol.com>
Source record: 37939

Anonymous <anyone@no-spam-please.com> wrote:
> In article <46aa8db2$1@dnews.tpgi.com.au>, who knows
> <noone@nowhere.nohow.notime> wrote:

> > However, the obvious comment is that the small physical size of a loop is
> > likely to lead to use in a situation (for example, indoors and close to the
> > operating point) that would/could lead to excessive levels of RF exposure.

> Does it really matter? What are the odds of serious health consequences
> from RF exposure? If I quit smoking and avoid RF over-exposure will I
> live forever, or will I be dead as a doornail 100 years from now just
> like everyone else currently participating in this newsgroup?

Well, like exposure to anything, it depends on how much exposure you
get.

It is possible to die from drinking too much water for example.

So, unless your plan is to live fast, die young, and leave a good
looking corpse, it is probably a good idea to know how much RF is
too much and avoid it at dangerous levels.

--
Jim Pennino

Remove .spam.sux to reply.

3932. Re: Wind Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 05:12:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g0kla3165h0h5qap4sng8b739imak5tjs2@4ax.com>
Source record: 37942

On Sat, 28 Jul 2007 00:01:39 GMT, "Al Lorona" <al_lorona@agilent.com>
wrote:

>Hi, Everybody,
>
>I have read many times here about how noise is generated when wind strikes
>an antenna made of bare conductors.
>
>Does the same effect occur on a mobile antenna? At highway speeds, that
>would be the equivalent of very high wind speed. But I have never heard
>anyone talking about this.

Hi Al,

That's why older external car antennas had small caps, or balls, at
the end - to reduce static discharge.

73's
Richard Clark, KB7QHC

3933. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 05:33:03 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <kyAqi.36996$kK1.32735@newsfe14.phx>
Source record: 37943

"John Passaneau" <w3jxp@arrl.net> wrote in message
news:Xns99798A25D7C4Ajxp16psuedu@128.118.141.40...

< snip >

> I have the Tennadyne 6 el Log periodic antenna. Covers 13 to 30Mhz with
> an SWR of under 2:1. It has a 12' boom and the longest element is 38'. No
> traps or any other trickery and weighs 37lb. I've had it up since 2002
> and have worked DXCC on all bands and have about 1500 band countries.
> Which means nothing in reality as it's more of a mark of my persistence
> than antenna performance. The fact is the antenna performs just as the
> specs say and it stays up even with 1/2" of ice. I would look carefully
> at this antenna if you are looking for an all band high performance
> antenna.
>
> John Passaneau, W3JXP

Can you get it to work on 40m or lower with a tuner? I ask because I just have a kluge antenna that I am feeding through a tuner [TRANSCEIVER > VSWR METER > PI-NETWORK TUNER > COAX > BALUN > OCF DIPOLE, 8 FT X 20 FT] and it's working better than I expected, even on 40.

Just wondering. TKS.

"Sal"
(KD6VKW)

3934. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 05:33:43 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f8ekfp$5v7$1@nnrp.linuxfan.it>
Source record: 37944

Anonymous wrote:

> ...
> Does it really matter? What are the odds of serious health consequences
> from RF exposure? If I quit smoking and avoid RF over-exposure will I
> live forever, or will I be dead as a doornail 100 years from now just
> like everyone else currently participating in this newsgroup?
>

I worry little about exposure to rf <30 Mhz and 1kw or less ...
I am NOT aware of any malady/disease which strikes hams any more often
than any other group ... which suggests the safeguards in place (simple
plain common sense) is/are more than adequate.

However, as frequency of the rf increases so does my concern ...
everyone is aware microwaves can cook, maim and kill biological entities.

Regards,
JS

3935. Most accurate loading coil calculator on the web

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 07:16:44 UTC
From: ON4AA <ON4AA.f0ac52@radiobanter.com>
Message-ID: <ON4AA.f0ac52@radiobanter.com>
Source record: 37946

http://HAMwaves.com/antennas/inductance.html

The inductor calculator presented on this page is unique in that it employs the the n=0 sheath helix waveguide mode to determine the inductance of a coil, irrespective of its electrical length. This allows for more accurate inductance predictions at high frequencies.

Furthermore, the calculator closely follows the National Institute of Standards and Technology (NIST) methodology for applying round wire and non-uniformity correction factors and takes into account both the proximity effect and the skin effect.

All constructive comments are more than welcome.

--
ON4AA

3936. Re: Test

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 07:19:09 UTC
From: Ian Jackson <IanJacksonRemoveThisBit@g3ohx.demon.co.uk>
Message-ID: <cWK8n5Ct3uqGFwwg@g3ohx.demon.co.uk>
Source record: 37945

In message <uAxqi.53438$5j1.26771@newssvr21.news.prodigy.net>, Al Lorona
<al_lorona@agilent.com> writes
>Oo ee oo ah-ah.
>
Yes, solid copy. 5 & 9 in England this fine morning.
And 'Ting tang, wallah wallah bing bang' to you.
But shall we use a test NG next time?
Ian.
--

3937. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 07:58:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13altpq94401f07@corp.supernews.com>
Source record: 37947

Calculating, or even defining, power density in the near field is a bit dicey to say the least. But the field strength (E or H, which aren't necessarily in phase or oriented at right angles in this vicinity) can readily be determined. Here are some values for the E field as a function of distance from the center of an octagonal loop about 3 feet in diameter at 7 MHz, with 100 watts of applied power, compared to the E field calculated using the proposed simple spherical method (and further assuming, incorrectly, that the wave impedance is 377 ohms resistive):

Dist m E V/m E sph apx V/m
1 683 54.8
2 133 27.4
4 34.2 13.7
8 11.1 6.85
16 4.58 3.42
32 2.15 1.71
64 1.06 0.856
1000 0.0548 0.0673

As you can see, the approximation might be adequate at some distances and for some purposes but not for others.

Roy Lewallen, W7EL

3938. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 11:00:17 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <46ab21c1@clear.net.nz>
Source record: 37948

```
cliff wright wrote:
> Owen Duffy wrote:
>
>> cliff wright <c.c.wright@paradise.net.nz> wrote in
>> news:46aa87cc@clear.net.nz:
>>
>>> nm5k@wt.net wrote:
>>>
>>>> On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
>>>>
>>>>
>>>>> n...@wt.net wrote
>>>>> innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:
>>>>
>>>>
>>>>
>>>>>> A 3/8 wave radiator is easily matched with a single variable cap..
>>>>>
>>>>>
>>>>> Details?
>>>>
>>>>
>>>>
>>>>
>>>> Place cap at the feedpoint in series . Viola...
>>>> This is fairly common really.. IE: feeding "extended"
>>>> Inv L's where the length is appx 3/8 wave.
>>>> The usual reason for that is to raise the maximum current
>>>> point up off the ground a bit to lower ground losses..
>>>> BTW, once you find the best match, and find the cap value
>>>> needed, you could replace the variable with a fixed cap.
>>>> MK
>>>>
>>>>
>>>>
>>>
>>> G'Day!
>>> Well I have tried the series cap idea of course first.
>>> It is set up at the moment with a 500 pF TX type variable in the
>>> matching box. However according to my SWR bridge it has quite a high
>>> VSWR and varying the 500 pF had very little effect. And yes, the coax
>>> is OK. 50 Ohm foam dielectric type which I have used up to 70 cM OK.
>>> My phased verticals that I mentioned did use capacitive matching in
>>> this case 1000 pF RX variables. But they were just a little too long.
```

>>> Unfortunately because of space restrictions I am limited to 4 radials.
>>> Thats one reason why I was trying for more than 1/4 wave.
>>>
>>> 73's Cliff wright ZL1BDA.
>>>
>>
>>
>> Well, it isn't quite "viola" or even "voila!" is it. MK didn't state
>> the limitations to his method.
>>
>> The proposed series capacitor will only achieve a reasonable match if
>> the series resistance component of the feedpoint is around 50 ohms,
>> and the reactance is inductive and within range of a practical capacitor.
>>
>> If indeed the antenna had a feedpoint impedance around 100+j300, the
>> series capacitor would not achieve a match better than VSWR~=2 (which
>> may or may not be good enough). Your observation that it was bad
>> (whatever "quite a high VSWR" means), suggests that it has a higher
>> feedpoint R (it is unlikely to be lower than 50 ohms), or that your
>> capacitor did not tune out the inductive reactance (unlikely since you
>> used a 500pF variable).
>>
>> If you can't match it with a series cap (and no surprises for me
>> there), you could always try an L network starting with the values
>> that I previously gave you.
>>
>> Owen
>>
> Yes Owen I reckon you are right!
> Tried it out again today and the VSWR is a bit worse than 2:1, not good
> enough for me at all.
> Now all I need is a good reference work to brush up my complex
> impeadnaces that I haven't looked at for about 30 years!
> 73's ZL1BDA

Owen I just happened across a reference on page 248 of "Amateur radio
Techniques" by Pat Hawker which I had missed before.
LUckily I have a good stock of "minductor" type coils and hope sometime
next week to try the arrangement at(d) in figure 64.
I have also got a stock of miniductor tapping clamps so it will be easy
to vary the feed point and tuning connections.
With a bit of luck, and some good weather I might have it all set up by
about Friday next.
Many thanks for your suggestions.
73"s Cliff Wright ZL1BDA ex G3NIA.

3939. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 13:24:47 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1185629087.662437.241770@19g2000hsx.googlegroups.com>
Source record: 37949

On 28 jul, 00:33, "wizard12342...@yahoo.com"
<wizard12342...@yahoo.com> wrote:
> I am curious as to whether RF exposure concerns are greater for a
> small transmitting loop [like the MFJ tuned loop] compared to a dipole
> radiating the same power. It would seem that close to the loop, the
> RF power density may be greater [than it would be at the same distance
> from the dipole apex] since the radiating volume is smaller. Can I
> just assume that the power is evenly distributed on the surface of a
> sphere having a radius equal to my distance from the loop antenna,
> calculate the power density on the sphere surface, and use that number
> for evaluation - or are there some near-field considerations not
> captured using this approach?
>
> Thanks,
>
> -JJ

Hello,

When you are close to the loop, let say less then 0.1 lambda, the exposure for the loop will be significantly higher with respect to the full size HW dipole.

The reason for that is that at short distance the reactive fields dominate (that are the fields that obey "DC/lumped AC" calculus). While the radiation H field has 1/r relation, the reactive field has a relation between 1/r^2 to 1/r^3. So you cannot calculate the field strength (both H and E) based on the 1/r relation.

Some years ago I did a calculation on the H field from a loop with D=3m, radiation efficiency 22%, input power 50W (so radiated power is just 11 W), 3.6 MHz. The H-field at 2m would be about 1.33A/m, while the ICNIRP reference level for the general public is 0.22A/m. At 4.5m from the loop, the field drops to 0.2A/m

The reason for the strong local magnetic field is the high Q factor of the loop (about 1500), while a HW dipole will have a Q of about 12. The same radiated power for a HW fipole would result in a about 0.5A feed current. This would result in about 0.04A/m at 2 m distance from the center of the dipole.

At the higher HF bands, the levels for a loop and HW dipole will come closer as the reactive fields vanish faster with respect to distance and (with same size of loop), the Q-factor decreases because of higher radiation resistance (hence lower circulating current in the loop).

Best regards,

Wim
PA3DJS
www.tetech.nl

3940. Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 14:02:08 UTC
From: ricknj10@hotmail.com
Message-ID: <46ab4338.3018828@news.optonline.net>
Source record: 37950

Sometimes on the HF bands you will hear a conversation that goes something like this:

"The antenna here is an extended double Zepp, hung up between two pine trees, fed with 100 feet of open wire line."
Or
"The antenna here is a tribander up 50 feet on a crank up tower."

And the guy on the other side of the QSO will reply, "That antenna is doing a geat job for you, you're 5 and 9 here."

My question is, How does he know? How does he know the antenna is doing a great job? Because he hears you 5 by 9? Maybe your tribander has negative gain, your coax has water in it, your RG58 is 300 feet long and your tuner is not adjusted right. But he tells you he hears you loud, you work other stations, you are happy, you believe your antenna system is working great.

Antenna performance is a state of mind ?? !!!!!

Some evidence -
There was a report put out by some west coast guys about 8 years ago. They did a well documented study of gain of several commercial HF yagis. Many of the newer models, the computer designed ones, outperformed some of the old standbys. I remember (because I saw their presentation at Dayton) them saying the KLM KT34 appeared to have its peak gain on 15 meters outside the band, above 21.450 MHz, although it didn't have the problem on other bands. And the one that most surprised me was the good old Mosely CL-33 had low gain, measurably below the competition. I used to own a CL-33 and knew several other hams who also did. I always was impressed with my beam, the way I could turn it and peak up stations, turn it around and null them out, call DX and they came back to me. A friend of mine had one mounted on his roof, 5 feet over the attic, and was on the DX Honor Roll. So when I heard this report about the lousy performance of a CL-33 I thought "Is it possible they are RIGHT, that the CL-33s that thousands of hams owned may not actually work much better than a dipole?" If an antenna had lossy traps I figured it would have low gain but might still show the nice pattern that I observed with mine. How then could these thousands of owners operate for so long with their CL-33s and not know they were operating at such a disadvantage? Is it possible my friend who is on the Honor Roll worked all that DX with a (let's say, because I forget the actual number) 3 db disadvantage? Yeah, I guess so. Maybe he called the DX a little longer, screamed a little ouder, but he got through, and he thought part of the reason for his success was his antenna.

I now have a modern yagi. It works the WARC bands as well as 10-20 meters. I'm happy with it if for no other reason than that. I get reports from DX that the antenna is working great. They don't know what they are talking

about!!! But I like hearing it.

Next time someone tells you your antenna is working great, ask them
"How do you know?"

Rick K2XT

3941. Re: Wind Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 14:07:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <t4Iqi.24986$Rw1.16877@newssvr25.news.prodigy.net>
Source record: 37951

Al Lorona wrote:
> I have read many times here about how noise is generated when wind strikes
> an antenna made of bare conductors.
>
> Does the same effect occur on a mobile antenna?

If you are talking about precipitation static,
defined at:

http://www.atis.org/tg2k/_precipitation_static.html

the problem is severe and well-documented for airplane
antennas and therefore would exist for mobile antennas.
But air alone passing over an antenna is not sufficient
to produce the effect. For precipitation static to occur,
the air must contain precipitation in the form of
charged particles of dust, snow, rain, etc.
--
73, Cecil http://www.w5dxp.com

3942. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 14:11:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <t8Iqi.24987$Rw1.7155@newssvr25.news.prodigy.net>
Source record: 37952

Rick wrote:
> Next time someone tells you your antenna is working great, ask them
> "How do you know?"

If the definition of "working great" is a 5x9
connection, 5x9 seems to be prima facie evidence.
--
73, Cecil http://www.w5dxp.com

3943. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 15:37:09 UTC
From: ricknj10@hotmail.com
Message-ID: <46ab6261.10997953@news.optonline.net>
Source record: 37953

>
>If the definition of "working great" is a 5x9
>connection, 5x9 seems to be prima facie evidence.

Couldn't it be working lousy but propagation still supported a 5 9 signal
report?

3944. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 15:40:03 UTC
From: ricknj10@hotmail.com
Message-ID: <46ab62d8.11117343@news.optonline.net>
Source record: 37954

In the A3 thread today you can read this :

"Was much better on bandwidth and I got great signal
reports."

Might he still get some great signal reports if he had a 3 db attenuator in
the transmission line? Who would know?

hummmm.......

K2XT

3945. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 15:57:10 UTC
From: "wizard12342002@yahoo.com" <wizard12342002@yahoo.com>
Message-ID: <1185638230.995425.186100@19g2000hsx.googlegroups.com>
Source record: 37955

Thanks all.

Roy, I was not implying that I believe one can assume that the power is from a point source and one can consider the power density passing through a sphere to determine RF safety. I was looking for some guidance as to how to determine a "safe" distance from a small tuned loop assuming a particular frequency and power.

It appears that the simple sphere approach works reasonably well beyond a wavelength or so, and may be an acceptable first-order approximation at 1/2 wavelength [from a small loop].

-JJ

3946. Re: Most accurate loading coil calculator on the web

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 16:13:40 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfamqpk.9mr.bit-bucket@shell.config.com>
Source record: 37956

On Sat, 28 Jul 2007 08:16:44 +0100, ON4AA wrote:
>
> http://HAMwaves.com/antennas/inductance.html
>
> The inductor calculator presented on this page is unique in that it
> employs the the n=0 sheath helix waveguide mode to determine the
> inductance of a coil, irrespective of its electrical length. This
> allows for more accurate inductance predictions at high frequencies.

VERY nice over all web site! Nice job!!

I especialy like the: "Best viewed with:"

FWIW, it looks good in konqueror, too.

Best regards,
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

3947. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 17:00:11 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <vCKqi.889$FO1.640@trnddc05>
Source record: 37957

"Rick" <ricknj10@hotmail.com> wrote in message
news:46ab4338.3018828@news.optonline.net...
> Sometimes on the HF bands you will hear a conversation that goes something
> like this:
>
> "The antenna here is an extended double Zepp, hung up between two pine
> trees,
> fed with 100 feet of open wire line."
> Or
> "The antenna here is a tribander up 50 feet on a crank up tower."
>
> And the guy on the other side of the QSO will reply, "That antenna is
> doing a
> geat job for you, you're 5 and 9 here."
>
> My question is, How does he know? How does he know the antenna is doing a
> great job? Because he hears you 5 by 9? Maybe your tribander has
> negative
> gain, your coax has water in it, your RG58 is 300 feet long and your tuner
> is
> not adjusted right. But he tells you he hears you loud, you work other
> stations, you are happy, you believe your antenna system is working great.
>
> Antenna performance is a state of mind ?? !!!!!
>
> Some evidence -
> There was a report put out by some west coast guys about 8 years ago.
> They
> did a well documented study of gain of several commercial HF yagis. Many
> of
> the newer models, the computer designed ones, outperformed some of the old
> standbys. I remember (because I saw their presentation at Dayton) them
> saying
> the KLM KT34 appeared to have its peak gain on 15 meters outside the band,
> above 21.450 MHz, although it didn't have the problem on other bands. And
> the
> one that most surprised me was the good old Mosely CL-33 had low gain,
> measurably below the competition. I used to own a CL-33 and knew several
> other hams who also did. I always was impressed with my beam, the way I
> could
> turn it and peak up stations, turn it around and null them out, call DX
> and
> they came back to me. A friend of mine had one mounted on his roof, 5
> feet

> over the attic, and was on the DX Honor Roll. So when I heard this report
> about the lousy performance of a CL-33 I thought "Is it possible they are
> RIGHT, that the CL-33s that thousands of hams owned may not actually work
> much
> better than a dipole?" If an antenna had lossy traps I figured it would
> have
> low gain but might still show the nice pattern that I observed with mine.
> How
> then could these thousands of owners operate for so long with their CL-33s
> and
> not know they were operating at such a disadvantage? Is it possible my
> friend
> who is on the Honor Roll worked all that DX with a (let's say, because I
> forget the actual number) 3 db disadvantage? Yeah, I guess so. Maybe he
> called the DX a little longer, screamed a little ouder, but he got
> through,
> and he thought part of the reason for his success was his antenna.
>
> I now have a modern yagi. It works the WARC bands as well as 10-20
> meters.
> I'm happy with it if for no other reason than that. I get reports from DX
> that the antenna is working great. They don't know what they are talking
> about!!! But I like hearing it.
>
> Next time someone tells you your antenna is working great, ask them
> "How do you know?"
>
> Rick K2XT

Hi Rick

Probably the guys who say "Your antenna is working great" are the HAM equivalent of those who answer the Cell Phone question "Can you hear me now?". Perhaps if you were lucky enough to get many-many such reports within a relatively short time, you could then evaluate your antenna.

Jerry

3948. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 17:42:00 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <8obsn4-udv.ln1@p400bob.personal.cox.net>
Source record: 37959

Hi Rick

I personally have tried to give meaningful signal reports over the years but given the tools I have my options are pretty limited. The only real useful report for a remote station is to compare them to someone nearby to where they are, then add and subtract some maths based on differences in power and supposed antenna gain.

You can of course also make judgments based on other signals you hear on the band. Not real accurate though.

Then you have the problem of allowing for antenna vs optimum take off angles when it comes to making gain assertions. Where you hang an antenna will never be the same environment as where the manufacturer tested theirs..

My 1c

Bob VK2YQA

Rick wrote:
> Sometimes on the HF bands you will hear a conversation that goes something
> like this:

3949. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 17:43:28 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6fLqi.125$IE5.15@newssvr17.news.prodigy.net>
Source record: 37958

Rick wrote:
>> If the definition of "working great" is a 5x9
>> connection, 5x9 seems to be prima facie evidence.
>
> Couldn't it be working lousy but propagation still supported a 5 9 signal
> report?

IMO, 5x9 is "great" by definition. :-)
--
73, Cecil http://www.w5dxp.com

3950. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 18:28:19 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <46AB8AD0.9060003@shaw.ca>
Source record: 37960

Rick wrote:

>
> And the guy on the other side of the QSO will reply, "That antenna is doing a
> geat job for you, you're 5 and 9 here."
>
> My question is, How does he know?

There are quite a number of factors, one being the type of
antenna. I have found that mine, for example, is affected
by the time of day, the condition of the ionosphere, and other
weird factors. As well, your transmitter might be working
better at the moment. Perhaps you are pressing harder on
the key or the PTT. It's all relative. :-)

Irv VE6BP

3951. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 18:39:02 UTC
From: gsm@mendelson.com
Message-ID: <slrnfan38n.7tl.gsm@cable.mendelson.com>
Source record: 37961
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Joel Kolstad wrote:
> There is a long history of amateur radio being used to avoid expensive
> commercial services: People used it for years as a replacement for long
> distance telephone calls prior to those rates becoming dirt cheap. It's
> almost ironic to what extent this motivates people -- international calls that
> were $5/minute in 1970 are now often no more than $0.05/minute, yet there's
> still plenty of interest in, e.g., Skype to reduce that to "free!" (after you
> pay your fixed monthly Internet bill). Heck, these days I think that
> satellite phones cost less per minute than many international calls 35 years
> ago!

Here in Israel, it's long since happened. Cell phones have replaced
HT's and phone patches are a thing of the past. Even without VoIP last
fall a long distance company had unlimited calls to the U.S. and
Canada $10 a month. That offer is gone now, but the regular price is
about $.04 a minute except for the "default" carrier which is $.10
a minute, less if you "join".

Quite simply no one here really cares about ham radio anymore.
The Israel Amateur Radio Club has worked hard to keep relegious
Jews and new immegrants out of it, and the "new" generation
does not want to have to take a morse code test.

It's only a few "old guys" left. :-(

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
IL Voice: (07)-7424-1667 U.S. Voice: 1-215-821-1838
Visit my 'blog at http://geoffstechno.livejournal.com/

3952. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 18:58:16 UTC
From: "david@g1zqc" <david@g1zqc.demon.co.uk>
Message-ID: <1185649096.522866.164420@19g2000hsx.googlegroups.com>
Source record: 37962

Funny thing that. I always use an Aerial and get great reports. Never
tried any insect antennas/antenni.
How do you make the coax/feeder connections and is the insect dead or
still alive?

> > And the guy on the other side of the QSO will reply, "That antenna is doing a
> > geat job for you, you're 5 and 9 here."

3953. OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 19:07:49 UTC
From: Radium <glucegen1x@excite.com>
Message-ID: <1185649669.131460.85610@z28g2000prd.googlegroups.com>
Source record: 37963
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

Hi Everyone:

I have a neurological disability called Asperger's Syndrome.

I would like to give you some information about my disability. The reason I am posting this message about Asperger's is to help avoid any potential misunderstandings [though it's probably too late].

I have been diagnosed with Asperger's Syndrome (AS). AS is a neurological condition that causes significant impairment in social interactions. People with AS see the world differently and this can often bring them in conflict with conventional ways of thinking. They have difficulty in reading body language, and interpreting subtle cues. In my situation, I have significant difficulty with natural conversation, reading social cues, and maintaining eye contact. This can lead to a great deal of misunderstanding about my intent or my behavior. For example, I may not always know what to say in social situations, so I may look away or may not say anything. I also may not always respond quickly when asked direct questions, but if given time I am able express my ideas.

On Usenet, the text-equivalent of my disability is probably noticed. I do apologize profusely, for any inconvenience it causes.

Thank you very much in advance for your understanding, cooperation, and assistance.

Regards,

Radium

3954. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 19:10:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13an54e9keccc59@corp.supernews.com>
Source record: 37964

wizard12342002@yahoo.com wrote:
> Thanks all.
>
> Roy, I was not implying that I believe one can assume that the power
> is from a point source and one can consider the power density passing
> through a sphere to determine RF safety. I was looking for some
> guidance as to how to determine a "safe" distance from a small tuned
> loop assuming a particular frequency and power.
>
> It appears that the simple sphere approach works reasonably well
> beyond a wavelength or so, and may be an acceptable first-order
> approximation at 1/2 wavelength [from a small loop].

There's no distinct boundary between the near and far field, but at a wavelength, or even a half wavelength, you're pretty much in the far field of a small antenna. So far field approximations such as the one involving power density on the surface of a sphere are quite reasonable at those distances.

Roy Lewallen, W7EL

3955. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 20:15:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <mcksn4-45r.ln1@mail.specsol.com>
Source record: 37965
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

In rec.radio.amateur.antenna Radium <glucegen1x@excite.com> wrote:
> Hi Everyone:

> I have a neurological disability called Asperger's Syndrome.

Poor baby.

Join a support group and stop making inane usenet postings.

--
Jim Pennino

Remove .spam.sux to reply.

3956. Re: matching masts as vertical antennas.

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 21:32:33 UTC
From: nm5k@wt.net
Message-ID: <1185658353.298985.27220@e9g2000prf.googlegroups.com>
Source record: 37966

On Jul 27, 8:21 pm, Owen Duffy <n...@no.where> wrote:
> cliff wright <c.c.wri...@paradise.net.nz> wrote innews:46aa87cc@clear.net.nz:
>
>
>
> > n...@wt.net wrote:
> >> On Jul 26, 5:14 pm, Owen Duffy <n...@no.where> wrote:
>
> >>>n...@wt.net wrote
> >>>innews:1185476045.317446.10860@d55g2000hsg.googlegroups.com:
>
> >>>>A 3/8 wave radiator is easily matched with a single variable cap..
>
> >>>Details?
>
> >> Place cap at the feedpoint in series . Viola...
> >> This is fairly common really.. IE: feeding "extended"
> >> Inv L's where the length is appx 3/8 wave.
> >> The usual reason for that is to raise the maximum current
> >> point up off the ground a bit to lower ground losses..
> >> BTW, once you find the best match, and find the cap value
> >> needed, you could replace the variable with a fixed cap.
> >> MK
>
> > G'Day!
> > Well I have tried the series cap idea of course first.
> > It is set up at the moment with a 500 pF TX type variable in the
> > matching box. However according to my SWR bridge it has quite a high
> > VSWR and varying the 500 pF had very little effect. And yes, the coax
> > is OK. 50 Ohm foam dielectric type which I have used up to 70 cM OK.
> > My phased verticals that I mentioned did use capacitive matching in
> > this case 1000 pF RX variables. But they were just a little too long.
> > Unfortunately because of space restrictions I am limited to 4 radials.
> > Thats one reason why I was trying for more than 1/4 wave.
>
> > 73's Cliff wright ZL1BDA.
>
> Well, it isn't quite "viola" or even "voila!" is it. MK didn't state the
> limitations to his method.

I wasn't really expecting the feed R to be that high.. If it's 100
ohms,
then yep, the best match would be 2:1. If that's the case, then yes,
he would need to use an L network if he wants the match better than

that.
I never had any trouble using this method, but thinking about it, most of mine were with 160m inv L's.. Maybe it was the shorter vertical section that gave me a low enough feed Z to match .
I'd have to model it to see.
MK

3957. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 22:01:07 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C5190B2E8Anonenowhere@61.9.191.5>
Source record: 37967

Roy Lewallen <w7el@eznec.com> wrote in news:13an54e9keccc59
@corp.supernews.com:

> wizard12342002@yahoo.com wrote:
>> Thanks all.
> There's no distinct boundary between the near and far field, but at a
> wavelength, or even a half wavelength, you're pretty much in the far
> field of a small antenna. So far field approximations such as the one
> involving power density on the surface of a sphere are quite reasonable
> at those distances.

Some years ago, I implemented an online calculator based on the method proposed by our communications regulator (then, the ACA). The calculator includes several overseas SAR levels, including that later struck by our radiation regulator (ARPANSA).

The key difference between the model used and todays regulatory environment in Australia is that the modelled results are not acceptable below 10MHz.

If readers want to play with the model, it is at http://www.vk1od.net/tl/emrcc.php . (The model assumes the antenna is 100% efficient, it it isn't, then adjust the input power to the expected radiated power.)

Is assessing the radiation hazard of the loop, the mode is very important to the outcome, and for reasons I don't understand, the FCC, then apparently the rest of the world, recommended a very high average/peak ratio for SSB telephony.

If one was really concerned about the loop, a simple measurement instrument could be made from a small loop terminated in a resistive load and detector with a small battery powered LCD panel meter. The loop Antenna Factor can be determined from an NEC model, the detector can be calibrated on a signal generator, and the whole lot then calibrated in mV DC to Field Strength in dBuV/m. I have done this for a 0.6m square loop and the measurement results at locations in the induction and radiation near field areas around a 20m dipole reconciled reasonably with expectations based on the calculator above understanding that the calculator's method is conservative.

Owen

3958. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 22:07:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C52AB47393nonenowhere@61.9.191.5>
Source record: 37968

Bob Bob <bob3bob3@suddenlink.net> wrote in
news:8obsn4-udv.ln1@p400bob.personal.cox.net:

> angles when it comes to making gain assertions. Where you hang an
> antenna will never be the same environment as where the manufacturer
> tested theirs..

Quite an assumption Bob, that manufacturers perform meaningful tests on their antennas and quote 3D gain.

Whilst there are no doubt some reputable antenna manufacturers, there are plenty that resemble snake oil salesmen.

Not that it was a salesman, but I read the article describing the little 2.4GHz 2el quad, and the author (who also has a VK1 call, so must be an RF neighbour of mine) noted that the noise increased when he pointed it at the Sun, implying it was sufficiently sensitive to hear Sun noise. In disbelief, I ran the numbers, and he would be more than 160dB shy of reliably detecting sun noise... so there was some other explanation for his observation.

Owen

3959. Gap Antennas - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 22:13:54 UTC
From: CP <kmt123>
Message-ID: <46abbf97$0$36438$4fafbaef@reader5.news.tin.it>
Source record: 37969

Hi friends,

it's a very short time that GAP Antennas have been advertised inside my country, so I can't find anyone who knows them enough, here, to ask him/her some impressions about these devices.

So I ask it from you: do they really have all this typical high gain and sensituvity, without any tuning need?

Did any ham-magazine of yours deal with a professional OM test of these antennas?

Thank you,

CP

3960. Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 22:39:10 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196>
Source record: 37970

This is the first time I've done this. If the need arises again, I'll have to download and try EZNEC, I guess.

Meanwhile, I am concerned about the efficiency of our ARES Command Center HF antenna system.

Could someone please advise me what feedpoint SWRs would be seen on a wire antenna, 15 feet above a flat metal roofed building, (it a NVIS antenna), and resonant at 6.2 MHz.

It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz

The 100 watt radio has one of those built in tuners that can only handle 3:1 SWR. I suspect we are terribly inefficient.

Thanks for any response.

Ed K7AAT

3961. Re: Gap Antennas - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 23:24:50 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <vbQqi.1069$Vk6.979@newsfe07.phx>
Source record: 37971

"CP @virgilio.it>" <kmt123<togliquesto> wrote in message
news:46abbf97$0$36438$4fafbaef@reader5.news.tin.it...
> Hi friends,
>
>
> it's a very short time that GAP Antennas have been advertised inside my
> country, so I can't find anyone who knows them enough, here, to ask
> him/her
> some impressions about these devices.
>
> So I ask it from you: do they really have all this typical high gain and
> sensituvity, without any tuning need?
>
> Did any ham-magazine of yours deal with a professional OM test of these
> antennas?
>
> Thank you,
>
> CP
>
For what it is worth, there are over 221 reviews on GAP antennas at URL:
http://www.eham.net/reviews/products/13

Good Luck es DX
The Shadow

3962. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-28 23:31:28 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C60E2BA4C3nonenowhere@61.9.191.5>
Source record: 37972

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196:

>
> This is the first time I've done this. If the need arises again,
> I'll
> have to download and try EZNEC, I guess.
>
>
> Meanwhile, I am concerned about the efficiency of our ARES Command
> Center HF antenna system.
>
>
> Could someone please advise me what feedpoint SWRs would be seen
> on a
> wire antenna, 15 feet above a flat metal roofed building, (it a NVIS
> antenna), and resonant at 6.2 MHz.
>
>
> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>
>
> The 100 watt radio has one of those built in tuners that can only
> handle 3:1 SWR. I suspect we are terribly inefficient.
>

Ed,

I am not sure exactly what you mean by a "a wire antenna, 15 feet above a flat metal roofed building, (it a NVIS antenna), and resonant at 6.2 MHz".

I assume you mean a centre fed dipole that is an electrical half wave at 6.2MHz.

The efficiency of the radiator component can be estimated from an NEC model, it is probably very high and not the real issue.

Components of an antenna system interact with each other in a complex way, and it is important to analyse the entire antenna system (radiator, earth, transmission line, balun, ATU etc) to obtain a correct understanding of how the antenna system works overall.

In your case, the feedline and ATU are the likely main contributors to antenna system loss. Antenna system loss, transmitter behaviour, and antenna pattern are the main contibutors to station performance.

To illustrate with an example. One Saturday a few months ago, I had 7MHz three QSOs in a row with our new six hour hams who were each using an 80m half wave dipole fed with a substantial run of RG58C/U coax and an ATU. I explained to them that their antenna would work ten times better on 7MHz if their antenna was half the length. A difficult concept for people with six hours investment in ham radio to understand. A fourth person who had heard one of the QSOs (and had apparently called me, but I couldn't dig him out of the noise) emailed me saying he was using the same setup and now knew the problem, it had to be the ATU. I replied to him that the ATU probably wasn't losing all that much power, the high coax losses protected the ATU from an extreme load and extreme loss. Again a hard concept to swallow when the ATU is closer to the transmitter but something downstream "protects" it from higher loss.

Owen

3963. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 00:06:59 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BAE3F3C0A8spectrumhogstarbandn@198.186.192.196>
Source record: 37973

> I am not sure exactly what you mean by a "a wire antenna, 15 feet
> above a flat metal roofed building, (it a NVIS antenna), and resonant
> at 6.2 MHz".
>
> I assume you mean a centre fed dipole that is an electrical half wave
> at 6.2MHz.

Yes. My appologies for leaving out a critical description. Its a wire centerfed halfwave antenna, 15 feet above a flat metal roof, and resonant at 6.2 MHz.

The people who installed it expected the tuner in the FT900 radio to handle the matching. I explained that the tuner was never intended to match an antenna that would be so far off resonance. To compound matters, they are using at least 100 feet of 50 ohm coax... mostly RG-8, I think.

>
> The efficiency of the radiator component can be estimated from an NEC
> model, it is probably very high and not the real issue.

Well, in this case, it IS a necessary issue. I wish to present the probably actual feedpoint SWR to these people so they will realize how far beyond tolerance they are trying to use that built in tuner. That is why I was asking for SWR estimates for 3.95MHz, 7.2MHz, and 5.4MHz.

I intend to propose going to a resonant antenna, and use traps or multiple dipoles to present a near 50ohm feedpoint to the coax and tuner for those three frequencies of operation.

... so.... if anyone could run those figures, I'd sure appreciate it.

Ed

PS: Thanks for the info, though, Owen.

3964. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 00:50:07 UTC
From: Stormin Mormon <cayoung61**spamblock##@hotmail.com>
Message-ID: <46abe470$1$4662$4c368faf@roadrunner.com>
Source record: 37974
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,rec.radio.amateur.antenna,rec.radio.shortwave

Would that be inane CROSS-postings?

--

Christopher A. Young
You can't shout down a troll.
You have to starve them.
.

<jimp@specsol.spam.sux.com> wrote in message
news:mcksn4-45r.ln1@mail.specsol.com...
: In rec.radio.amateur.antenna Radium <glucegen1x@excite.com>
wrote:
: > Hi Everyone:
:
: > I have a neurological disability called Asperger's Syndrome.
:
: Poor baby.
:
: Join a support group and stop making inane usenet postings.
:
: --
: Jim Pennino
:
: Remove .spam.sux to reply.

3965. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 01:02:47 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C705D9E08Dnonenowhere@61.9.191.5>
Source record: 37975

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997BAE3F3C0A8spectrumhogstarbandn@198.186.192.196:

>
>
>
>> I am not sure exactly what you mean by a "a wire antenna, 15 feet
>> above a flat metal roofed building, (it a NVIS antenna), and resonant
>> at 6.2 MHz".
>>
>> I assume you mean a centre fed dipole that is an electrical half wave
>> at 6.2MHz.
>
>
> Yes. My appologies for leaving out a critical description. Its a
> wire centerfed halfwave antenna, 15 feet above a flat metal roof, and
> resonant at 6.2 MHz.
>
> The people who installed it expected the tuner in the FT900 radio
> to
> handle the matching. I explained that the tuner was never intended
> to match an antenna that would be so far off resonance. To compound
> matters, they are using at least 100 feet of 50 ohm coax... mostly
> RG- 8, I think.
>
>
>>
>> The efficiency of the radiator component can be estimated from an NEC
>> model, it is probably very high and not the real issue.
>
>
> Well, in this case, it IS a necessary issue. I wish to present

Whilst neither of us KNOW whether it is an issue, I suggest to you that
based on experience radiator loss in this type of configurationis
probably less than 2%.

> the
> probably actual feedpoint SWR to these people so they will realize how
> far beyond tolerance they are trying to use that built in tuner. That
> is why I was asking for SWR estimates for 3.95MHz, 7.2MHz, and
> 5.4MHz.

You seem to be equating feed point VSWR and that seen by the built in
tuner. That might be the case if the transmission line was lossless. It

is unlikely to be, and we don't know again due to lack of information.

You might find my article at http://www.vk1od.net/LOLL/index.htm which looks at multi-frequency use of a coax fed centre fed dipole of interest. Though it models a 66' dipole at 30' height, some (most) of the messages are relevant to your situation.

Perhaps on reviewing the article, you will see my point that radiator loss is less important, and that understanding transmission line loss is very important to your problem.

The article might even suggest some other options that you haven't nominated.

Owen

3966. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 01:42:31 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BBE71D2CE5spectrumhogstarbandn@198.186.192.196>
Source record: 37976

> You seem to be equating feed point VSWR and that seen by the built in
> tuner. That might be the case if the transmission line was lossless.
> It is unlikely to be, and we don't know again due to lack of
> information.

Owen,

I appreciate your responses, but I am at a loss as to what additional information one would need to model a center fed 75 foot long half wave antenna, resosnant at 6.2 MHz, positioned 15 feet above a flat metal roof, fed with 100 feet of 50 ohm coax (RG8), and operated on any one of three frequencies.... 3.95MHz, 5.4MHz, and 7.2 MHz.

What parameter is missing to provide a good model of this?

Ed

3967. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 01:47:05 UTC
From: nobody@nowheres.com
Message-ID: <1i1yw4b.1q4c7ixa9g2tcN%nobody@nowheres.com>
Source record: 37977
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

Do you drink a lot of diet soft drinks or have you used a lot of
artificial sweetners?? People who are heavy users of these tend to get a
range of neurological problems. There was a pretty good documentary on
it I downloaded, a lot of research behind it, can't remeber the name
now.

Radium <glucegen1x@excite.com> wrote:

> Hi Everyone:
>
> I have a neurological disability called Asperger's Syndrome.
>
> I would like to give you some information about my disability. The
> reason I am posting this message about Asperger's is to help avoid any
> potential misunderstandings [though it's probably too late].
>
> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> neurological condition that causes significant impairment in social
> interactions. People with AS see the world differently and this can
> often bring them in conflict with conventional ways of thinking. They
> have difficulty in reading body language, and interpreting subtle
> cues. In my situation, I have significant difficulty with natural
> conversation, reading social cues, and maintaining eye contact. This
> can lead to a great deal of misunderstanding about my intent or my
> behavior. For example, I may not always know what to say in social
> situations, so I may look away or may not say anything. I also may not
> always respond quickly when asked direct questions, but if given time
> I am able express my ideas.
>
> On Usenet, the text-equivalent of my disability is probably noticed. I
> do apologize profusely, for any inconvenience it causes.
>
> Thank you very much in advance for your understanding, cooperation,
> and assistance.
>
>
> Regards,
>
> Radium

3968. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 01:49:04 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BBF8E63733spectrumhogstarbandn@198.186.192.196>
Source record: 37978

```
but I am at a loss as to what
> additional
> information one would need to model a center fed 75 foot long half
> wave antenna, resosnant at 6.2 MHz, positioned 15 feet above a flat
> metal roof, fed with 100 feet of 50 ohm coax (RG8), and operated on
> any one of three frequencies.... 3.95MHz, 5.4MHz, and 7.2 MHz.
>

Small correction.... the feedline is also not important since all I am
asking for is essentially the feedpoint impedance of this antenna at those
three frequencies of operation.

Ed K7AAT
```

3969. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 02:08:41 UTC
From: Stuart Grey <stuart.grey@comcast.net>
Message-ID: <BrqdnTzdKuw0azbbnZ2dnUVZ_gadnZ2d@comcast.com>
Source record: 37979
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:

> Hi Everyone:
>
> I have a neurological disability called Asperger's Syndrome.
>
> I would like to give you some information about my disability. The
> reason I am posting this message about Asperger's is to help avoid any
> potential misunderstandings [though it's probably too late].
>
> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> neurological condition that causes significant impairment in social
> interactions. People with AS see the world differently and this can
> often bring them in conflict with conventional ways of thinking. They
> have difficulty in reading body language, and interpreting subtle
> cues. In my situation, I have significant difficulty with natural
> conversation, reading social cues, and maintaining eye contact. This
> can lead to a great deal of misunderstanding about my intent or my
> behavior. For example, I may not always know what to say in social
> situations, so I may look away or may not say anything. I also may not
> always respond quickly when asked direct questions, but if given time
> I am able express my ideas.
>
> On Usenet, the text-equivalent of my disability is probably noticed. I
> do apologize profusely, for any inconvenience it causes.
>
> Thank you very much in advance for your understanding, cooperation,
> and assistance.
>
>
> Regards,
>
> Radium

So? Why mention it?

3970. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 02:31:33 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C7F6ACEB09nonenowhere@61.9.191.5>
Source record: 37981

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997BBF8E63733spectrumhogstarbandn@198.186.192.196:

> but I am at a loss as to what
>> additional
>> information one would need to model a center fed 75 foot long half
>> wave antenna, resosnant at 6.2 MHz, positioned 15 feet above a flat
>> metal roof, fed with 100 feet of 50 ohm coax (RG8), and operated on
>> any one of three frequencies.... 3.95MHz, 5.4MHz, and 7.2 MHz.
>>
>
>
> Small correction.... the feedline is also not important since all I
> am
> asking for is essentially the feedpoint impedance of this antenna at
> those three frequencies of operation.

If the metal roof was infinite (or very large compared to the dipole),
the feedpoint Z looks to be around 3-j711 at 3.95MHz. (This is probably
not a good model of your scenario though.)

Is that all you really need to assess the outcome?

100' of RG8 with such a load will lose 20.6dB.

The ATU will see around 4-j55, so you may well be losing 3dB

Radiator loss (with with you seemed concerned) depends on the wire (which
you haven't told us about), and it might be a dB with such a low
feedpoint R.

The coax loss dominates the problem.

There is a lot more to quantifying the problem, and designing a solution
than knowing feedpoint Z at three spot frequencies for a dipole over an
inadequately specified metal roof.

However, we do know that a coax fed centre fed dipole is not an efficient
multi-frequency antenna if the coax is of significant length (meaning
basically more than nearly zero).

Owen

3971. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 02:35:09 UTC
From: Frank Gilliland <w&#65533;renut@NOSPAM&#65533;cehouse.net>
Message-ID: <7juna3hps9iq80hdcu1g8nd96o3rifttcu@4ax.com>
Source record: 37980
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
<stuart.grey@comcast.net> wrote in
<BrqdnTzdKuw0azbbnZ2dnUVZ_gadnZ2d@comcast.com>:

>On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>
>> Hi Everyone:
>>
>> I have a neurological disability called Asperger's Syndrome.
>>
>> I would like to give you some information about my disability. The
>> reason I am posting this message about Asperger's is to help avoid any
>> potential misunderstandings [though it's probably too late].
>>
>> I have been diagnosed with Asperger's Syndrome (AS). AS is a
>> neurological condition that causes significant impairment in social
>> interactions. People with AS see the world differently and this can
>> often bring them in conflict with conventional ways of thinking. They
>> have difficulty in reading body language, and interpreting subtle
>> cues. In my situation, I have significant difficulty with natural
>> conversation, reading social cues, and maintaining eye contact. This
>> can lead to a great deal of misunderstanding about my intent or my
>> behavior. For example, I may not always know what to say in social
>> situations, so I may look away or may not say anything. I also may not
>> always respond quickly when asked direct questions, but if given time
>> I am able express my ideas.
>>
>> On Usenet, the text-equivalent of my disability is probably noticed. I
>> do apologize profusely, for any inconvenience it causes.
>>
>> Thank you very much in advance for your understanding, cooperation,
>> and assistance.
>>
>>
>> Regards,
>>
>> Radium
>
>So? Why mention it?

Because ever since King George got into the White House, a lot of
people learned that they can set higher goals in spite of their
autism!

3972. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 02:37:21 UTC
From: Notan <notan@ddressthatcanbespammed>
Message-ID: <ufOdnf9Ch6_8YDbbnZ2dnUVZ_hWdnZ2d@giganews.com>
Source record: 37882
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

the_blogologist wrote:

> Do you drink a lot of diet soft drinks or have you used a lot of
> artificial sweetners?? People who are heavy users of these tend to get a
> range of neurological problems. There was a pretty good documentary on
> it I downloaded, a lot of research behind it, can't remeber the name
> now.

Loss of memory?

Do you drink a lot of diet soft drinks or have you used a lot of
artificial sweetners?? People who are heavy users of these tend to get a
range of neurological problems. There was a pretty good documentary on
it I downloaded, a lot of research behind it, can't remeber the name
now.

--
Notan

3973. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 02:47:14 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <ScTqi.3733$8u1.2359@trnddc07>
Source record: 37883

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>
> This is the first time I've done this. If the need arises again, I'll
> have to download and try EZNEC, I guess.
>
>
> Meanwhile, I am concerned about the efficiency of our ARES Command
> Center HF antenna system.
>
>
> Could someone please advise me what feedpoint SWRs would be seen on a
> wire antenna, 15 feet above a flat metal roofed building, (it a NVIS
> antenna), and resonant at 6.2 MHz.
>
>
> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>
>
> The 100 watt radio has one of those built in tuners that can only
> handle 3:1 SWR. I suspect we are terribly inefficient.
>
>
> Thanks for any response.
>
>
> Ed K7AAT

Hi Ed

I probably dont quite understand your situation. But, if your question
is referenced to a 75 foot long center fed dipole 15 feet above a metal
ground, EZNEC shows the terminal impedance will be 72 ohms at 6.4 MHz.
The VSWR is under 3:1 from about 6.05 MHz to 6.5 MHz.

Jerry (who used 1 mm diameter copper wire)

3974. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 03:12:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C8662053B3nonenowhere@61.9.191.5>
Source record: 37884

"Jerry Martes" <j.jmartes@verizon.net> wrote in
news:ScTqi.3733$8u1.2359@trnddc07:

>
> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
> news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>>
>> This is the first time I've done this. If the need arises again,
>> I'll
>> have to download and try EZNEC, I guess.
>>
>>
>> Meanwhile, I am concerned about the efficiency of our ARES Command
>> Center HF antenna system.
>>
>>
>> Could someone please advise me what feedpoint SWRs would be seen
>> on a
>> wire antenna, 15 feet above a flat metal roofed building, (it a NVIS
>> antenna), and resonant at 6.2 MHz.
>>
>>
>> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>>
>>
>> The 100 watt radio has one of those built in tuners that can only
>> handle 3:1 SWR. I suspect we are terribly inefficient.
>>
>>
>> Thanks for any response.
>>
>>
>> Ed K7AAT
>
>
> Hi Ed
>
> I probably dont quite understand your situation. But, if your
> question
> is referenced to a 75 foot long center fed dipole 15 feet above a
> metal ground, EZNEC shows the terminal impedance will be 72 ohms at
> 6.4 MHz. The VSWR is under 3:1 from about 6.05 MHz to 6.5 MHz.
>

Jerry, are you saying that your model suggests the Z~=72+j0 at resonance, and the half wave dipole is ~0.1m above a perfectly conducting plane. It doesn't seem right.

Owen

3975. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 03:13:49 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C86956D508nonenowhere@61.9.191.5>
Source record: 37885

Owen Duffy <none@no.where> wrote in
news:Xns997C8662053B3nonenowhere@61.9.191.5:

> "Jerry Martes" <j.jmartes@verizon.net> wrote in
> news:ScTqi.3733$8u1.2359@trnddc07:
>
>>
>> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
>> news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>>>
>>> This is the first time I've done this. If the need arises again,
>>> I'll
>>> have to download and try EZNEC, I guess.
>>>
>>>
>>> Meanwhile, I am concerned about the efficiency of our ARES
>>> Command
>>> Center HF antenna system.
>>>
>>>
>>> Could someone please advise me what feedpoint SWRs would be seen
>>> on a
>>> wire antenna, 15 feet above a flat metal roofed building, (it a
>>> NVIS antenna), and resonant at 6.2 MHz.
>>>
>>>
>>> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>>>
>>>
>>> The 100 watt radio has one of those built in tuners that can only
>>> handle 3:1 SWR. I suspect we are terribly inefficient.
>>>
>>>
>
> Jerry, are you saying that your model suggests the Z~=72+j0 at
> resonance, and the half wave dipole is ~0.1m above a perfectly
> conducting plane. It doesn't seem right.

That should read "0.1 wl above..."

3976. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 03:40:00 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <k_Tqi.12016$tj6.3133@newsread4.news.pas.earthlink.net>
Source record: 37886

```
"Owen Duffy" <none@no.where> wrote in message
news:Xns997C86956D508nonenowhere@61.9.191.5...
> Owen Duffy <none@no.where> wrote in
> news:Xns997C8662053B3nonenowhere@61.9.191.5:
>
>> "Jerry Martes" <j.jmartes@verizon.net> wrote in
>> news:ScTqi.3733$8u1.2359@trnddc07:
>>
>>>
>>> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
>>> news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>>>>
>>>> This is the first time I've done this. If the need arises again,
>>>> I'll
>>>> have to download and try EZNEC, I guess.
>>>>
>>>>
>>>> Meanwhile, I am concerned about the efficiency of our ARES
>>>> Command
>>>> Center HF antenna system.
>>>>
>>>>
>>>> Could someone please advise me what feedpoint SWRs would be seen
>>>> on a
>>>> wire antenna, 15 feet above a flat metal roofed building, (it a
>>>> NVIS antenna), and resonant at 6.2 MHz.
>>>>
>>>>
>>>> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>>>>
>>>>
>>>> The 100 watt radio has one of those built in tuners that can only
>>>> handle 3:1 SWR. I suspect we are terribly inefficient.
>>>>
>>>>
>>
>> Jerry, are you saying that your model suggests the Z~=72+j0 at
>> resonance, and the half wave dipole is ~0.1m above a perfectly
>> conducting plane. It doesn't seem right.
>
> That should read "0.1 wl above..."

The answer to the question would seem to be that it would not work very well
just due to experiance. The swr would be off the charts and a rig that had
```

an internal tuner would not tune that kind of antenna over that frequency range if the swr had to be under 3:1. Also the loss in the coax due to the high swr would be very large..

3977. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:17:56 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BD8C9EC50Fspectrumhogstarbandn@64.209.0.92>
Source record: 37887

."
>
> The answer to the question would seem to be that it would not work
> very well just due to experiance. The swr would be off the charts and
> a rig that had an internal tuner would not tune that kind of antenna
> over that frequency range if the swr had to be under 3:1. Also the
> loss in the coax due to the high swr would be very large..
>

Well, that was my original surmise of the situation. I was just trying to have someone with expertize on EZNEC run the antenna at the three frequencies listed in order to have the feedpoint SWR calculated for each of those three frequencies. So far, no one, except Owen, has come even close. I can work with the figures Owen provided for the one frequency (3975) and do the rest of the calculations manually to determine the SWR on that frequency, but had hoped for actual feedpoint SWR data for all three actual transmit frequencies listed.

Thanks to all.

Ed

3978. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:35:20 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C946701DD6nonenowhere@61.9.191.5>
Source record: 37888

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997BD8C9EC50Fspectrumhogstarbandn@64.209.0.92:

...
> Well, that was my original surmise of the situation. I was just
> trying to have someone with expertize on EZNEC run the antenna at the
> three frequencies listed in order to have the feedpoint SWR calculated
> for each of those three frequencies. So far, no one, except Owen, has
> come even close. I can work with the figures Owen provided for the one
> frequency (3975) and do the rest of the calculations manually to
> determine the SWR on that frequency, but had hoped for actual feedpoint
> SWR data for all three actual transmit frequencies listed.

Ed, I am giving you information that is not sufficient to solve the
problem.

Nevertheless, I defer to your opinion.

Read my earlier caveats about my reading of your limited information and
interpretation in a model.

Freq VSWR at feedpoint (RG8/U)
3.98 959
5.4 115
7.2 34

Owen

3979. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:45:46 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <_XUqi.1027$FO1.53@trnddc05>
Source record: 37889

"Owen Duffy" <none@no.where> wrote in message
news:Xns997C86956D508nonenowhere@61.9.191.5...
> Owen Duffy <none@no.where> wrote in
> news:Xns997C8662053B3nonenowhere@61.9.191.5:
>
>> "Jerry Martes" <j.jmartes@verizon.net> wrote in
>> news:ScTqi.3733$8u1.2359@trnddc07:
>>
>>>
>>> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
>>> news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>>>>
>>>> This is the first time I've done this. If the need arises again,
>>>> I'll
>>>> have to download and try EZNEC, I guess.
>>>>
>>>>
>>>> Meanwhile, I am concerned about the efficiency of our ARES
>>>> Command
>>>> Center HF antenna system.
>>>>
>>>>
>>>> Could someone please advise me what feedpoint SWRs would be seen
>>>> on a
>>>> wire antenna, 15 feet above a flat metal roofed building, (it a
>>>> NVIS antenna), and resonant at 6.2 MHz.
>>>>
>>>>
>>>> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>>>>
>>>>
>>>> The 100 watt radio has one of those built in tuners that can only
>>>> handle 3:1 SWR. I suspect we are terribly inefficient.
>>>>
>>>>
>>
>> Jerry, are you saying that your model suggests the Z~=72+j0 at
>> resonance, and the half wave dipole is ~0.1m above a perfectly
>> conducting plane. It doesn't seem right.
>
> That should read "0.1 wl above..."

Hi Owen

I was kinda surprised too. But, I have alot of faith in EZNEC. The problem of determining the input impedance of such a simple antenna over a perfectly conducting ground seemed too easy to model, so I did that. EZNEC tells me that the 75 foot copper wire thats 0.040 diameter and 15 feet above ground looks like 72.33 +j0.5972 ohms.at 6.4 MHz.

My experience with Roy's program has always indicated that it is more accurate than my actual measurements. I would appreciate hearing where EZNEC cannot be trusted.

Jerry

3980. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:52:07 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BDE97E8068spectrumhogstarbandn@198.186.192.196>
Source record: 37890

> Ed, I am giving you information that is not sufficient to solve the
> problem.
>
> Nevertheless, I defer to your opinion.
>
> Read my earlier caveats about my reading of your limited information
and
> interpretation in a model.

It is apparent to me that we have not been communicating effectively.
I did leave out some info, such as the wire type, (#18 stranded and
insulated) and the size of the flat metal roof (can probably be treated
as infinite given its size), but only because I knew the basic losses
due to antenna size itself (non-resonant) would be so huge as to mask
any much smaller effects of these other items.

>
> Freq VSWR at feedpoint (RG8/U)
> 3.98 959
> 5.4 115
> 7.2 34
>

My thanks on the above. That is something basic I can give to the
operators of this station to convince them we need to change the antenna
system. (Giving them complex impedance figures, etc, would not fly with
that group!)

It is also obvious I need to get EZNEC. Soon as I have time to play
with it, I will download the freebie version for starters. I've seen too
much discussion here on this group not to realize it is worthwhile to
have, even if only occasionally used.

Ed K7AAT

3981. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:53:42 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <q3Vqi.1030$FO1.737@trnddc05>
Source record: 37891

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns997BD8C9EC50Fspectrumhogstarbandn@64.209.0.92...
> ."
>>
>> The answer to the question would seem to be that it would not work
>> very well just due to experiance. The swr would be off the charts and
>> a rig that had an internal tuner would not tune that kind of antenna
>> over that frequency range if the swr had to be under 3:1. Also the
>> loss in the coax due to the high swr would be very large..
>>
>
>
> Well, that was my original surmise of the situation. I was just
> trying to have someone with expertize on EZNEC run the antenna at the
> three frequencies listed in order to have the feedpoint SWR calculated
> for each of those three frequencies. So far, no one, except Owen, has
> come even close.

Hi Ed
Did you miss my post??? Or, did misunderstand your question. This
antenna is so easy to model with Roy's EZNEC that I suspect it would be an
excellant "first try" for you. Send Roy a few $$ and you will soon realize
that you have spent some money well.
I'd be willing to show you how to model it, and I am a novice user of
EZNEC. Your question certainly doesnt require an expert on EZNEC to be
answered very clearly.

Jerry KD6JDJ

I can work with the figures Owen provided for the one
> frequency (3975) and do the rest of the calculations manually to
> determine the SWR on that frequency, but had hoped for actual feedpoint
> SWR data for all three actual transmit frequencies listed.
>
> Thanks to all.
>
> Ed
>
>

3982. Re: Wind Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 04:59:35 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <X8Vqi.53362$dI1.18065@newsfe08.phx>
Source record: 37892

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:t4Iqi.24986$Rw1.16877@newssvr25.news.prodigy.net...
> Al Lorona wrote:
> > I have read many times here about how noise is generated when wind
strikes
> > an antenna made of bare conductors.
> >
> > Does the same effect occur on a mobile antenna?
>
> If you are talking about precipitation static,
> defined at:
>
> http://www.atis.org/tg2k/_precipitation_static.html
>
> the problem is severe and well-documented for airplane
> antennas and therefore would exist for mobile antennas.
> But air alone passing over an antenna is not sufficient
> to produce the effect. For precipitation static to occur,
> the air must contain precipitation in the form of
> charged particles of dust, snow, rain, etc.
> --
> 73, Cecil http://www.w5dxp.com

Navy receive whip antennas are all fitted with a "static drain resistor" (50
k-ohm, I think) in a connection box at the base. We had to disconnect the
resistor to megger the element during inspections. Evidently, precipitation
static could and would build up to a hazardous DC potential.

3983. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 05:07:19 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <cgVqi.53505$dI1.50138@newsfe08.phx>
Source record: 37893

"Rick" <ricknj10@hotmail.com> wrote in message
news:46ab4338.3018828@news.optonline.net...
> Sometimes on the HF bands you will hear a conversation that goes something
> like this:
>
> "The antenna here is an extended double Zepp, hung up between two pine
trees,
> fed with 100 feet of open wire line."
> Or
> "The antenna here is a tribander up 50 feet on a crank up tower."
>
> And the guy on the other side of the QSO will reply, "That antenna is
doing a
> geat job for you, you're 5 and 9 here."
>
> My question is, How does he know? How does he know the antenna is doing a
> great job? Because he hears you 5 by 9?

Hey, Rick -- You're 5-9 on my monitor. Your keyboard is working great! ;-)
I agree, it's just become a ragchewing convention.

"Sal"

3984. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 05:38:32 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997C9F1DED8EBnonenowhere@61.9.191.5>
Source record: 37894

```
"Jerry Martes" <j.jmartes@verizon.net> wrote in
news:_XUqi.1027$FO1.53@trnddc05:

>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns997C86956D508nonenowhere@61.9.191.5...
>> Owen Duffy <none@no.where> wrote in
>> news:Xns997C8662053B3nonenowhere@61.9.191.5:
>>
>>> "Jerry Martes" <j.jmartes@verizon.net> wrote in
>>> news:ScTqi.3733$8u1.2359@trnddc07:
>>>
>>>>
>>>> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
>>>> news:Xns997B9F5B3972spectrumhogstarbandn@198.186.192.196...
>>>>>
>>>>> This is the first time I've done this. If the need arises again,
>>>>> I'll
>>>>> have to download and try EZNEC, I guess.
>>>>>
>>>>>
>>>>> Meanwhile, I am concerned about the efficiency of our ARES
>>>>> Command
>>>>> Center HF antenna system.
>>>>>
>>>>>
>>>>> Could someone please advise me what feedpoint SWRs would be
>>>>> seen on a
>>>>> wire antenna, 15 feet above a flat metal roofed building, (it a
>>>>> NVIS antenna), and resonant at 6.2 MHz.
>>>>>
>>>>>
>>>>> It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz
>>>>>
>>>>>
>>>>> The 100 watt radio has one of those built in tuners that can
>>>>> only
>>>>> handle 3:1 SWR. I suspect we are terribly inefficient.
>>>>>
>>>>>
>>>
>>> Jerry, are you saying that your model suggests the Z~=72+j0 at
>>> resonance, and the half wave dipole is ~0.1m above a perfectly
>>> conducting plane. It doesn't seem right.
```

>>
>> That should read "0.1 wl above..."
>
> Hi Owen
>
> I was kinda surprised too. But, I have alot of faith in EZNEC.
> The
> problem of determining the input impedance of such a simple antenna
> over a perfectly conducting ground seemed too easy to model, so I did
> that.
> EZNEC tells me that the 75 foot copper wire thats 0.040 diameter and
> 15
> feet above ground looks like 72.33 +j0.5972 ohms.at 6.4 MHz.

Ok, I get around 20 ohms at resonance.

We have obviously made some different interpretations somewhere... but I expect a number smaller than 72 due to the proximity of the conducting plane.

>
> My experience with Roy's program has always indicated that it is
> more
> accurate than my actual measurements. I would appreciate hearing
> where EZNEC cannot be trusted.

I didn't say that, nor did I imply so, and to infer so is a YKW trick.

It is not the tool, it is the difference in the way we have each built the model. As it happens, I am using EZNEC 3, but I expect I would get exactly the same answer from any NEC-2 based tool, 4NEC2 for instance. (I have mailed you my model, you can compare them and see where they are different.)

Owen

Glossary: YKW=You Know Who

3985. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 05:48:55 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997BE8390D928spectrumhogstarbandn@198.186.192.196>
Source record: 37895

> Hi Ed
> Did you miss my post??? Or, did misunderstand your question.
> This
> antenna is so easy to model with Roy's EZNEC that I suspect it would
> be an excellant "first try" for you. Send Roy a few $$ and you will
> soon realize that you have spent some money well.
> I'd be willing to show you how to model it, and I am a novice user
> of
> EZNEC. Your question certainly doesnt require an expert on EZNEC to
> be answered very clearly.
>

No, Jerry, I did not miss your post.... but it did not answer my question. You modeled the antenna I described, apparently, but not at the frequencies of intended operation. Yes, it is a 75foot halfwave center fed, etc, etc, but I was looking for either feedpoint impedence or a calculated feedpoint SWR into 50 ohm transmission line on three frequencies, 3993KHz, 5400 KHz, and 7240KHz. Owen has subsequently provided the figures I was looking forward, although he wasn't happy with it. He wanted more info to provide a more accurate model, and I was only looking for a "close" figure.

Thanks for your input, Jerry.

Ed

3986. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 07:25:16 UTC
From: Lee <lo012a4519@blueyonder.co.uk>
Message-ID: <whXqi.11246$7c.3807@fe2.news.blueyonder.co.uk>
Source record: 37896
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

"Radium" <glucegen1x@excite.com> wrote in message
news:1185649669.131460.85610@z28g2000prd.googlegroups.com...
> Hi Everyone:
>
> I have a neurological disability called Asperger's Syndrome.
>
> I would like to give you some information about my disability. The
> reason I am posting this message about Asperger's is to help avoid any
> potential misunderstandings [though it's probably too late].
>
> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> neurological condition that causes significant impairment in social
> interactions. People with AS see the world differently and this can
> often bring them in conflict with conventional ways of thinking. They
> have difficulty in reading body language, and interpreting subtle
> cues. In my situation, I have significant difficulty with natural
> conversation, reading social cues, and maintaining eye contact. This
> can lead to a great deal of misunderstanding about my intent or my
> behavior. For example, I may not always know what to say in social
> situations, so I may look away or may not say anything. I also may not
> always respond quickly when asked direct questions, but if given time
> I am able express my ideas.
>
> On Usenet, the text-equivalent of my disability is probably noticed. I
> do apologize profusely, for any inconvenience it causes.
>
> Thank you very much in advance for your understanding, cooperation,
> and assistance.
>
>
> Regards,
>
> Radium
>

So you`re a typical radio ham then ????

Lee......G6ZSG....

3987. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 11:57:54 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1185710274.411697.45190@b79g2000hse.googlegroups.com>
Source record: 37897

Owen Duffy wrote:
> Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
> news:Xns997BBF8E63733spectrumhogstarbandn@198.186.192.196:
>
> > but I am at a loss as to what
> >> additional
> >> information one would need to model a center fed 75 foot long half
> >> wave antenna, resosnant at 6.2 MHz, positioned 15 feet above a flat
> >> metal roof, fed with 100 feet of 50 ohm coax (RG8), and operated on
> >> any one of three frequencies.... 3.95MHz, 5.4MHz, and 7.2 MHz.
> >>
> >
> >
> > Small correction.... the feedline is also not important since all I
> > am
> > asking for is essentially the feedpoint impedance of this antenna at
> > those three frequencies of operation.
>
> If the metal roof was infinite (or very large compared to the dipole),
> the feedpoint Z looks to be around 3-j711 at 3.95MHz. (This is probably
> not a good model of your scenario though.)
>
> Is that all you really need to assess the outcome?
>
> 100' of RG8 with such a load will lose 20.6dB.
>
> The ATU will see around 4-j55, so you may well be losing 3dB
>
> Radiator loss (with with you seemed concerned) depends on the wire (which
> you haven't told us about), and it might be a dB with such a low
> feedpoint R.
>
> The coax loss dominates the problem.
>
> There is a lot more to quantifying the problem, and designing a solution
> than knowing feedpoint Z at three spot frequencies for a dipole over an
> inadequately specified metal roof.
>
> However, we do know that a coax fed centre fed dipole is not an efficient
> multi-frequency antenna if the coax is of significant length (meaning
> basically more than nearly zero).
>
>
> Owen

3988. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 12:55:38 UTC
From: ricknj10@hotmail.com
Message-ID: <46ac8b01.40692609@news.optonline.net>
Source record: 37898

15 feet above a flat metal roofed building, (it a NVIS
>antenna), and resonant at 6.2 MHz.
It is operated at 3.98 MHZ, 5.4 MHz, and 7.2 MHz

Here's your answer:
Freq SWR
3.98 3,240 (three thousand !!)
6.2 2.08
7.2 39.3

Details:
Used 4NEC2 (free)
5 meters above ground
Length of antenna = 11.62 m
Impedance at 3.98 MHz = 3-j710
Impedance at 6.2 MHz = 24 +j3
Impedance at 7.2 MHz = 54+j318
Limitation - real earth used vs flat metal roof

File Setup and computation/optimization time - 7.8 minutes
Rate $60/hour
Your billable cost $7.80
Rebate for first time user $7.80
Net cost $0.00

73,

Rick K2XT

3989. Re: Your antenna is working great

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 13:10:51 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <r7gun4-0o1.ln1@p400bob.personal.cox.net>
Source record: 37899

You arc weld of of course....

Haven't you seen those blue fluro looking boxes that make zapping
noises? They are the production line for such things..

<grin>

Bob

david@g1zqc wrote:

> How do you make the coax/feeder connections and is the insect dead or
> still alive?

3990. Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 14:06:44 UTC
From: "dfcoates@gmail.com" <dfcoates@gmail.com>
Message-ID: <1185718004.556740.308070@g4g2000hsf.googlegroups.com>
Source record: 37900

Greetings,

To be honest, I'm a little embarrassed to even be posting this question. I've been a ham for over 10 years, but I've been out of the hobby for the past several and I'll freely admit that I'm one of those "memorize the multiple choice" people. Anyway, times have changed and I now own a house, and an HF rig, and have moved far from my roots. I want to get an HF station together, but I find the prospect of building/raising an antenna and putting together a grounding system a daunting task.

So here's my question. Is it ok to have multiple shallow grounding rods versus one longer grounding rod? For example, what's the difference between 2 four foot rods versus 1 eight foot rod?

Also, I'd like to describe my potential station set up, as I strongly suspect that it is not ideal, and I'd like any suggestions from the elmering crowd. It's on the 2nd floor of my home, over the garage. The power, cable, and phone connections are on the opposite side of the house, and there is no way to directly go under the house to get there (at least from outside the house). The home is nearly brand new (less than one year old). I should also mention that I have an unnatural fear of putting holes in the house, but I suppose I'll have to get over that in order to get on the air ;-).

Thanks in advance and 73!

Dan, W4XJF

3991. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 14:18:02 UTC
From: hot-ham-and-cheese@hotmail.com
Message-ID: <1185718682.609272.139610@m37g2000prh.googlegroups.com>
Source record: 37901
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 28, 11:35 pm, Frank Gilliland <wïrenut@NOSPAMïcehouse.net>
wrote:
> On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
> <stuart.g...@comcast.net> wrote in
> <BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
>
> >On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>
> >> Hi Everyone:
>
> >> I have a neurological disability called Asperger's Syndrome.
>
> >> I would like to give you some information about my disability. The
> >> reason I am posting this message about Asperger's is to help avoid any
> >> potential misunderstandings [though it's probably too late].
>
> >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> >> neurological condition that causes significant impairment in social
> >> interactions. People with AS see the world differently and this can
> >> often bring them in conflict with conventional ways of thinking. They
> >> have difficulty in reading body language, and interpreting subtle
> >> cues. In my situation, I have significant difficulty with natural
> >> conversation, reading social cues, and maintaining eye contact. This
> >> can lead to a great deal of misunderstanding about my intent or my
> >> behavior. For example, I may not always know what to say in social
> >> situations, so I may look away or may not say anything. I also may not
> >> always respond quickly when asked direct questions, but if given time
> >> I am able express my ideas.
>
> >> On Usenet, the text-equivalent of my disability is probably noticed. I
> >> do apologize profusely, for any inconvenience it causes.
>
> >> Thank you very much in advance for your understanding, cooperation,
> >> and assistance.
>
> >> Regards,
>
> >> Radium
>
> >So? Why mention it?
>
> Because ever since King George got into the White House, a lot of
> people learned that they can set higher goals in spite of their

> autism!

Finally someone has noted that Asperger's Syndrome is one form of autism. If you visit your local schools you will find whole classrooms full of autistic kids - almost entirely boys. It's an epidemic!

For Radium to be able to post his message places him in the "high-functioning" category. Many are not high-functioning.

3992. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 14:41:11 UTC
From: Stuart Grey <stuart.grey@comcast.net>
Message-ID: <roOdncL7YJ-aOjHbnZ2dnUVZ_gmdnZ2d@comcast.com>
Source record: 37902
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sun, 29 Jul 2007 07:25:16 +0000, Lee wrote:

> "Radium" <glucegen1x@excite.com> wrote in message
> news:1185649669.131460.85610@z28g2000prd.googlegroups.com...
>> Hi Everyone:
>>
>> I have a neurological disability called Asperger's Syndrome.
>>
>> I would like to give you some information about my disability. The
>> reason I am posting this message about Asperger's is to help avoid any
>> potential misunderstandings [though it's probably too late].
>>
>> I have been diagnosed with Asperger's Syndrome (AS). AS is a
>> neurological condition that causes significant impairment in social
>> interactions. People with AS see the world differently and this can
>> often bring them in conflict with conventional ways of thinking. They
>> have difficulty in reading body language, and interpreting subtle
>> cues. In my situation, I have significant difficulty with natural
>> conversation, reading social cues, and maintaining eye contact. This
>> can lead to a great deal of misunderstanding about my intent or my
>> behavior. For example, I may not always know what to say in social
>> situations, so I may look away or may not say anything. I also may not
>> always respond quickly when asked direct questions, but if given time
>> I am able express my ideas.
>>
>> On Usenet, the text-equivalent of my disability is probably noticed. I
>> do apologize profusely, for any inconvenience it causes.
>>
>> Thank you very much in advance for your understanding, cooperation,
>> and assistance.
>>
>>
>> Regards,
>>
>> Radium
>>
>
> So you`re a typical radio ham then ????

I tried ham once... but I didn't have any disabilities or illnesses to
share over the radio.

> Lee......G6ZSG....

For all we know, it's Bill Gates.

I've got a knee injury. Just thought I'd mention that since we're doing confessions.

3993. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 14:43:15 UTC
From: Stuart Grey <stuart.grey@comcast.net>
Message-ID: <roOdnf37YJ8eOjHbnZ2dnUVZ_gmdnZ2d@comcast.com>
Source record: 37903
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sun, 29 Jul 2007 07:18:02 -0700, hot-ham-and-cheese wrote:

> On Jul 28, 11:35 pm, Frank Gilliland <wrenut@NOSPAMcehouse.net>
> wrote:
>> On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
>> <stuart.g...@comcast.net> wrote in
>> <BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
>>
>> >On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>>
>> >> Hi Everyone:
>>
>> >> I have a neurological disability called Asperger's Syndrome.
>>
>> >> I would like to give you some information about my disability. The
>> >> reason I am posting this message about Asperger's is to help avoid any
>> >> potential misunderstandings [though it's probably too late].
>>
>> >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
>> >> neurological condition that causes significant impairment in social
>> >> interactions. People with AS see the world differently and this can
>> >> often bring them in conflict with conventional ways of thinking. They
>> >> have difficulty in reading body language, and interpreting subtle
>> >> cues. In my situation, I have significant difficulty with natural
>> >> conversation, reading social cues, and maintaining eye contact. This
>> >> can lead to a great deal of misunderstanding about my intent or my
>> >> behavior. For example, I may not always know what to say in social
>> >> situations, so I may look away or may not say anything. I also may not
>> >> always respond quickly when asked direct questions, but if given time
>> >> I am able express my ideas.
>>
>> >> On Usenet, the text-equivalent of my disability is probably noticed. I
>> >> do apologize profusely, for any inconvenience it causes.
>>
>> >> Thank you very much in advance for your understanding, cooperation,
>> >> and assistance.
>>
>> >> Regards,
>>
>> >> Radium
>>
>> >So? Why mention it?
>>

>> Because ever since King George got into the White House, a lot of
>> people learned that they can set higher goals in spite of their
>> autism!
>
> Finally someone has noted that Asperger's Syndrome is one form of
> autism. If you visit your local schools you will find whole
> classrooms full of autistic kids - almost entirely boys. It's an
> epidemic!
>
> For Radium to be able to post his message places him in the "high-
> functioning" category. Many are not high-functioning.

Bill Gates is high functioning. Many of the Microsoft billionaires have Aspergers. On the other hand, many with Aspergers end up in their mother's basement playing D&D and computer games the rest of their lives.

3994. Re: Gap Antennas - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 15:02:28 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <5qapa3lllc1jjbuh7ap7r2c4ufbusgogd1@4ax.com>
Source record: 37904

On Sun, 29 Jul 2007 00:13:54 +0200, "CP"
<kmt123<togliquesto>@virgilio.it> wrote:

>Hi friends,
>
>
>it's a very short time that GAP Antennas have been advertised inside my
>country, so I can't find anyone who knows them enough, here, to ask him/her
>some impressions about these devices.
>
>So I ask it from you: do they really have all this typical high gain and
>sensituvity, without any tuning need?
>
>Did any ham-magazine of yours deal with a professional OM test of these
>antennas?
>
>Thank you,
>
>CP
>
>

If you're an ARRL member, their web site has the 1995 QST review of a
Gap multi-band vertical, and shows how it compares to several other
antennas.

bob
k5qwg

3995. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 15:27:33 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <kvSdnc17TNXMLDHbnZ2dnUVZ_qelnZ2d@comcast.com>
Source record: 37905
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

"Stuart Grey" <stuart.grey@comcast.net> wrote in message
news:roOdncL7YJ-aOjHbnZ2dnUVZ_gmdnZ2d@comcast.com...
> On Sun, 29 Jul 2007 07:25:16 +0000, Lee wrote:
>
>> "Radium" <glucegen1x@excite.com> wrote in message
>> news:1185649669.131460.85610@z28g2000prd.googlegroups.com...
>>> Hi Everyone:
>>>
>>> I have a neurological disability called Asperger's Syndrome.
>>>
>>> I would like to give you some information about my disability. The
>>> reason I am posting this message about Asperger's is to help avoid any
>>> potential misunderstandings [though it's probably too late].
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>>> I have been diagnosed with Asperger's Syndrome (AS). AS is a
>>> neurological condition that causes significant impairment in social
>>> interactions. People with AS see the world differently and this can
>>> often bring them in conflict with conventional ways of thinking. They
>>> have difficulty in reading body language, and interpreting subtle
>>> cues. In my situation, I have significant difficulty with natural
>>> conversation, reading social cues, and maintaining eye contact. This
>>> can lead to a great deal of misunderstanding about my intent or my
>>> behavior. For example, I may not always know what to say in social
>>> situations, so I may look away or may not say anything. I also may not
>>> always respond quickly when asked direct questions, but if given time
>>> I am able express my ideas.
>>>
>>> On Usenet, the text-equivalent of my disability is probably noticed. I
>>> do apologize profusely, for any inconvenience it causes.
>>>
>>> Thank you very much in advance for your understanding, cooperation,
>>> and assistance.
>>>
>>>
>>> Regards,
>>>
>>> Radium
>>>
>>
>> So you`re a typical radio ham then ????
>
> I tried ham once... but I didn't have any disabilities or illnesses to
> share over the radio.

>
>> Lee......G6ZSG....
>
> For all we know, it's Bill Gates.
>
> I've got a knee injury. Just thought I'd mention that since we're doing
> confessions.

I'm a Ham Operator - I don't have AS, my disability is MDS - you can GOOGLE
IT!

3996. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 15:51:20 UTC
From: EskWIRED@spamblock.panix.com
Message-ID: <f8id1o$6ov$11@reader2.panix.com>
Source record: 37906
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

In misc.survivalism Radium <glucegen1x@excite.com> wrote:

> Thank you very much in advance for your understanding, cooperation,
> and assistance.

It was very brave of you to make this statement.

--
The whole problem with the world is that fools and fanatics are always so
certain of themselves, but wiser people so full of doubts.
-- Bertrand Russel

3997. Re: Most accurate loading coil calculator on the web

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 16:04:53 UTC
From: ON4AA <ON4AA.f2a693@radiobanter.com>
Message-ID: <ON4AA.f2a693@radiobanter.com>
Source record: 37918

Allodoxaphobia;584462 Wrote:
> On Sat, 28 Jul 2007 08:16:44 +0100, ON4AA wrote:[color=blue][i]
>
> VERY nice over all web site! Nice job!!
>
> I especialy like the: "Best viewed with:"
>
> FWIW, it looks good in konqueror, too.
>
> Best regards,
> Jonesy
> --
> Thank you are welcome.
> It is all "hand work", no FrontPage or the like.
> I still need to restyle a couple of old frame-based pages though. I
> will do so when I find the time for it.
>
> I am happy to know that everything looks fine under konqueror.
>
> When I spent so much time writing HTML and standard JavaScript trying
> to make a nice and comprehensive web page that looks fine on all
> browsers except MSIE, I find it particularly disturbing that I need to
> do special things in order to let things work with Micro**** Internet
> Explorer, especially version 6 which so many still seem to use as it
> came standard with XP.
>
> So thank you for your understanding and support!

--
ON4AA

3998. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 16:34:20 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1185726860.329704.278420@19g2000hsx.googlegroups.com>
Source record: 37907

.
Jerry Martes wrote:
> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
> news:Xns997BD8C9EC50Fspectrumhogstarbandn@64.209.0.92...
> > ."
> >>
> >> The answer to the question would seem to be that it would not work
> >> very well just due to experiance. The swr would be off the charts and
> >> a rig that had an internal tuner would not tune that kind of antenna
> >> over that frequency range if the swr had to be under 3:1. Also the
> >> loss in the coax due to the high swr would be very large..
> >>
> >
> >
> > Well, that was my original surmise of the situation. I was just
> > trying to have someone with expertize on EZNEC run the antenna at the
> > three frequencies listed in order to have the feedpoint SWR calculated
> > for each of those three frequencies. So far, no one, except Owen, has
> > come even close.
>

Ed, several years ago I had to find out why an almost identical
antenna system as you have discribed operating on similar frequencies
didnt work very well. System also used an ATU. Analysis showed data
very similar to the EZNEC values. I t was not practical to increase
the hiegth of the antenna so I went vertical using a 30ft fiberglass
whip, gov surplus. Also used inductors and capacitors switched in to
bring the antenna to resonance at the desired freq. Although we only
really used one the others had to be available. Although the ATU was
still used it was completely unneeded as only 3 frequencies were being
used seies inductance and capacitance selected by remotely controled
relays provide a match with the VSWR less than 1:.5 on any frequency .
Communication from NC to GA, FL, and DC were routinely possible with
100watts PEP SSB.

Jimmie

3999. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 16:46:41 UTC
From: Myal <Dumaree@hotmail.com>
Message-ID: <Rv3ri.13647$4A1.3082@news-server.bigpond.net.au>
Source record: 37908
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

hot-ham-and-cheese@hotmail.com wrote:
> On Jul 28, 11:35 pm, Frank Gilliland <wï¿½renut@NOSPAMï¿½cehouse.net>
> wrote:
>
>>On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
>><stuart.g...@comcast.net> wrote in
>><BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
>>
>>
>>>On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>>
>>>>Hi Everyone:
>>
>>>>I have a neurological disability called Asperger's Syndrome.
>>
>>>>I would like to give you some information about my disability. The
>>>>reason I am posting this message about Asperger's is to help avoid any
>>>>potential misunderstandings [though it's probably too late].
>>
>>>>I have been diagnosed with Asperger's Syndrome (AS). AS is a
>>>>neurological condition that causes significant impairment in social
>>>>interactions. People with AS see the world differently and this can
>>>>often bring them in conflict with conventional ways of thinking. They
>>>>have difficulty in reading body language, and interpreting subtle
>>>>cues. In my situation, I have significant difficulty with natural
>>>>conversation, reading social cues, and maintaining eye contact. This
>>>>can lead to a great deal of misunderstanding about my intent or my
>>>>behavior. For example, I may not always know what to say in social
>>>>situations, so I may look away or may not say anything. I also may not
>>>>always respond quickly when asked direct questions, but if given time
>>>>I am able express my ideas.
>>
>>>>On Usenet, the text-equivalent of my disability is probably noticed. I
>>>>do apologize profusely, for any inconvenience it causes.
>>
>>>>Thank you very much in advance for your understanding, cooperation,
>>>>and assistance.
>>
>>>>Regards,
>>
>>>>Radium
>>
>>>So? Why mention it?

>>
>>Because ever since King George got into the White House, a lot of
>>people learned that they can set higher goals in spite of their
>>autism!
>
>
> Finally someone has noted that Asperger's Syndrome is one form of
> autism. If you visit your local schools you will find whole
> classrooms full of autistic kids - almost entirely boys. It's an
> epidemic!
>
> For Radium to be able to post his message places him in the "high-
> functioning" category. Many are not high-functioning.
>
>

only folk I know with Aspergers are girls, weird world

4000. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 17:09:24 UTC
From: Ron in Radio Heaven <kc4yoy@Xcarolina.rr.com>
Message-ID: <46acc9c6$0$32559$4c368faf@roadrunner.com>
Source record: 37909

dfcoates@gmail.com wrote:
> Dan, W4XJF
>

Since you've moved I'll suggest that you do a change
of address with the FCC, you're still listed
as being in an apartment.

W4XJF
DANIEL F COATES
4619 Sunflower Rd. Apt 22
Knoxville TN 37909

73, Ron kc4yoy

4001. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 17:10:04 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <0bipa316ejkdfiuvolffpqa6ill2o6qb6v@4ax.com>
Source record: 37910

On Sun, 29 Jul 2007 14:06:44 -0000, "dfcoates@gmail.com"
<dfcoates@gmail.com> wrote:

[snip

>So here's my question. Is it ok to have multiple shallow grounding
>rods versus one longer grounding rod? For example, what's the
>difference between 2 four foot rods versus 1 eight foot rod?
>
[snip]
>
>Dan, W4XJF

Dan, you didn't mention the type of ground you're seeking (safety, RF
or lightining). If lightining, here's a good place to start.

http://www.polyphaser.com/NR/rdonlyres/C1565001-F81A-4AC2-A98F-E88B8037F988/182/TD1016.pdf

Danny, K6MHE

4002. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 17:12:26 UTC
From: ibocisacrock@yahoo.com
Message-ID: <1185729146.803619.267450@g12g2000prg.googlegroups.com>
Source record: 37911
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 28, 3:07?pm, Radium <glucege...@excite.com> wrote:
> Hi Everyone:
>
> I have a neurological disability called Asperger's Syndrome.
>
> I would like to give you some information about my disability. The
> reason I am posting this message about Asperger's is to help avoid any
> potential misunderstandings [though it's probably too late].
>
> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> neurological condition that causes significant impairment in social
> interactions. People with AS see the world differently and this can
> often bring them in conflict with conventional ways of thinking. They
> have difficulty in reading body language, and interpreting subtle
> cues. In my situation, I have significant difficulty with natural
> conversation, reading social cues, and maintaining eye contact. This
> can lead to a great deal of misunderstanding about my intent or my
> behavior. For example, I may not always know what to say in social
> situations, so I may look away or may not say anything. I also may not
> always respond quickly when asked direct questions, but if given time
> I am able express my ideas.
>
> On Usenet, the text-equivalent of my disability is probably noticed. I
> do apologize profusely, for any inconvenience it causes.
>
> Thank you very much in advance for your understanding, cooperation,
> and assistance.
>
> Regards,
>
> Radium

Hi Kook,

Let's get out our violins - what, do you want money ? Get the fuck out
of here, and take you fucking post with you !

4003. Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 18:03:21 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <JD4ri.36898$G23.17918@newsreading01.news.tds.net>
Source record: 37912

http://www.arraysolutions.com/Users/no8d.htm

4004. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 18:14:17 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997C7273B9250spectrumhogstarbandn@198.186.192.196>
Source record: 37913

> Ed, several years ago I had to find out why an almost identical
> antenna system as you have discribed operating on similar frequencies
> didnt work very well. System also used an ATU. Analysis showed data
> very similar to the EZNEC values. I t was not practical to increase
> the hiegth of the antenna so I went vertical using a 30ft fiberglass
> whip, gov surplus. Also used inductors and capacitors switched in to
> bring the antenna to resonance at the desired freq. Although we only
> really used one the others had to be available. Although the ATU was
> still used it was completely unneeded as only 3 frequencies were being
> used seies inductance and capacitance selected by remotely controled
> relays provide a match with the VSWR less than 1:.5 on any frequency .
> Communication from NC to GA, FL, and DC were routinely possible with
> 100watts PEP SSB.

That could certainly be an option.... especially since this antenna is
on top of a government building. Aesthetics is an issue here.

However, the pre-existing antenna can easily be made to work well in
our situation simply by shortening it to resonance on 3975, and possibly
just adding traps or another dipole off the feedpoint for the other two
frequencies of operation. There is room. The reason for this silly
situation to begin with is just the misconception held by our ARES people
that the internal tuner of the FT900 could handle the mismatch.

Ed

4005. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 18:43:29 UTC
From: "kb9rqz@hotmail.com" <kb9rqz@hotmail.com>
Message-ID: <1185734609.170334.239010@w3g2000hsg.googlegroups.com>
Source record: 37914
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 10:18 am, hot-ham-and-che...@hotmail.com wrote:
> On Jul 28, 11:35 pm, Frank Gilliland <wïrenut@NOSPAMïcehouse.net>
> wrote:
>
>
>
>
>
> > On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
> > <stuart.g...@comcast.net> wrote in
> > <BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
>
> > >On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>
> > >> Hi Everyone:
>
> > >> I have a neurological disability called Asperger's Syndrome.
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> > >> I would like to give you some information about my disability. The
> > >> reason I am posting this message about Asperger's is to help avoid any
> > >> potential misunderstandings [though it's probably too late].
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> > >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> > >> neurological condition that causes significant impairment in social
> > >> interactions. People with AS see the world differently and this can
> > >> often bring them in conflict with conventional ways of thinking. They
> > >> have difficulty in reading body language, and interpreting subtle
> > >> cues. In my situation, I have significant difficulty with natural
> > >> conversation, reading social cues, and maintaining eye contact. This
> > >> can lead to a great deal of misunderstanding about my intent or my
> > >> behavior. For example, I may not always know what to say in social
> > >> situations, so I may look away or may not say anything. I also may not
> > >> always respond quickly when asked direct questions, but if given time
> > >> I am able express my ideas.
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> > >> On Usenet, the text-equivalent of my disability is probably noticed. I
> > >> do apologize profusely, for any inconvenience it causes.
>
> > >> Thank you very much in advance for your understanding, cooperation,
> > >> and assistance.
>
> > >> Regards,
>

> > >> Radium
>
> > >So? Why mention it?
>
> > Because ever since King George got into the White House, a lot of
> > people learned that they can set higher goals in spite of their
> > autism!
>
> Finally someone has noted that Asperger's Syndrome is one form of
> autism.
interesting I was unawar e of that myself BB

>If you visit your local schools you will find whole
> classrooms full of autistic kids - almost entirely boys. It's an
> epidemic!

in many areas in some areas they are dumped around and trated badly

>
> For Radium to be able to post his message places him in the "high-
> functioning" category. Many are not high-functioning

nice to see you BB

4006. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 19:13:46 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997D3531B765Fnonenowhere@61.9.191.5>
Source record: 37915

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997C7273B9250spectrumhogstarbandn@198.186.192.196:

> other two frequencies of operation. There is room. The reason for
> this silly situation to begin with is just the misconception held by
> our ARES people that the internal tuner of the FT900 could handle the
> mismatch.

Ed, I worked up some numbers for you at 3.98MHz, and the numbers demonstrated that the main cause of system inefficiency was coax loss (and not the ATU).

If you are focussed on VSWR and bandwidth as you seem, you need a radiating dummy load. They have certain merit in this application. Google for "TTFD antenna" for an example.

Owen

4007. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 19:34:46 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <uZ5ri.55062$dI1.50338@newsfe08.phx>
Source record: 37916

[cross-posting erased]

<EskWIRED@spamblock.panix.com> wrote in message
news:f8id1o$6ov$11@reader2.panix.com...
> In misc.survivalism Radium <glucegen1x@excite.com> wrote:
>
> > Thank you very much in advance for your understanding, cooperation,
> > and assistance.
>
>
> It was very brave of you to make this statement.

Taken in isolation, this looks like a sensitive exchange between thoughtful people. Taken in the context of Radium's repeated, rambling, unscientific posts about modulation, it is something else -- I don't know what but I have my suspicions.

4008. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 19:47:10 UTC
From: N7ZZT - Eric Oyen <n7zzt@127.0.0.1>
Message-ID: <E76ri.6143$Uz4.3096@newsfe19.lga>
Source record: 37917
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Lee wrote:
>>
>
> So you`re a typical radio ham then ????
>
> Lee......G6ZSG....

if only that were the case.........

4009. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 21:14:07 UTC
From: hot-ham-and-cheese@hotmail.com
Message-ID: <1185743647.079100.41210@z28g2000prd.googlegroups.com>
Source record: 37919
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 3:43 pm, "kb9...@hotmail.com" <kb9...@hotmail.com> wrote:
> On Jul 29, 10:18 am, hot-ham-and-che...@hotmail.com wrote:
>
>
>
> > On Jul 28, 11:35 pm, Frank Gilliland <wïrenut@NOSPAMïcehouse.net>
> > wrote:
>
> > > On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
> > > <stuart.g...@comcast.net> wrote in
> > > <BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
>
> > > >On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
>
> > > >> Hi Everyone:
>
> > > >> I have a neurological disability called Asperger's Syndrome.
>
> > > >> I would like to give you some information about my disability. The
> > > >> reason I am posting this message about Asperger's is to help avoid any
> > > >> potential misunderstandings [though it's probably too late].
>
> > > >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> > > >> neurological condition that causes significant impairment in social
> > > >> interactions. People with AS see the world differently and this can
> > > >> often bring them in conflict with conventional ways of thinking. They
> > > >> have difficulty in reading body language, and interpreting subtle
> > > >> cues. In my situation, I have significant difficulty with natural
> > > >> conversation, reading social cues, and maintaining eye contact. This
> > > >> can lead to a great deal of misunderstanding about my intent or my
> > > >> behavior. For example, I may not always know what to say in social
> > > >> situations, so I may look away or may not say anything. I also may not
> > > >> always respond quickly when asked direct questions, but if given time
> > > >> I am able express my ideas.
>
> > > >> On Usenet, the text-equivalent of my disability is probably noticed. I
> > > >> do apologize profusely, for any inconvenience it causes.
>
> > > >> Thank you very much in advance for your understanding, cooperation,
> > > >> and assistance.
>
> > > >> Regards,
>

> > > >> Radium
>
> > > >So? Why mention it?
>
> > > Because ever since King George got into the White House, a lot of
> > > people learned that they can set higher goals in spite of their
> > > autism!
>
> > Finally someone has noted that Asperger's Syndrome is one form of
> > autism.
>
> interesting I was unawar e of that myself BB
>
> >If you visit your local schools you will find whole
> > classrooms full of autistic kids - almost entirely boys. It's an
> > epidemic!
>
> in many areas in some areas they are dumped around and trated badly

Autistic children are different from other kids. And the libs never
tire of bitching about "no child left behind." I think they call it
"compassionate liberalism."

> > For Radium to be able to post his message places him in the "high-
> > functioning" category. Many are not high-functioning
>
> nice to see you BB-

Good to see you. I'm assuming you are posting from rrap?

4010. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 21:14:56 UTC
From: hot-ham-and-cheese@hotmail.com
Message-ID: <1185743696.445941.164450@z24g2000prh.googlegroups.com>
Source record: 37920
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
> On Sun, 29 Jul 2007 07:25:16 +0000, Lee wrote:
> > "Radium" <glucege...@excite.com> wrote in message
> >news:1185649669.131460.85610@z28g2000prd.googlegroups.com...
> >> Hi Everyone:
>
> >> I have a neurological disability called Asperger's Syndrome.
>
> >> I would like to give you some information about my disability. The
> >> reason I am posting this message about Asperger's is to help avoid any
> >> potential misunderstandings [though it's probably too late].
>
> >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> >> neurological condition that causes significant impairment in social
> >> interactions. People with AS see the world differently and this can
> >> often bring them in conflict with conventional ways of thinking. They
> >> have difficulty in reading body language, and interpreting subtle
> >> cues. In my situation, I have significant difficulty with natural
> >> conversation, reading social cues, and maintaining eye contact. This
> >> can lead to a great deal of misunderstanding about my intent or my
> >> behavior. For example, I may not always know what to say in social
> >> situations, so I may look away or may not say anything. I also may not
> >> always respond quickly when asked direct questions, but if given time
> >> I am able express my ideas.
>
> >> On Usenet, the text-equivalent of my disability is probably noticed. I
> >> do apologize profusely, for any inconvenience it causes.
>
> >> Thank you very much in advance for your understanding, cooperation,
> >> and assistance.
>
> >> Regards,
>
> >> Radium
>
> > So you`re a typical radio ham then ????
>
> I tried ham once... but I didn't have any disabilities or illnesses to
> share over the radio.
>
> > Lee......G6ZSG....
>
> For all we know, it's Bill Gates.

>
> I've got a knee injury. Just thought I'd mention that since we're doing
> confessions.-

I'm slightly sunburned from a week at Virginia Beach.

4011. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 21:29:28 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997D4C331DF86nonenowhere@61.9.191.5>
Source record: 37921

Owen Duffy <none@no.where> wrote in
news:Xns997D3531B765Fnonenowhere@61.9.191.5:

Bushcomm's BBA-100 is designed for the type of application you have Ed:

http://www.bushcomm.info/index.php?act=viewProd&productId=3

4012. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 22:25:04 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997C9CF38F277spectrumhogstarbandn@198.186.192.196>
Source record: 37922

> Ed, I worked up some numbers for you at 3.98MHz, and the numbers
> demonstrated that the main cause of system inefficiency was coax loss
> (and not the ATU).
>
> If you are focussed on VSWR and bandwidth as you seem, you need a
> radiating dummy load. They have certain merit in this application.
> Google for "TTFD antenna" for an example.
>

As I indicated earlier, I am not communicating effectively with you!
Sorry if I have not been making myself clear, Owen. I am not "focused"
on those issues you mentioned, especially the ATU. I am aware of its
limitations and proper uses. I only wanted the data to help "prod" the
people in charge of the need to change the antenna system. SWR is a
figure that they recognize.

The Bushcomm looks interesting, but probably a little bit more wire
than we want to hang on this public building. The ARES group ONLY
operaties on three frequencies/bands. It is my opinion that we can very
easily add traps to the 75 foot halfwave antenna and shorten it at the
same time, giving us a resonant antenna with close to 50 ohm match on two
of the three operating frequencies. The third operating frequency can be
taken care of with another perpendicular dipole off the feedpoint. We
easily have end mounting points for both dipoles.

That should give us a much improved system for very little work.

Thanks, Owen.

Ed K7AAT

4013. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 22:57:01 UTC
From: "kb9rqz@hotmail.com" <kb9rqz@hotmail.com>
Message-ID: <1185749821.358976.176420@k79g2000hse.googlegroups.com>
Source record: 37923
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
> On Jul 29, 3:43 pm, "kb9...@hotmail.com" <kb9...@hotmail.com> wrote:

> > >If you visit your local schools you will find whole
> > > classrooms full of autistic kids - almost entirely boys. It's an
> > > epidemic!
>
> > in many areas in some areas they are dumped around and trated badly
>
> Autistic children are different from other kids. And the libs never
> tire of bitching about "no child left behind." I think they call it
> "compassionate liberalism."

I know that it is sad the way they and other disabled receive such
erratic treament in this nation

>
> > > For Radium to be able to post his message places him in the "high-
> > > functioning" category. Many are not high-functioning
>
> > nice to see you BB-
>
> Good to see you. I'm assuming you are posting from rrap?-
well youd be wrong this time BB

RRAP is a total waste land I suspect it will stay that way until
something related to need to deal ARS rules comes up again

I have always read the RRS gruop I coment when something strikes me to

4014. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 22:57:31 UTC
From: "kb9rqz@hotmail.com" <kb9rqz@hotmail.com>
Message-ID: <1185749851.058008.52920@w3g2000hsg.googlegroups.com>
Source record: 37924
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:

> I'm slightly sunburned from a week at Virginia Beach
hope you had fun

4015. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:22:02 UTC
From: Notan <notan@ddressthatcanbespammed>
Message-ID: <av2dnWJYMZ-HvDDbnZ2dnUVZ_g6dnZ2d@giganews.com>
Source record: 37925
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

kb9rqz@hotmail.com wrote:
> On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
>> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
>
>> I'm slightly sunburned from a week at Virginia Beach
> hope you had fun

Don't really care.

--
Notan

4016. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:27:44 UTC
From: hot-ham-and-cheese@hotmail.com
Message-ID: <1185751664.593885.37520@m37g2000prh.googlegroups.com>
Source record: 37926
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 8:22 pm, Notan <notan@ddressthatcanbespammed> wrote:
> kb9...@hotmail.com wrote:
> > On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
> >> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
>
> >> I'm slightly sunburned from a week at Virginia Beach
> > > hope you had fun
>
> Don't really care.

We were talking about illnesses and injuries. I guess yours is apathy.

4017. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:42:06 UTC
From: "dfcoates@gmail.com" <dfcoates@gmail.com>
Message-ID: <1185752526.802139.287850@57g2000hsv.googlegroups.com>
Source record: 37928

On Jul 29, 1:09 pm, Ron in Radio Heaven <kc4...@Xcarolina.rr.com>
wrote:
> dfcoa...@gmail.com wrote:
> > Dan, W4XJF
>
> Since you've moved I'll suggest that you do a change
> of address with the FCC, you're still listed
> as being in an apartment.
>
> W4XJF
> DANIEL F COATES
> 4619 Sunflower Rd. Apt 22
> Knoxville TN 37909
>
> 73, Ron kc4yoy

Good point... I'll definitely need to update that sooner than
later. ;-).

4018. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:42:52 UTC
From: "dfcoates@gmail.com" <dfcoates@gmail.com>
Message-ID: <1185752572.536904.318980@22g2000hsm.googlegroups.com>
Source record: 37929

On Jul 29, 1:10 pm, Danny Richardson <n_gr...@k6mhe.com> wrote:
> On Sun, 29 Jul 2007 14:06:44 -0000, "dfcoa...@gmail.com"
>
> <dfcoa...@gmail.com> wrote:
>
> [snip
>
>
>
> >So here's my question. Is it ok to have multiple shallow grounding
> >rods versus one longer grounding rod? For example, what's the
> >difference between 2 four foot rods versus 1 eight foot rod?
>
> [snip]
>
> >Dan, W4XJF
>
> Dan, you didn't mention the type of ground you're seeking (safety, RF
> or lightining). If lightining, here's a good place to start.
>
> http://www.polyphaser.com/NR/rdonlyres/C1565001-F81A-4AC2-A98F-E88B80...
>
> Danny, K6MHE

Sorry, I should have been somewhat more specific. I'm looking to
create an RF ground.

4019. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:44:34 UTC
From: Stuart Grey <stuart.grey@comcast.net>
Message-ID: <J8SdneU7j4z_uzDbnZ2dnUVZ_rjinZ2d@comcast.com>
Source record: 37930
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sun, 29 Jul 2007 14:14:56 -0700, hot-ham-and-cheese wrote:

> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
>> On Sun, 29 Jul 2007 07:25:16 +0000, Lee wrote:
>> > "Radium" <glucege...@excite.com> wrote in message
>> >news:1185649669.131460.85610@z28g2000prd.googlegroups.com...
>> >> Hi Everyone:
>>
>> >> I have a neurological disability called Asperger's Syndrome.
>>
>> >> I would like to give you some information about my disability. The
>> >> reason I am posting this message about Asperger's is to help avoid any
>> >> potential misunderstandings [though it's probably too late].
>>
>> >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
>> >> neurological condition that causes significant impairment in social
>> >> interactions. People with AS see the world differently and this can
>> >> often bring them in conflict with conventional ways of thinking. They
>> >> have difficulty in reading body language, and interpreting subtle
>> >> cues. In my situation, I have significant difficulty with natural
>> >> conversation, reading social cues, and maintaining eye contact. This
>> >> can lead to a great deal of misunderstanding about my intent or my
>> >> behavior. For example, I may not always know what to say in social
>> >> situations, so I may look away or may not say anything. I also may not
>> >> always respond quickly when asked direct questions, but if given time
>> >> I am able express my ideas.
>>
>> >> On Usenet, the text-equivalent of my disability is probably noticed. I
>> >> do apologize profusely, for any inconvenience it causes.
>>
>> >> Thank you very much in advance for your understanding, cooperation,
>> >> and assistance.
>>
>> >> Regards,
>>
>> >> Radium
>>
>> > So you`re a typical radio ham then ????
>>
>> I tried ham once... but I didn't have any disabilities or illnesses to
>> share over the radio.
>>
>> > Lee......G6ZSG....

>>
>> For all we know, it's Bill Gates.
>>
>> I've got a knee injury. Just thought I'd mention that since we're doing
>> confessions.-
>
> I'm slightly sunburned from a week at Virginia Beach.

Society always gives people with sunburns a bum rap.

4020. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:46:34 UTC
From: Stuart Grey <stuart.grey@comcast.net>
Message-ID: <J8SdneQ7j4xHuzDbnZ2dnUVZ_rjinZ2d@comcast.com>
Source record: 37931
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Sun, 29 Jul 2007 16:27:44 -0700, hot-ham-and-cheese wrote:

> On Jul 29, 8:22 pm, Notan <notan@ddressthatcanbespammed> wrote:
>> kb9...@hotmail.com wrote:
>> > On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
>> >> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
>>
>> >> I'm slightly sunburned from a week at Virginia Beach
>> > hope you had fun
>>
>> Don't really care.
>
> We were talking about illnesses and injuries. I guess yours is apathy.

I thought Notan was confessing his illness. I mean, he's just too
apathetic to get into tree hugging. All the other tree huggers say he's
sap challenged.

4021. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:46:54 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997D63807C24nonenowhere@61.9.191.5>
Source record: 37833

Ed <Huckleberry_REMOVE_@bigvalley.net> wrote in
news:Xns997C9CF38F277spectrumhogstarbandn@198.186.192.196:

> The Bushcomm looks interesting, but probably a little bit more
> wire
> than we want to hang on this public building. The ARES group ONLY

The 'S' model is 66' overall, a little shorter than your current antenna.

These antennas are well suited to an application where the operator or
not a radio tech, or unfamiliar with the station, frequency agility is
needed, particularly rapid change in frequency with confidence that the
system is setup and ready to go, and where comms technology is second to
the job to be done.

No doubt there are similar things made in the USA, and I think Bushcomm
stuff is sold there (see Array Solutions).

BTW, someone suggested a vertical. Vertical's have very low gain at high
angles, so relatively unsuited to NVIS.

Owen

4022. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-29 23:48:30 UTC
From: N7ZZT - Eric Oyen <n7zzt@127.0.0.1>
Message-ID: <RF9ri.6618$Uz4.2038@newsfe19.lga>
Source record: 37832
Cross-posted to: comp.sys.ibm.pc.hardware.chips,rec.radio.amateur.antenna,rec.radio.shortwave

Radium wrote:

> Hi Everyone:
>
> I have a neurological disability called Asperger's Syndrome.
>

hmmmm. ok, I am not sure how to respond to this:
1. you are either trying to get some sympathy attention (in which case, it won't work and everyone will pile on you more for it)
2. you really do have it (highly unlikely as I know folks with this who are extremely successful and make no claim to having it publically)

in any case, I know folks with AS and they are very reticent about making it public (most people won't understand and oft times assume that the body language, etc would still be that of someone suspicious). Most of those I know with AS have one additional point: they don't get emotionally involved. for them, logic is the better answer. So.... pardon my finding it hard to believe you actually have AS.

4023. Re: Cellular yagi help needed

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 00:43:54 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <qsydnXCguKsxuDDbnZ2dnUVZ_qGknZ2d@bright.net>
Source record: 37927
Cross-posted to: alt.cellular-phone-tech,rec.radio.amateur.antenna

Dear Chris:

Others have pointed out the expected large loss in the RG58 type coax
and the difficulty in designing an antenna to cover the two bands that you
mentioned.

You may find the FCC ID number of your phone/card and go to the FCC's
site to learn the band or bands that your communication device is able to
operate on. It is possible that the device is only able to operate on one
band. I have heard of cases where a device was able to operate on more than
one band but needed the operator to execute an instruction to cause the
device to find the best band. (In other words, apparently some devices do
not ascertain continually what band has the best SNR.)

When you have changed the coax, do report back.

Regards, Mac N8TT

--
J. Mc Laughlin; Michigan U.S.A.
Home: JCM@Power-Net.Net

"szilagyic" <chris@groupinfo.com> wrote in message
news:1184591451.546176.139440@22g2000hsm.googlegroups.com...
> Hello,

4024. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 01:02:26 UTC
From: nm5k@wt.net
Message-ID: <1185757346.628725.212300@x40g2000prg.googlegroups.com>
Source record: 37834

On Jul 29, 6:42 pm, "dfcoa...@gmail.com" <dfcoa...@gmail.com> wrote:
> On Jul 29, 1:10 pm, Danny Richardson <n_gr...@k6mhe.com> wrote:
>
>
>
> > On Sun, 29 Jul 2007 14:06:44 -0000, "dfcoa...@gmail.com"
>
> > <dfcoa...@gmail.com> wrote:
>
> > [snip
>
> > >So here's my question. Is it ok to have multiple shallow grounding
> > >rods versus one longer grounding rod? For example, what's the
> > >difference between 2 four foot rods versus 1 eight foot rod?
>
> > [snip]
>
> > >Dan, W4XJF
>
> > Dan, you didn't mention the type of ground you're seeking (safety, RF
> > or lightining). If lightining, here's a good place to start.
>
> >http://www.polyphaser.com/NR/rdonlyres/C1565001-F81A-4AC2-A98F-E88B80...
>
> > Danny, K6MHE
>
> Sorry, I should have been somewhat more specific. I'm looking to
> create an RF ground.

A couple of ground rods is not going to make much of an RF ground.
Do you actually need an RF ground? Being you will be on the 2nd
floor, I bet you would be better off without one.
What will the antenna be?
You would be better off to use a "complete" antenna, and that way
you will not need an RF ground in the shack at all.
An RF ground should always be under an antenna the way I see
things.
Trying to rig up an RF ground on the ground floor, and then rigging a
wire from it, up to the 2nd floor, is a mistake, and will just act
like
part of the antenna.
Myself, I would not even bother.
Heck, I'm on the ground floor in this shack, and I don't use an RF
ground to the shack. Haven't in nearly 15 years...

MK

4025. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 02:17:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hlgqa3151mt64qc09kdji843ks5pgclgtn@4ax.com>
Source record: 37835

On 29 Jul 2007 22:25:04 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
wrote:

>I only wanted the data to help "prod" the
>people in charge of the need to change the antenna system. SWR is a
>figure that they recognize.

Hi Ed,

After having heard the third chorus of:
> I am not communicating effectively with you!
it is time to analyze why.

First and foremost, the correspondents here are focused on technical solutions. You are seeking a political answer. The two do not generally reside on the same page.

Technical correspondents here would reasonably expect that an association composed of amateur radio operators would appreciate a technical analysis to solve a technical problem. Owen and others have provided that, and several have been specific to exactly the numbers you have asked for. By and large, those numbers don't seem compelling if your audience fails to appreciate the limitations of the internal tuner's abilities.

SWR is not in and of itself loss. It does not always represent a quid pro quo for efficiency. Your reliance on these numbers to sway a group's rather myopic view of the problem gives all the appearance of a magic beans solution suited for yokels.

Returning to the work we do here, there remain a number of missing details to help us provide solutions, not political answers.

I've noted a number of correspondents have presumed this metal roof of yours stretching out in an infinite plain. Clearly no such roof exists. However, I have seen no further amplification of the details by you. At a minimum, and as a gesture of good will towards those you ask favors of, it would be useful to know the size of that roof, if it is flat (or reasonably so); how high it is, and how high the antenna is above earth (I presume you have only described how high the antenna is above the roof).

These parameters have a bearing on the results of the EZNEC computation you ask for. The metal roof has no particular effect in terms of loss, and hence doesn't particularly effect SWR if resonance is not perturbed. However, the proximity of earth does tend to broaden bandwidth and to lower resistance of dipoles (shunt resistance

doing the job in both situations). This does impact EZNEC computations you ask for.

Insofar as actually remedying the problem, that too has a technical solution easily achieved courtesy of your metal roof. You simply convert the dipole into an Inverted F. Consult: http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm

Its discussion is couched in terms of UHF, but HF is merely a matter of scaling. Also, you don't strictly need the wide, bent radiator as single wires will do the same job to a narrower bandwidth (or you can build a skeleton version as illustrated).

The Inverted F is suited to a long low horizontal section. This is something that already exists and is probably driven by the lack of higher supports. The metal roof conforms to the expected metal ground conditions (UHF would make this simple to supply, you already have it handy). The amount of wire is less than you already have, so no new burden in that regard. The need for NVIS operation is clearly supported. The design match obviates the transmission line losses driven through the roof by existing mismatches.

73's
Richard Clark, KB7QHC

4026. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 10:57:30 UTC
From: hot-ham-and-cheese@hotmail.com
Message-ID: <1185793050.287049.252860@z28g2000prd.googlegroups.com>
Source record: 37836
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

On Jul 29, 8:46 pm, Stuart Grey <stuart.g...@comcast.net> wrote:
> On Sun, 29 Jul 2007 16:27:44 -0700, hot-ham-and-cheese wrote:
> > On Jul 29, 8:22 pm, Notan <notan@ddressthatcanbespammed> wrote:
> >> kb9...@hotmail.com wrote:
> >> > On Jul 29, 5:14 pm, hot-ham-and-che...@hotmail.com wrote:
> >> >> On Jul 29, 11:41 am, Stuart Grey <stuart.g...@comcast.net> wrote:
>
> >> >> I'm slightly sunburned from a week at Virginia Beach
> >> > hope you had fun
>
> >> Don't really care.
>
> > We were talking about illnesses and injuries. I guess yours is apathy.
>
> I thought Notan was confessing his illness. I mean, he's just too
> apathetic to get into tree hugging. All the other tree huggers say he's
> sap challenged.

It's and agressive, debilitating disease.

4027. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 11:31:34 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1185795094.933801.234480@m37g2000prh.googlegroups.com>
Source record: 37837

On Jul 29, 2:03 pm, "John, N9JG" <j...@Xremove.MeYgotwals.com> wrote:
> http://www.arraysolutions.com/Users/no8d.htm

Impressive...
I suspect the FB is not as clean as one might think....
Still, an impressive exercise...

denny / k8do

4028. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 12:03:57 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <Nskri.36920$G23.21401@newsreading01.news.tds.net>
Source record: 37838

Not only impressive but expensive!

"Denny" <k8do@mailblocks.com> wrote in message
news:1185795094.933801.234480@m37g2000prh.googlegroups.com...
> On Jul 29, 2:03 pm, "John, N9JG" <j...@Xremove.MeYgotwals.com> wrote:
>> http://www.arraysolutions.com/Users/no8d.htm
>
> Impressive...
> I suspect the FB is not as clean as one might think....
> Still, an impressive exercise...
>
> denny / k8do
>

4029. Re: TH3 vs A3S

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 13:07:09 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns997D5CD781BE1jxp16psuedu@128.118.141.40>
Source record: 37839

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in
news:kyAqi.36996$kK1.32735@newsfe14.phx:

>
> "John Passaneau" <w3jxp@arrl.net> wrote in message
> news:Xns99798A25D7C4Ajxp16psuedu@128.118.141.40...
>
> < snip >
>
>> I have the Tennadyne 6 el Log periodic antenna. Covers 13 to 30Mhz
>> with an SWR of under 2:1. It has a 12' boom and the longest element
>> is 38'. No traps or any other trickery and weighs 37lb. I've had it
>> up since 2002 and have worked DXCC on all bands and have about 1500
>> band countries. Which means nothing in reality as it's more of a mark
>> of my persistence than antenna performance. The fact is the antenna
>> performs just as the specs say and it stays up even with 1/2" of ice.
>> I would look carefully at this antenna if you are looking for an all
>> band high performance antenna.
>>
>> John Passaneau, W3JXP
>
> Can you get it to work on 40m or lower with a tuner? I ask because I
> just have a kluge antenna that I am feeding through a tuner
> [TRANSCEIVER > VSWR METER > PI-NETWORK TUNER > COAX > BALUN > OCF
> DIPOLE, 8 FT X 20 FT] and it's working better than I expected, even on
> 40.
>
> Just wondering. TKS.
>
> "Sal"
> (KD6VKW)
>
>
>
Hi Sal:

Well you could get it to load with a tuner but it wouldn't act like a beam.
The directivity of an antenna is controlled by the parasitic elements in the case of a yagi or by the more complex relationship between elements in a log periodic. Getting power into the driven element at a lower frequency than the antenna is designed for doesn't excite the parasitic elements in the proper manner to make then function and give directivity. At best it will act like a very short dipole in this case. There are some who have claimed that this antenna will work on 30 meters, I've tried it

but it had no directivity and no indication that it worked any better than my dipole. Others claim it works up to 6 meters. Again I&#65533;ve tried that too with no good results.

If I was going to try this antenna on 40 meters, I would short the shield to the center conductor and feed it as a vertical with a top hat. The boom of the log periodic is insulated from the tower which makes this possible. Again though I don&#65533;t think it will preform better than or as well as an antenna made for 40 meters.

73

John Passaneau

4030. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 13:40:27 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns997D627C74CEFjxp16psuedu@128.118.141.40>
Source record: 37840

"dfcoates@gmail.com" <dfcoates@gmail.com> wrote in
news:1185718004.556740.308070@g4g2000hsf.googlegroups.com:

> Greetings,
>
> To be honest, I'm a little embarrassed to even be posting this
> question. I've been a ham for over 10 years, but I've been out of the
> hobby for the past several and I'll freely admit that I'm one of those
> "memorize the multiple choice" people. Anyway, times have changed and
> I now own a house, and an HF rig, and have moved far from my roots. I
> want to get an HF station together, but I find the prospect of
> building/raising an antenna and putting together a grounding system a
> daunting task.
>
> So here's my question. Is it ok to have multiple shallow grounding
> rods versus one longer grounding rod? For example, what's the
> difference between 2 four foot rods versus 1 eight foot rod?
>
> Also, I'd like to describe my potential station set up, as I strongly
> suspect that it is not ideal, and I'd like any suggestions from the
> elmering crowd. It's on the 2nd floor of my home, over the garage.
> The power, cable, and phone connections are on the opposite side of
> the house, and there is no way to directly go under the house to get
> there (at least from outside the house). The home is nearly brand new
> (less than one year old). I should also mention that I have an
> unnatural fear of putting holes in the house, but I suppose I'll have
> to get over that in order to get on the air ;-).
>
> Thanks in advance and 73!
>
> Dan, W4XJF
>
Hi Dan:

I want to follow on what some of the other have said.
First to only reason to have an RF ground in you shack is if you are going to use an antenna that brings part of the antenna that is supposed to radiate RF into the shack, as an example, a long wire antenna.
Dipoles, beams and verticals that are feed with coax do not need RF grounds in the shack. Anyway making a RF ground in a second floor shack is a hard job.
You do need a ground for lighting and static charge protection. For information on how to do that the Polyphaser web site is a good place to go.

The basics are at least one 8&#65533; ground rod as close to the shack as physically possible. More ground rods are better. Using shorter ground rods requires the use of more of them. In all cases more ground rods, properly installed the better. The ground rods should be connected together, if more than one is used, and to the shack with at least a #6 solid copper wire. You can bring it in to the shack anyway that is convent. Also national electrical code requires that all grounds to connect to the house ground (green wire ground) also. There is already a ground rod connecting your fuse panel to earth ground and your lighting protection ground must be connected to this ground via at least a #6 sold copper wire. The problem with RF ground and second story shacks is the length of wire will be too long the reach the earth and will act more as an antenna than a ground.

Hope this helps.
73
John Passaneau W3JXP

4031. 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 14:37:42 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <WImri.17500$fJ5.3405@pd7urf1no>
Source record: 37841

I have just built a 80 mtr dipole c/w 1:1 balun ,feed with RG8X coax
works great, really dont even need a tuner(which i am trying to get away
from)
here is what i want to do.I would like to get 40mtrs on it,without using
tuner,so I want to use a couple of latching realys to open the dipole up at
the 40 mtr section of the dipole,1 relay for each leg.
I want to use latching relays so they do not have to be energized when i am
on 80mtr portion or viseversa if i use the normally closed contact.I was
going to feed 1 end of the realy coil from the sheild of the coax and run 1
wire for the other side of the coil to my switch point.Does anyone have a
better idea on how to do this or is this all a waste of time.If this is ok
to do and worth it does anyone have a realy PRT# I could use,I only run 100
watts max
Also i have tried to strap on a 40mtr dipole to the 80mtr and the 40 would
not tune at all and I dont have the room to run the 40mtr dipole away from
the 80mtr
thanx
Howard
VE4ISP

4032. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 14:54:49 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <0qura3l0fj4mljf2de3cjnf3ahvd6ot38o@4ax.com>
Source record: 37842

On Sun, 29 Jul 2007 23:42:52 -0000, "dfcoates@gmail.com"
<dfcoates@gmail.com> wrote:

>On Jul 29, 1:10 pm, Danny Richardson <n_gr...@k6mhe.com> wrote:
>> On Sun, 29 Jul 2007 14:06:44 -0000, "dfcoa...@gmail.com"
>>
>> <dfcoa...@gmail.com> wrote:
>>
>> [snip
>>
>>
>>
>> >So here's my question. Is it ok to have multiple shallow grounding
>> >rods versus one longer grounding rod? For example, what's the
>> >difference between 2 four foot rods versus 1 eight foot rod?
>>
>> [snip]
>>
>> >Dan, W4XJF
>>
>> Dan, you didn't mention the type of ground you're seeking (safety, RF
>> or lightining). If lightining, here's a good place to start.
>>
>> http://www.polyphaser.com/NR/rdonlyres/C1565001-F81A-4AC2-A98F-E88B80...
>>
>> Danny, K6MHE
>
>Sorry, I should have been somewhat more specific. I'm looking to
>create an RF ground.

If it's an RF ground for an antenna, radials, buried or elevated,
would be better than ground rod(s).

bob
k5qwg

4033. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 15:04:20 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <qoura3tchoe0c7v9m6kma299c6b088c0h7@4ax.com>
Source record: 37843

On Mon, 30 Jul 2007 13:40:27 +0000 (UTC), John Passaneau
<w3jxp@arrl.net> wrote:

>I want to follow on what some of the other have said.
>First to only reason to have an RF ground in you shack is if you are
>going to use an antenna that brings part of the antenna that is supposed
>to radiate RF into the shack, as an example, a long wire antenna.
>Dipoles, beams and verticals that are feed with coax do not need RF
>grounds in the shack

Not true. Feeding an antenna with coax does not remove the need for a
station ground and here's why:

http://k6mhe.com/sub/BlancedFeedLine.pdf

Danny,K6MHE

4034. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 15:53:30 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfas2bq.132e.bit-bucket@shell.config.com>
Source record: 37844

On Mon, 30 Jul 2007 04:31:34 -0700, Denny wrote:
> On Jul 29, 2:03 pm, "John, N9JG" <j...@Xremove.MeYgotwals.com> wrote:
>> http://www.arraysolutions.com/Users/no8d.htm
>
> Impressive...
> I suspect the FB is not as clean as one might think....
> Still, an impressive exercise...

I can grasp the "all band" application of a Log Periodic antenna.

Now, explain to me the the theory behind an "all band" phasing system --
one that doesn't use infinite lengths of coax....

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

4035. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 18:43:42 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <yjqri.1377$vW.927@trnddc08>
Source record: 37845

"Howard Kowall" <hkowall@shaw.ca> wrote in message
news:WImri.17500$fJ5.3405@pd7urf1no...
>I have just built a 80 mtr dipole c/w 1:1 balun ,feed with RG8X coax
> works great, really dont even need a tuner(which i am trying to get away
> from)
> here is what i want to do.I would like to get 40mtrs on it,without using
> tuner,so I want to use a couple of latching realys to open the dipole up
> at the 40 mtr section of the dipole,1 relay for each leg.
> I want to use latching relays so they do not have to be energized when i
> am on 80mtr portion or viseversa if i use the normally closed contact.I
> was going to feed 1 end of the realy coil from the sheild of the coax and
> run 1 wire for the other side of the coil to my switch point.Does anyone
> have a better idea on how to do this or is this all a waste of time.If
> this is ok to do and worth it does anyone have a realy PRT# I could use,I
> only run 100 watts max
> Also i have tried to strap on a 40mtr dipole to the 80mtr and the 40 would
> not tune at all and I dont have the room to run the 40mtr dipole away from
> the 80mtr
> thanx
> Howard
> VE4ISP
I found this very interesting:
http://www.w5dxp.com/notuner.htm

and has the advantage that the switching is not in the antenna elements.

4036. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 18:50:13 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns997D78885DC27spectrumhogstarbandn@198.186.192.196>
Source record: 37846

Richard,

Everything you said makes sense to me, but as I keep trying to convey, accuracy is not necessarily needed in my particular situation.

The very basic issue here is the operation of a halfwave dipole antenna, (resonant at 6.2 MHz), by this orgaznization and expected to operate properly through over 100 feet of RG8 on those three specific frequencies I mentioned. It is their expectation that the internal tuner of the radio will handle any mis-match. Losses in the coax due to SWR do not seem to occurr to them.

I was not seeking a "technical solution" to the antenna situation, as I already have that... I would simply convert this antenna to resonance on the operating frequencies. My intent in the original post was simply to get some ball park figure for either antenna feedpoint impedance, or SWR so that I could finish the loss calculations in the coax.,... I certainly didn't intend to stir you guys up with a whole raft of necessary details that would refine the data, but not really change it in a way that would be significant to this particular situation!

I think I need to just haul my Wattmeter up to the feedpoint and measure the loss for myself! Access to this roof is somewhat difficult, but not impossible. It Certainly will provide the info I need to convince these guys.

As far as the roof goes, it is a FLAT rubber covered metal roof on a large 1 story building.... 14 feet above ground. The roof extends for at least 50 feet beyond the ends of the antenna, and appears to be well grounded at a number of points.

I really hope you all do realize I appreciate your responses... while my replies to you may "appear" to be unthankful, that is far from the case. I do read all that you discuss and learn much. Thank you.

Ed (sorry for the top post - thought I'd leave Richard's post below for reference.)

Richard Clark <kb7qhc@comcast.net> wrote in news:hlgqa3151mt64qc09kdji843ks5pgclgtn@4ax.com:

> On 29 Jul 2007 22:25:04 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
> wrote:
>
>>I only wanted the data to help "prod" the
>>people in charge of the need to change the antenna system. SWR is a
>>figure that they recognize.

>
> Hi Ed,
>
> After having heard the third chorus of:
>> I am not communicating effectively with you!
> it is time to analyze why.
>
> First and foremost, the correspondents here are focused on technical
> solutions. You are seeking a political answer. The two do not
> generally reside on the same page.
>
> Technical correspondents here would reasonably expect that an
> association composed of amateur radio operators would appreciate a
> technical analysis to solve a technical problem. Owen and others have
> provided that, and several have been specific to exactly the numbers
> you have asked for. By and large, those numbers don't seem compelling
> if your audience fails to appreciate the limitations of the internal
> tuner's abilities.
>
> SWR is not in and of itself loss. It does not always represent a quid
> pro quo for efficiency. Your reliance on these numbers to sway a
> group's rather myopic view of the problem gives all the appearance of
> a magic beans solution suited for yokels.
>
> Returning to the work we do here, there remain a number of missing
> details to help us provide solutions, not political answers.
>
> I've noted a number of correspondents have presumed this metal roof of
> yours stretching out in an infinite plain. Clearly no such roof
> exists. However, I have seen no further amplification of the details
> by you. At a minimum, and as a gesture of good will towards those you
> ask favors of, it would be useful to know the size of that roof, if it
> is flat (or reasonably so); how high it is, and how high the antenna
> is above earth (I presume you have only described how high the antenna
> is above the roof).
>
> These parameters have a bearing on the results of the EZNEC
> computation you ask for. The metal roof has no particular effect in
> terms of loss, and hence doesn't particularly effect SWR if resonance
> is not perturbed. However, the proximity of earth does tend to
> broaden bandwidth and to lower resistance of dipoles (shunt resistance
> doing the job in both situations). This does impact EZNEC
> computations you ask for.
>
> Insofar as actually remedying the problem, that too has a technical
> solution easily achieved courtesy of your metal roof. You simply
> convert the dipole into an Inverted F. Consult:
> http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm
>
> Its discussion is couched in terms of UHF, but HF is merely a matter

> of scaling. Also, you don't strictly need the wide, bent radiator as
> single wires will do the same job to a narrower bandwidth (or you can
> build a skeleton version as illustrated).
>
> The Inverted F is suited to a long low horizontal section. This is
> something that already exists and is probably driven by the lack of
> higher supports. The metal roof conforms to the expected metal ground
> conditions (UHF would make this simple to supply, you already have it
> handy). The amount of wire is less than you already have, so no new
> burden in that regard. The need for NVIS operation is clearly
> supported. The design match obviates the transmission line losses
> driven through the roof by existing mismatches.
>
> 73's
> Richard Clark, KB7QHC
>

4037. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 19:08:33 UTC
From: nm5k@wt.net
Message-ID: <1185822513.019943.272710@i38g2000prf.googlegroups.com>
Source record: 37847

On Jul 30, 10:04 am, Danny Richardson <n_gr...@k6mhe.com> wrote:

> Not true. Feeding an antenna with coax does not remove the need for a
> station ground and here's why:
>
> http://k6mhe.com/sub/BlancedFeedLine.pdf
>
> Danny,K6MHE

The coax has nothing to do with it. Whether or not the antenna is
complete will be a much more deciding factor.
But still, I see nothing in the pdf that would imply a ground
is needed for feeding such an antenna, coax fed or not.
Only decoupling of the feedline is needed. Not a shack ground.
Why would one "need" a station ground in that case, assuming
the feedline is decoupled?
How would adding a station ground improve operation of a "complete"
antenna that was not well decoupled?
Myself, I would consider that a "bandaid" approach to the common
mode problem. A ground can hide problems in some cases, but
it never actually fixes anything. Common mode problems should
never be "cured" by station "RF" grounding.
MK

4038. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 19:13:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f8ld9j$1356$1@f04n12.cac.psu.edu>
Source record: 37848

Allodoxaphobia wrote:
> On Mon, 30 Jul 2007 04:31:34 -0700, Denny wrote:
>> On Jul 29, 2:03 pm, "John, N9JG" <j...@Xremove.MeYgotwals.com> wrote:
>>> http://www.arraysolutions.com/Users/no8d.htm
>> Impressive...
>> I suspect the FB is not as clean as one might think....
>> Still, an impressive exercise...
>
> I can grasp the "all band" application of a Log Periodic antenna.
>
> Now, explain to me the the theory behind an "all band" phasing system --
> one that doesn't use infinite lengths of coax....

Another question (pardon my ignorance)

Is it a given that the TOA that the antenna is "putting out" should be
the same as the incoming angle? Is their no change over time?

Sure is gorgeous, tho'

- 73 de Mike KB3EIA -

4039. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 19:25:35 UTC
From: dplatt@radagast.org
Message-ID: <fiq1o4-l36.ln1@radagast.org>
Source record: 37849

In article <Xns997D78885DC27spectrumhogstarbandn@198.186.192.196>,
Ed <Huckleberry_REMOVE_@bigvalley.net> wrote:

> As far as the roof goes, it is a FLAT rubber covered metal roof on a
>large 1 story building.... 14 feet above ground. The roof extends for
>at least 50 feet beyond the ends of the antenna, and appears to be well
>grounded at a number of points.

Ed,

I hope that once you figure out a more efficient matching system
(traps, or feedpoint coils, or whatever) and get your TX power up to
where you want it to be, you don't regret having succeeded :-)

Our ARES/RACES group has its shack located in our city's police-and-
fire admin building, which also hosts the city's 911 dispatch center.
We have a 40/80-meter trap dipole, mounted perhaps 20' above the roof,
running the length of the building.

We haven't had any matching problems with it.

What we *have* had, is a severe problem with RF incursion into the
building's phone system, including the 911 lines. At first we thought
it might be due to RF on the outside of the coax feedline (which runs
near the phone wiring) or RF leakage from the shack into the phone
wiring in the closet next-door. Feedline chokes didn't help,
unfortunately.

In the end, we ran a test in which we opened up the feedline near the
base of the central antenna tower (disconnecting the antenna from the
shack and from all of the in-building coax), and transmitted through
the antenna using a portable HF radio on battery power. The phone
lines still picked up the signal. Grounding or "floating" the HF
radio made no difference at all. The problem is apparently due to RF
near-field pickup by the phone wiring.

Unfortunately, the city comms folks weren't interested in making the
large effort (and handout of cash) needed to actually diagnose the
deficiencies in their in-house phone system, and install filters and
ferrites on the lines to choke off the RF pickup. Our only practical
solution was to limit our TX power to below the point which causes RF
incursion (varies by band... 20 watts usually seems to be safe).

I can't really blame the city folks, as our HF setup is used only
infrequently and is about a sixth-level backup to the city's other
communication systems. If we were operating independently, out of a
non-city-owned building using non-city equipment, we could make the

case that the incursion is their problem, not ours (according to the FCC), but since they own the building and the gear we can't do that.

If you're lucky, your increased TX power won't cause you any such problems... but you might want to consider the implications of having this sort of incursion problem.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

4040. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 19:46:26 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <Xns997DA0897B846jxp16psuedu@128.118.141.40>
Source record: 37850

Danny Richardson <n_group@k6mhe.com> wrote in
news:qoura3tchoe0c7v9m6kma299c6b088c0h7@4ax.com:

> On Mon, 30 Jul 2007 13:40:27 +0000 (UTC), John Passaneau
> <w3jxp@arrl.net> wrote:
>
>>I want to follow on what some of the other have said.
>>First to only reason to have an RF ground in you shack is if you are
>>going to use an antenna that brings part of the antenna that is
>>supposed to radiate RF into the shack, as an example, a long wire
>>antenna. Dipoles, beams and verticals that are feed with coax do not
>>need RF grounds in the shack
>
> Not true. Feeding an antenna with coax does not remove the need for a
> station ground and here's why:
>
> http://k6mhe.com/sub/BlancedFeedLine.pdf
>
>
> Danny,K6MHE
>

Hi:
Interesting web site, but what I meant to say and didn't do well, is
that if the antenna is installed properly and feed properly with coax
and a balun or open wire line that is properly balanced, there will
never be RF problems that an RF ground in the shack will solve. I had a
problem with 80 meters at high power turning on my furnace. It was
caused by the thermostat line being near resonate at 80 meters. All the
RF grounds in the world would not have helped that, a clamp on ferrite
choke did. It is very hard to get a RF ground in a second floor room.
The idea that one or more ground rods or ground rods and radials outside
with a length of wire running up to a second floor shack will be
anything close to an RF ground at any Ham frequency is just plan wrong.
How ever a lighting ground is a necessity and ground rods work quite
well for that.

John Passaneau W3JXP

4041. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 19:55:19 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <dqesa3lboovvnjubvt5am134rduq2td5hr@4ax.com>
Source record: 37851

On Mon, 30 Jul 2007 12:08:33 -0700, nm5k@wt.net wrote:

>On Jul 30, 10:04 am, Danny Richardson <n_gr...@k6mhe.com> wrote:
>
>>
>> Not true. Feeding an antenna with coax does not remove the need for a
>> station ground and here's why:
>>
>> http://k6mhe.com/sub/BlancedFeedLine.pdf
>>
>> Danny,K6MHE
>
>The coax has nothing to do with it. Whether or not the antenna is
>complete will be a much more deciding factor.
>But still, I see nothing in the pdf that would imply a ground
>is needed for feeding such an antenna, coax fed or not.
>Only decoupling of the feedline is needed. Not a shack ground.
>Why would one "need" a station ground in that case, assuming
>the feedline is decoupled?
>How would adding a station ground improve operation of a "complete"
>antenna that was not well decoupled?
>Myself, I would consider that a "bandaid" approach to the common
>mode problem. A ground can hide problems in some cases, but
>it never actually fixes anything. Common mode problems should
>never be "cured" by station "RF" grounding.
>MK
>
>

May things you say are correct, but remember that a balun/choke does not totally choke off (eliminate) common mode current on the transmission line (particularly a multi-band antenna system) and a good station ground can provide additional reduction RFI problems.

For example here at my station where I have a half way decent single point RF grounding system. If I remove just my ground connection to my tuner - leaving everything else intact - and turn on my old CRT computer monitor I have over an S9 noise level. Reconnect the ground connection to the tuner the noise drops to less than S2. [BTW: I found that out quite by accident when I rearranged my station.]

Station grounds can beneficial for several reasons.

Danny, K6MHE

4042. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:10:36 UTC
From: nm5k@wt.net
Message-ID: <1185826236.440337.133090@d30g2000prg.googlegroups.com>
Source record: 37852

On Jul 30, 2:55 pm, Danny Richardson <n_gr...@k6mhe.com> wrote:

>
> May things you say are correct, but remember that a balun/choke does
> not totally choke off (eliminate) common mode current on the
> transmission line (particularly a multi-band antenna system) and a
> good station ground can provide additional reduction RFI problems.

But again, it's really an antenna/feedline problem, rather than lack
of ground. I'll agree.. Sometimes a ground can "bandaid" certain
problems, but I consider it a last resort solution.

>
> For example here at my station where I have a half way decent single
> point RF grounding system. If I remove just my ground connection to my
> tuner - leaving everything else intact - and turn on my old CRT
> computer monitor I have over an S9 noise level. Reconnect the ground
> connection to the tuner the noise drops to less than S2. [BTW: I found
> that out quite by accident when I rearranged my station.]

Sounds like that particular antenna system is not very well decoupled
if you are having noise ingress problems of that level.
I have a 21 inch CRT sitting right next to my ungrounded radio and
have no noise problems at all.
>
> Station grounds can beneficial for several reasons.

Well.. Dunno.. I guess for some people.. Myself, I have no need
for one at all. Even running full legal limit power.
I can say for sure, there ain't no way he is going to get a decent
"RF"
ground on the 2nd floor of that building by running a wire to it.
So if I were him, I would forget all about it, and use better, more
modern 21st century techniques to deal with any common mode
problems that might or might not pop up.
MK

4043. Re: Grounding parallel feed (ladder line) ?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:11:06 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8lgkr$gv7$1@nntp1.jpl.nasa.gov>
Source record: 37853

Edward Feustel wrote:
> "Rob Roschewsk" <nospam@nospam.com> wrote in message
> news:ca6dndtgjKlc2DTbnZ2dnUVZ_rSinZ2d@comcast.com...
>
>>I intend to build a "spark plug" type lighting arrestor.
>>
>
> These are available commercially. I have one but have not installed it.
> Part of the difficulty is the voltage at which they fire! Imagine what
> it could do to tuner and possibly transceiver. Best to ground the
> antenna directly outside the shack when it is not in use and hope!
>
The idea behind this sort of device isn't necessarily to protect the equipment, but is to provide a high current path for a direct hit, so that the house doesn't burn down.

With coax, the shield is theoretically connected to a safety ground outside the house, so that's the path.

With a balanced line, not connected to ground anywhere, there's no path for the lightning impulse to take, except through the gear inside. Put a 0.05 inch gap to ground and it will easily conduct the several tens of kA, with not a huge voltage (once the arc is struck, the voltage will be down in the tens of volts range, and you could set the gap to whatever works (say, around 500V).

4044. Re: Help with Wifi antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:16:37 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8lgv5$gv7$2@nntp1.jpl.nasa.gov>
Source record: 37854
Cross-posted to: comp.sys.laptops,sci.electronics.design,rec.radio.amateur.antenna

Joel Kolstad wrote:

>
> I also think it would be cool to build something like an HF PSK31 gateway back
> to the popular Internet instant-messaging services (Yahoo!, MSN!, etc.) -- I
> figure the way to approach this would be to hack together the bits of PSK31
> code out there with the bits of a multi-protocol messaging program such as
> Pidgin (formerly GAIM).

Bonnie Crystal and the HFLINK crowd is doing just this, using ALE text
messages.

>
> ---Joel
>
>
>

4045. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:33:27 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8lhuohkb1@nntp1.jpl.nasa.gov>
Source record: 37855

wizard12342002@yahoo.com wrote:
> I am curious as to whether RF exposure concerns are greater for a
> small transmitting loop [like the MFJ tuned loop] compared to a dipole
> radiating the same power.

yes.

It would seem that close to the loop, the
> RF power density may be greater [than it would be at the same distance
> from the dipole apex] since the radiating volume is smaller. Can I
> just assume that the power is evenly distributed on the surface of a
> sphere having a radius equal to my distance from the loop antenna,
> calculate the power density on the sphere surface, and use that number
> for evaluation
No
- or are there some near-field considerations not
> captured using this approach?
yes

The big problem is this: a small loop stores a lot of energy in the fields around the loop (if the loop has a Q of, say, 100), and you're radiating 100 Watts, that implies that there is 10kW circulating in the loop between the loop itself and the tuning capacitor. The energy moves between the magnetic field of the loop and the E field of the capacitor every 1/4 cycle.

A particularly egregious example is the tabletop small loop shown in QST a few months ago. The Operator is sitting about 1 meter from the loop, and unless he's running very, very low power, he's exceeding the RF exposure limit by quite a bit. The worst thing is that the article makes the assertion that there's a field null along the axis of the loop, which is true in the far field, but certainly not true in the near field.

As a practical matter, the field is pretty uniform (within a factor of 2) within a couple loop diameters.

Some useful practical numbers:

For a 1 meter loop, with a current of 10 Amps, the H field at 2 meters away (along the axis, normal to the plane of the loop) is about .16 A/m (or right at the Maximum Permissible Exposure (MPE) for controlled environments at 30MHz, 100% duty factor)

In the plane of the loop, you get down to that level at a distance of about 1.6 meters.

Here's the letter I sent to QST about it:
http://home.earthlink.net/%7Ew6rmk/qstrfsafety.htm

Jim, W6RMK

4046. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:35:04 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <46AE4B78.3090401@jpl.nasa.gov>
Source record: 37856

>
> However, the obvious comment is that the small physical size of a loop is
> likely to lead to use in a situation (for example, indoors and close to the
> operating point) that would/could lead to excessive levels of RF exposure.
> For an electrically small loop (the typical loaded loop less than 0.1
> wavelength), then it is probably fair to assume that all of the input power
> is radiated through the sphere surrounding the loop provided that the
> separation is reasonably large,

separation being large ->>> many loop diameters
i.e. in the radiating far field.

4047. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:38:38 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8li8ehmq1@nntp1.jpl.nasa.gov>
Source record: 37857

Anonymous wrote:
> In article <46aa8db2$1@dnews.tpgi.com.au>, who knows
> <noone@nowhere.nohow.notime> wrote:
>
>
>>However, the obvious comment is that the small physical size of a loop is
>>likely to lead to use in a situation (for example, indoors and close to the
>>operating point) that would/could lead to excessive levels of RF exposure.
>
>
> Does it really matter? What are the odds of serious health consequences
> from RF exposure? If I quit smoking and avoid RF over-exposure will I
> live forever, or will I be dead as a doornail 100 years from now just
> like everyone else currently participating in this newsgroup?
>

It's probably not the health consequences you have to worry about
(although you should...). It's losing your license for not following the
basic RF exposure safety rules. Or, it's the legal exposure for
violating those rules.

Lots of hams rely on the "safe harbor" limits to avoid the need for a
routine evaluation of RF safety hazards. How many realize that if
they're holding a cell phone, or use an HT at the same time as their HF
rig, the safe harbor doesn't apply (the multiple transmitter rule)?

The last thing you want is your HOA or other busybodies being able to
shut you down for operating in an "unsafe" manner.

4048. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:45:40 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8lilkhvo1@nntp1.jpl.nasa.gov>
Source record: 37858

John Smith I wrote:
> Anonymous wrote:
>
> > ...
>
>> Does it really matter? What are the odds of serious health consequences
>> from RF exposure? If I quit smoking and avoid RF over-exposure will I
>> live forever, or will I be dead as a doornail 100 years from now just
>> like everyone else currently participating in this newsgroup?
>>
>
> I worry little about exposure to rf <30 Mhz and 1kw or less ...
> I am NOT aware of any malady/disease which strikes hams any more often
> than any other group ... which suggests the safeguards in place (simple
> plain common sense) is/are more than adequate.

Not to be too hostile here, but that suggests ignorance rather than knowledge.
a) one of the early studies that triggered the whole "currents of death" fiasco happened to be one that showed that radio amateurs (among some other groups) happened to have higher incidence of some forms of cancer. Later shown to be statistically insigificant and confounded by other factors, but there it is.

b) There is ample evidence of adverse effects of RF exposure in this frequency and power range. One of the more interesting is the ankle and wrist pain experienced by workers on the flight line in a high RF field environment. The eventual analysis was that the pain was likely due to RF currents flowing through the body from hand (on or near airplane) to feet(then to ground). There's also some interesting cases of things like people on transmitting towers when the transmitter was turned back on (or the power turned on), but that's not necessarily a credible situation for a ham.

Common sense is a good start (don't look into the waveguide with your remaining good eye)(don't turn on the transmitter when someone is working on the antenna), but it actually takes a bit more thought to figure out the RF exposure hazards in a off-nominal situation. A dipole 30 feet up in the trees is easy, so is a 3 element yagi on a 100ft tower.

But something like a flagpole vertical in your yard, or an attic dipole, or a compact loop on a picnic table is a much trickier situation.

>
> However, as frequency of the rf increases so does my concern ...
> everyone is aware microwaves can cook, maim and kill biological entities.

And so can MF, HF, VHF, and UHF...

Jim

4049. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 20:49:04 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8lis1$i1i$1@nntp1.jpl.nasa.gov>
Source record: 37859

Roy Lewallen wrote:
> wizard12342002@yahoo.com wrote:
>
>> Thanks all.
>>
>> Roy, I was not implying that I believe one can assume that the power
>> is from a point source and one can consider the power density passing
>> through a sphere to determine RF safety. I was looking for some
>> guidance as to how to determine a "safe" distance from a small tuned
>> loop assuming a particular frequency and power.
>>
>> It appears that the simple sphere approach works reasonably well
>> beyond a wavelength or so, and may be an acceptable first-order
>> approximation at 1/2 wavelength [from a small loop].
>
>
> There's no distinct boundary between the near and far field, but at a
> wavelength, or even a half wavelength, you're pretty much in the far
> field of a small antenna. So far field approximations such as the one
> involving power density on the surface of a sphere are quite reasonable
> at those distances.

Somehow, though, I suspect that many people will operate within a half wavelength of a 40m or 20m compact loop, and that's where it gets a bit stickier.

It's the loop or short whip on the balcony railing or picnic table, with a high duty cycle mode (like psk31, rtty, or SSTV) and turning up the power knob beyond a few watts that raises the concern. The antenna doesn't radiate well, and the QSO is a bit marginal, so the OP turns up the gas a bit.

4050. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 21:31:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13asm6a9vsn388c@corp.supernews.com>
Source record: 37860

Michael Coslo wrote:
>
> Another question (pardon my ignorance)
>
>
> Is it a given that the TOA that the antenna is "putting out" should be
> the same as the incoming angle? Is their no change over time?

An antenna radiates at all elevation angles. It does not "put out" at any single angle. Likewise, it receives signals from all elevation angles, not just a single one.

Roy Lewallen, W7EL

4051. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 21:38:26 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1185831506.556774.287120@m37g2000prh.googlegroups.com>
Source record: 37861

On Jul 30, 2:43 pm, "Wayne" <mygarbage...@verizon.net> wrote:
> "Howard Kowall" <hkow...@shaw.ca> wrote in message
>
> news:WImri.17500$fJ5.3405@pd7urf1no...
>
>
>
> >I have just built a 80 mtr dipole c/w 1:1 balun ,feed with RG8X coax
> > works great, really dont even need a tuner(which i am trying to get away
> > from)
> > here is what i want to do.I would like to get 40mtrs on it,without using
> > tuner,so I want to use a couple of latching realys to open the dipole up
> > at the 40 mtr section of the dipole,1 relay for each leg.
> > I want to use latching relays so they do not have to be energized when i
> > am on 80mtr portion or viseversa if i use the normally closed contact.I
> > was going to feed 1 end of the realy coil from the sheild of the coax and
> > run 1 wire for the other side of the coil to my switch point.Does anyone
> > have a better idea on how to do this or is this all a waste of time.If
> > this is ok to do and worth it does anyone have a realy PRT# I could use,I
> > only run 100 watts max
> > Also i have tried to strap on a 40mtr dipole to the 80mtr and the 40 would
> > not tune at all and I dont have the room to run the 40mtr dipole away from
> > the 80mtr
> > thanx
> > Howard
> > VE4ISP
>
> I found this very interesting:http://www.w5dxp.com/notuner.htm
>
> and has the advantage that the switching is not in the antenna elements.- Hide quoted
text -
>
> - Show quoted text -

If you ask Cecil 'pretty please' he will even explain it to you on
here...

denny / k8do

4052. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 22:25:19 UTC
From: Ron in Radio Heaven <kc4yoy@Xcarolina.rr.com>
Message-ID: <46ae6566$0$8934$4c368faf@roadrunner.com>
Source record: 37862

If you cut resonate dipoles for 40 and 80 meters,
attach them to the same center insulator and
feed with coax,all you have to do is either have
the 40 meter wires angled down more under the 80 meter
wires, or pulled off at an angle.
It won't bee very wide banded, but it'll
work without a tuner.
This type works great for AM since most AM activity
is near the same frequency on each band.

73, Ron kc4oy

4053. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 22:39:09 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <e3nsa3p4ffjj8qj8tqme0t4mnobfm18q5a@4ax.com>
Source record: 37863

On Mon, 30 Jul 2007 13:10:36 -0700, nm5k@wt.net wrote:

>Sounds like that particular antenna system is not very well decoupled
>if you are having noise ingress problems of that level.
>I have a 21 inch CRT sitting right next to my ungrounded radio and
>have no noise problems at all.

Not all common mode problems can be fixed by transmission line/antenna decoupling. Noise can be coupled to the transmission line or other station equipment (as in my example). It would have made no difference had I the world's best decoupling choke installed at the transmission line to antenna transition point the noise would still be there.

Secondly I have never been able to find any broadband balun or choke (80-10 meters) that is effective on all bands. Indeed, I have measured the common mode impedance of some commercially made broadband baluns that have had as little as 100 ohms on some bands while very high on others. Common mode current will always be with you the only questions are what is the source and how much. It may be very little and no consequence while on other bands - particularly in a multi-band antenna system - it can be substantial.

I have no doubt that your CRT monitor didn't give you any problems but, then again you weren't using mine. So you are not comparing apples to apples.

Additionally, you can also have common mode problems via electrical wiring system. And no matter what you do to decouple the antenna will have any effect on that but, utilizing a good ground could reduce it substantially, although, additional filter may be required.

It boils down that a good single point station RF ground system can't hurt - it can only help. It just an additional protective measure. One I would not be without.

Danny, K6MHE

4054. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 22:58:27 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <88qsa3p1bnu3tsgv86297mdi5veev4t9qs@4ax.com>
Source record: 37864

On Mon, 30 Jul 2007 19:46:26 +0000 (UTC), John Passaneau
<w3jxp@arrl.net> wrote:

>Hi:
>Interesting web site, but what I meant to say and didnï¿½t do well, is
>that if the antenna is installed properly and feed properly with coax
>and a balun or open wire line that is properly balanced, there will
>never be RF problems that an RF ground in the shack will solve. I had a
>problem with 80 meters at high power turning on my furnace. It was
>caused by the thermostat line being near resonate at 80 meters. All the
>RF grounds in the world would not have helped that, a clamp on ferrite
>choke did. It is very hard to get a RF ground in a second floor room.
>The idea that one or more ground rods or ground rods and radials outside
>with a length of wire running up to a second floor shack will be
>anything close to an RF ground at any Ham frequency is just plan wrong.
>How ever a lighting ground is a necessity and ground rods work quite
>well for that.
>
>John Passaneau W3JXP

Agreed except the only properly built and installed antennas exist in
text books and free space. For the antenna itself (forgetting for the
moment the transmission line) it would have to be installed in a
completely balance environment. Yard clutter such as buildings, trees,
powerlines and etc. would have identical geometry in relation of your
balanced antenna - something that does exist in the real world. Plus
ground conditions under and near the antenna will vary. So there will
be some unbalance. Next add the transmission line. Have you ever seen
a ham station whose transmission line ran perfectly perpendicular from
the antenna to the transmitter? In other words, there will be some
unbalance the only question is how much,

73,
Danny, K6MHE

4055. using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 23:34:55 UTC
From: Anonymous <anyone@no-spam-please.com>
Message-ID: <300720071934558252%anyone@no-spam-please.com>
Source record: 37865

I am a slender fellow, about 185 centimeters tall. I wonder if I can use _myself_ as a monopole antenna for a wearable QRP station. (Transmitter in shirt pocket, handheld straight key, and self as antenna.) What is my impedance likely to be?

--
-30-

4056. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 23:47:13 UTC
From: JOHN PASSANEAU <jxp16@psu.edu>
Message-ID: <Xns997DC949278D0JXP16PSUEDU@216.196.97.136>
Source record: 37866

>
> Agreed except the only properly built and installed antennas exist in
> text books and free space. For the antenna itself (forgetting for the
> moment the transmission line) it would have to be installed in a
> completely balance environment. Yard clutter such as buildings, trees,
> powerlines and etc. would have identical geometry in relation of your
> balanced antenna - something that does exist in the real world. Plus
> ground conditions under and near the antenna will vary. So there will
> be some unbalance. Next add the transmission line. Have you ever seen
> a ham station whose transmission line ran perfectly perpendicular from
> the antenna to the transmitter? In other words, there will be some
> unbalance the only question is how much,
>
> 73,
> Danny, K6MHE
>
>
>
>
>

Hi Danny:

You are of course correct, but with RF in the shack problems levels are important. If the level of RF is below some threshold it causes no harm. Almost all Ham stations operate just fine with low levels of unbalance and other defects in the antennas.
Just for interest sake I ran some numbers on a model ground system. Let's assume you have a perfect ground system and you connect to it from the shack on the second floor using 12' of #6 wire. And it runs in a straight line, no bends or curls. The self inductance of that wire is about 56.22uHy.
So what will be the reactance of that wire at 3.5 MHz? Doing the math I get 1,235.7ohms. At the other extreme 28MHz, I get 9,886.52ohms. These are numbers that hardly make me confident that I have any kind of a RF ground.
By the way at 60Hz the reactance is 0.021ohms that I think is a good ground.
Please excuse me for harping on this, but I run the electronics shop in the Physics dept at Penn State University. I'm constantly seeing many meter long thin wires tied to some cold water pipe or something in a lab that is supposed to get rid of all the high frequency noise in some experiment and it has no chance of helping. If physics grad students have problems understanding grounding it's no wonder that Ham's do too.

John Passaneau W3JXP

4057. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 23:50:56 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <APuri.17090$_d2.4166@pd7urf3no>
Source record: 37867

so how much distance between the 80 and 40 is 3" enough
thanx
howard

"Ron in Radio Heaven" <kc4yoy@Xcarolina.rr.com> wrote in message
news:46ae6566$0$8934$4c368faf@roadrunner.com...
> If you cut resonate dipoles for 40 and 80 meters,
> attach them to the same center insulator and
> feed with coax,all you have to do is either have
> the 40 meter wires angled down more under the 80 meter
> wires, or pulled off at an angle.
> It won't bee very wide banded, but it'll
> work without a tuner.
> This type works great for AM since most AM activity
> is near the same frequency on each band.
>
>
> 73, Ron kc4oy

4058. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-30 23:52:29 UTC
From: Brian Kelly <kelly@dvol.com>
Message-ID: <1185839549.397932.52010@e9g2000prf.googlegroups.com>
Source record: 37868

On Jul 30, 7:34 pm, Anonymous <any...@no-spam-please.com> wrote:
> I am a slender fellow, about 185 centimeters tall. I wonder if I can
> use _myself_ as a monopole antenna for a wearable QRP station.
> (Transmitter in shirt pocket, handheld straight key, and self as
> antenna.) What is my impedance likely to be?

Zero or infinite, take yer pick . . .
>
> --
> -30-

w3rv

4059. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 00:00:19 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns997E65C6A9C35nonenowhere@61.9.191.5>
Source record: 37869

Richard Clark <kb7qhc@comcast.net> wrote in
news:hlgqa3151mt64qc09kdji843ks5pgclgtn@4ax.com:

> On 29 Jul 2007 22:25:04 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
> wrote:
>
>>I only wanted the data to help "prod" the
>>people in charge of the need to change the antenna system. SWR is a
>>figure that they recognize.
>
> Hi Ed,
>
> After having heard the third chorus of:
>> I am not communicating effectively with you!
> it is time to analyze why.

Hi Richard,

This all seems much ado about nothing since it emerges that the real objective is to inform a committe in VSWR speak that the VSWR at the antenna side of the radio's ATU is more than the specified 3:1 capability.

It seems to me that could be done very easily by measurement, and all the uncertainty of models that resemble to some greater or lesser extent is not only unnecessary, but introduces significant error due to the assumptions used to simplify the model.

It seems that the reduction of the modelled feed point impedance of a centre fed dipole over an infinite metal plane using an efficient and effective balun to a single un-qualified metric, the holy VSWR, is a bit of a fraud.

There is a certain element of "it doesn't matter if it is accurate or valid, so long as it is compelling".

Owen

4060. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 00:35:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sd0ta3tpsfeuj0mf3asmbagjek9p3mbks3@4ax.com>
Source record: 37870

On 30 Jul 2007 18:50:13 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
wrote:

> I think I need to just haul my Wattmeter up to the feedpoint and
>measure the loss for myself!

Hi Ed,

That won't fully demonstrate the magnitude of the problem either. The
Wattmeter will only be calibrated into a matched load and if you
provide the matched load, then you won't suffer the Mismatch Loss
(where the drama of this soap opera resides).

You will then be back into a technical discussion complete with loss
multipliers or transmission line mechanics that will act as a narcotic
to your audience. If you supply the mismatch then you are going to
have to juggle the forward and reverse powers (and explain why forward
isn't as high coming out as it is going in the line).

The result is the appearance of a game of three card Monte .

You may as well treat them like full-fledged technicians and lay out
the entire problem from the beginning with a technical solution at the
end.

73's
Richard Clark, KB7QHC

4061. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 00:47:55 UTC
From: Danny Richardson <n_group@k6mhe.com>
Message-ID: <pl1ta39elqc2utaaubodav017515ltge7l@4ax.com>
Source record: 37871

On Mon, 30 Jul 2007 18:47:13 -0500, JOHN PASSANEAU <jxp16@psu.edu>
wrote:

>Hi Danny:
>
>You are of course correct, but with RF in the shack problems levels are
>important. If the level of RF is below some threshold it causes no harm.
>Almost all Ham stations operate just fine with low levels of unbalance
>and other defects in the antennas.
>Just for interest sake I ran some numbers on a model ground system. Letï¿½s
>assume you have a perfect ground system and you connect to it from the
>shack on the second floor using 12' of #6 wire. And it runs in a straight
>line, no bends or curls. The self inductance of that wire is about
>56.22uHy.
>So what will be the reactance of that wire at 3.5 MHz? Doing the math I
>get 1,235.7ohms. At the other extreme 28MHz, I get 9,886.52ohms. These
>are numbers that hardly make me confident that I have any kind of a RF
>ground.
>By the way at 60Hz the reactance is 0.021ohms that I think is a good
>ground.
>Please excuse me for harping on this, but I run the electronics shop in
>the Physics dept at Penn State University. I'm constantly seeing many
>meter long thin wires tied to some cold water pipe or something in a lab
>that is supposed to get rid of all the high frequency noise in some
>experiment and it has no chance of helping. If physics grad students have
>problems understanding grounding it's no wonder that Hamï¿½s do too.
>
>John Passaneau W3JXP

John,

You are absolutely correct. My error was I didn't address the second
story issue. At that location all bets are off and your statements
above are correct. Although using copper strapping with multiple runs
of different lengths from the station to the ground system should
work better.

My station here is on ground level. The distance from the connection
point of the outside ground system to the point inside were all
equipment is connected is about three feet of 3/8" diameter copper
tubing. My frequencies of interest is 80-10 meters. The ground system
consists of eighteen #8 copper radial wires connected to a eight foot
ground rod which serves as the anchor point. The radials are fanned
out over about 210ï¿½ arc varying in length from as short as about
twenty feet up to seventy feet. It seems to work fairly well.

Thanks for the input and addressing the original poster's question. I had taken off on a tangent based on the statement that a so called balanced antenna wouldn't benefit from using a station ground.

Very 73,
Danny, K6MHE

4062. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 00:52:37 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <BfednYs0GJeQFTPbRVnysAA@bt.com>
Source record: 37872

"Anonymous" <anyone@no-spam-please.com> wrote in message
news:300720071934558252%anyone@no-spam-please.com...
>
> I am a slender fellow, about 185 centimeters tall. I wonder if I can
> use _myself_ as a monopole antenna for a wearable QRP station.
> (Transmitter in shirt pocket, handheld straight key, and self as
> antenna.) What is my impedance likely to be?
>
> --
> -30-

Rather like one of Radium's queries, but I'll bite...

This is an interesting question because it serves to demonstrate just how many variables are involved.

Your height would probably be best used as a quarter wavelength vertical radiator, so frequencies around 40 MHz would seem to fit the bill.

How do you intend to couple the RF to the radiating element? Dry skin has a relatively high resistive value although once into the squishy stuff inside your body, resistance values fall dramatically. Are you at all worried about how much current passes through or over the radiating element? Brings a new meaning to the term skin effect. At 40 MHz most of the RF will want to flow around the outside of you.

What form of insulation/isolation is used from the ground? Rubber soled sneakers, rubber boots, platform heels? What sort of ground plane will be used. Standing on the ground would be very different to standing on a metal roof or sheet of corrugated iron.

What local objects or obstructions are likely to be in the vicinity?

Off the cuff, I would guess an impedence of around 1 kilohm at 40 MHz would probably be a ball park figure. You would radiate some signal but on any of the amateur bands I would not expect a transmission range of better than line of sight at any frequency.

Reception of signals would be okay. Receiver front ends generally have a high impedence so your body would make a much better match to the receiving side of the system. Receivers are also set up to receive signals in the microvolt range, so very little in the way of an antenna is needed. This is why you can generally pick up stuff on a radio receiver just by touching the centre pin of an antenna socket even when the antenna itself is disconnected.

In reality, a four foot telescopic antenna will make a far better transmitting and receiving device than your body at pretty much any frequency, even without any form of matching. Use one of the ferrite toroid miracle whip designs published on the Internet to provide a half way decent impedence match and you could work thousands of miles under the right atmospheric conditions.

So in theory, it is possible to use your body as an antenna. In practice, it is inadvisable to use your body for transmitting due to the potential for causing possible physiological damage and it will be very inefficient. Using your body as a receiving antenna does work in theory and in practice and is unlikely to have any harmful effects.

Mike G0ULI

4063. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:03:30 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <W8GdnWsn5boEFzPbnZ2dnUVZ8q-rnZ2d@bt.com>
Source record: 37873

Since you're top posting...
Try to aim for a couple of feet of separation from the 80 metre antenna at the ends of the 40 metre elements. If you have to run the elements in parallel, around 9 inches of separation along the entire length of the 40 metre elements would do. The elements will interact with each other to some extent, depending on how close the spacing is. You might want to check on how to construct a trap dipole if you really only want a single wire element up in the air and no tuners. A Google check will reveal hundreds of sites with design and construction data.
Mike G0ULI

"Howard Kowall" <hkowall@shaw.ca> wrote in message
news:APuri.17090$_d2.4166@pd7urf3no...
> so how much distance between the 80 and 40 is 3" enough
> thanx
> howard
>
> "Ron in Radio Heaven" <kc4yoy@Xcarolina.rr.com> wrote in message
> news:46ae6566$0$8934$4c368faf@roadrunner.com...
> > If you cut resonate dipoles for 40 and 80 meters,
> > attach them to the same center insulator and
> > feed with coax,all you have to do is either have
> > the 40 meter wires angled down more under the 80 meter
> > wires, or pulled off at an angle.
> > It won't bee very wide banded, but it'll
> > work without a tuner.
> > This type works great for AM since most AM activity
> > is near the same frequency on each band.
> >
> >
> > 73, Ron kc4oy
>
>

4064. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:42:18 UTC
From: Anonymous <anyone@no-spam-please.com>
Message-ID: <3007200721421835 64%anyone@no-spam-please.com>
Source record: 37874

In article <BfednYs0GJeQFTPbRVnysAA@bt.com>, Mike Kaliski
<michael.kaliski@tesco.net> wrote:

> How do you intend to couple the RF to the radiating element? Dry skin has a
> relatively high resistive value although once into the squishy stuff inside
> your body, resistance values fall dramatically.

I hadn't given that much thought. Perhaps a salt-water soaked sponge
under one of my feet, while wearing waterproof boots.

> Reception of signals would be okay. Receiver front ends generally have a
> high impedence so your body would make a much better match to the receiving
> side of the system.

Interesting. Perhaps I could make some sort of a small vertical
transmit antenna to wear on a hat or helmet, then, instead of using
myself. Maybe a baseball batting helmet would be stable enough to
support a few pounds of antenna without flopping around like a soft
hat.

The idea of a wearable station just grabbed me this evening. Just as a
novelty, I wouldn't expect to work DX with it.

Thanks for your response.

--
-30-

4065. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:48:54 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <aywri.17578$_d2.11523@pd7urf3no>
Source record: 37875

Anonymous wrote:
> I am a slender fellow, about 185 centimeters tall. I wonder if I can
> use _myself_ as a monopole antenna for a wearable QRP station.
> (Transmitter in shirt pocket, handheld straight key, and self as
> antenna.) What is my impedance likely to be?
>

Will you be wearing an aluminum top hat?
Where will you be sticking the coax connector?
What grounds have you for doing this?

Irv VE6BP (the devil makes me do it!)

4066. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:51:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13at5cdmpcs3d19@corp.supernews.com>
Source record: 37876

I think Richard is unnecessarily complicating the matter. Assuming you have a directional wattmeter, you determine the power at the line input by subtracting the "reverse power" from the "forward power" at that point. The power at the line output is determined the same way. 10 times the logarithm of the ratio of the input power to output power is the line loss in dB.

Use or even knowledge of mismatch loss isn't necessary. In fact, attempting to apply it to the problem at hand will very likely lead to incorrect conclusions.

Roy Lewallen, W7EL

Richard Clark wrote:
> On 30 Jul 2007 18:50:13 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
> wrote:
>
>> I think I need to just haul my Wattmeter up to the feedpoint and
>> measure the loss for myself!
>
> Hi Ed,
>
> That won't fully demonstrate the magnitude of the problem either. The
> Wattmeter will only be calibrated into a matched load and if you
> provide the matched load, then you won't suffer the Mismatch Loss
> (where the drama of this soap opera resides).
>
> You will then be back into a technical discussion complete with loss
> multipliers or transmission line mechanics that will act as a narcotic
> to your audience. If you supply the mismatch then you are going to
> have to juggle the forward and reverse powers (and explain why forward
> isn't as high coming out as it is going in the line).
>
> The result is the appearance of a game of three card Monte .
>
> You may as well treat them like full-fledged technicians and lay out
> the entire problem from the beginning with a technical solution at the
> end.
>
> 73's
> Richard Clark, KB7QHC

4067. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:54:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13at5idnqcebj8f@corp.supernews.com>
Source record: 37877

But, end fed, you'll only be half an antenna. What's the other half?

Maybe you can figure out a way to gamma feed yourself as a vertical dipole.

Roy Lewallen, W7EL

Anonymous wrote:
> In article <BfednYs0GJeQFTPbRVnysAA@bt.com>, Mike Kaliski
> <michael.kaliski@tesco.net> wrote:
>
>> How do you intend to couple the RF to the radiating element? Dry skin has a
>> relatively high resistive value although once into the squishy stuff inside
>> your body, resistance values fall dramatically.
>
> I hadn't given that much thought. Perhaps a salt-water soaked sponge
> under one of my feet, while wearing waterproof boots.
>
>> Reception of signals would be okay. Receiver front ends generally have a
>> high impedence so your body would make a much better match to the receiving
>> side of the system.
>
> Interesting. Perhaps I could make some sort of a small vertical
> transmit antenna to wear on a hat or helmet, then, instead of using
> myself. Maybe a baseball batting helmet would be stable enough to
> support a few pounds of antenna without flopping around like a soft
> hat.
>
> The idea of a wearable station just grabbed me this evening. Just as a
> novelty, I wouldn't expect to work DX with it.
>
> Thanks for your response.
>

4068. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 01:56:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13at5m7np3t83d9@corp.supernews.com>
Source record: 37878

Actually, people do it all the time. Every time someone picks up an HT with a whip shorter than a half wavelength, he's just as much a part of the antenna as the "antenna". In fact, it wouldn't surprise me to find that the person holding the HT is radiating more than the "antenna".

Roy Lewallen, W7EL

4069. Some Teen Porn to keep the board entertained!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 05:18:45 UTC
From: smutpusher9@yahoo.com
Message-ID: <1185859125.428699.294560@z28g2000prd.googlegroups.com>
Source record: 37879

Pure 18 is a all new Teen Porn site loaded with movies and picture zip
sets of super good looking girls having sex !!!
http://www.pure18.com/main.htm?id=starman

Meet a girl in your local area and fuck the shit out of her! Been
getting me laid for the last 8 months !!!
http://www.fling.com/enter.php?prg=2&id=starman&t=best&ad_id=custom_geo&cmp=&pg=

Complete access to over 14 killer sites !!!
http://www.realitykings.com/main.htm?id=starman

40 Inch Plus is a MUST see for ass lovers !!!
http://www.40inchplus.com/main.htm?id=starman

Check out Tuna Party for 100% free Movies and Pics Updated daily!!!
http://www.tunaparty.com/main.htm?id=starman

4070. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 06:18:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cqjta35gpg471t5ebo0q6tofe5dbjnde1n@4ax.com>
Source record: 37880

On Mon, 30 Jul 2007 18:51:07 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Use or even knowledge of mismatch loss isn't necessary. In fact,
>attempting to apply it to the problem at hand will very likely lead to
>incorrect conclusions.

Hi Roy,

Well, I suppose offering a palliative often suits both sides of the
podium.

73's
Richard Clark, KB7QHC

4071. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 07:06:59 UTC
From: John Smith I <assemblywizard@gmail.com>
Message-ID: <f8mn31$q4r$1@nnrp.linuxfan.it>
Source record: 37881

Jim Lux wrote:

[...]

I know of only one fellow who worked on radar for the military and used to warm his hands by a slit on the waveguides, who seriously thought he suffered any disease from rf; his complaint was that it increased the severity of his arthritis in his hands.

Now, I can see that "cooking" your hands with microwaves is not good ... how he determined that this caused more pain from arthritis was probably less than scientific--however, it would be quite easy for me to believe. I also note that he did have to have cataract surgery, however, so did many in my family who were not exposed to any rf that they were aware of.

My statement stands, other than mentioned here I am aware of no hams with legitimate injuries from rf from hf antennas (and, I have no way to determine the validity of such anyway.)

Now, I have heard many, many stories of friends of friends, or someone who knows someone--somewhere who has suffered noticeable damage from rf--however, I have also met individuals who have claimed to have been abducted by aliens ...

Not long ago I had dental surgery and a "rf scalpel" was used. I suppose I could go find some loony attorney to help me sue the dentist ... I think I'll pass ... other than the "normal" longer-than-usual time to heal which is common to rf burns, I noted no abnormal complications.

But, wives tales can make for entertaining reading, feel free to entertain me ...

Regards,
JS

4072. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 11:41:34 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <1185882094.131364.54560@i13g2000prf.googlegroups.com>
Source record: 37782

>
> Irv VE6BP (the devil makes me do it!)

Irv, down on your knees and bow your head... I want 40 CQ's at 160 meters at high noon and a dozen QRZ's on 10 meters at midnight as penance, for that... Shame on you...

denny / k8do

4073. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 11:50:26 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <39k3o4-e07.ln1@p400bob.personal.cox.net>
Source record: 37784

JFI

I remember when I was involved in a coverage test prediction for a VHF (149MHz) paging service, a persons body was said to increase the received signal to the pager. I think I remember 6dB over just putting the unit on a 4ft stick!.

The pager unit itself of course didn't have a antenna anywhere near that of a half wave. I think we used 0dB gain (implying a 6dB loss in the pager by itself) but my memory is kind of foggy on this..

Maybe loose coupling and not worrying about your Z is the way to go. You could always vary the dielectric between your radio and skin if you want to experiment! Just rub on more suntan lotion and watch a beacon on the S meter! <grin>

Cheers Bob VK2YQA

Anonymous wrote:
> What is my impedance likely to be?

4074. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 11:51:13 UTC
From: Mike <vk6mo@iinet.net.au>
Message-ID: <46af2235$0$31404$5a62ac22@per-qv1-newsreader-01.iinet.net.au>
Source record: 37783

"Denny" <k8do@mailblocks.com> wrote in message
news:1185882094.131364.54560@i13g2000prf.googlegroups.com...
>
>>
>> Irv VE6BP (the devil makes me do it!)
>
> Irv, down on your knees and bow your head... I want 40 CQ's at 160
> meters at high noon and a dozen QRZ's on 10 meters at midnight as
> penance, for that... Shame on you...
>
> denny / k8do
>
Very interesting thread, with the aluminium top hat and/or vertical
telescopic antenna mounted on a baseball helmet we should have a certain
lightning victim very shortly.

Mike./vk6mo.

4075. Re: Some Teen Porn to keep the board entertained!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 13:58:22 UTC
From: John Doe <hgorden@adelphia.net>
Message-ID: <Yb2dnbvIL_fUojLbnZ2dnUVZ_qOknZ2d@comcast.com>
Source record: 37785

WHY DON'T YOU TAKE THIS CRAP TO REC.RADIO.AMATEUR.POLICY & REC.RADIO.CB,
WHERE THEY ENJOY THIS JUNK??

<smutpusher9@yahoo.com> wrote in message
news:1185859125.428699.294560@z28g2000prd.googlegroups.com...
> Pure 18 is a all new Teen Porn site loaded with movies and picture zip
> sets of super good looking girls having sex !!!
> http://www.pure18.com/main.htm?id=starman
>
> Meet a girl in your local area and fuck the shit out of her! Been
> getting me laid for the last 8 months !!!
> http://www.fling.com/enter.php?prg=2&id=starman&t=best&ad_id=custom_geo&cmp=&pg=
>
> Complete access to over 14 killer sites !!!
> http://www.realitykings.com/main.htm?id=starman
>
> 40 Inch Plus is a MUST see for ass lovers !!!
> http://www.40inchplus.com/main.htm?id=starman
>
>
> Check out Tuna Party for 100% free Movies and Pics Updated daily!!!
> http://www.tunaparty.com/main.htm?id=starman
>

4076. What is the BEST ladder line tuner?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 14:42:21 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.31.14.42.20.548967@from.qrz.com>
Source record: 37786

Looking for opinions on the BEST manual ladder line tuner with 50-ohm coax connection to rig (built-in balun).

Main criteria I'm looking for are low loss, and wide impedance matching range (my Nye Viking M-II won't quite tune my inverted V on the high end of 40 meters presumably because combination of ladder line length and antenna length presents a too-high impedance at that frequency).

Power capability is secondary ... I run 200 watts with no desire to go any higher ... but I think they're all mostly capable of legal limit these days anyway.

Thanks...

4077. Re: using myself as an antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 14:57:46 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <K5Iri.7330$yg1.160@trnddc04>
Source record: 37787

> "Denny" <k8do@mailblocks.com> wrote in message
> news:1185882094.131364.54560@i13g2000prf.googlegroups.com...
>>
>>>
>>> Irv VE6BP (the devil makes me do it!)
>>
>> Irv, down on your knees and bow your head... I want 40 CQ's at 160
>> meters at high noon and a dozen QRZ's on 10 meters at midnight as
>> penance, for that... Shame on you...
>>
>> denny / k8do
>>
> Very interesting thread, with the aluminium top hat and/or vertical
> telescopic antenna mounted on a baseball helmet we should have a certain
> lightning victim very shortly.
>
> Mike./vk6mo.
Hmmmm......wonder if one could hold up an umbrella, and tune across the band
by raising or lowering your arm?

4078. Re: Grounding systems -- need the help of some good elmers

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 15:42:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8nl95rus2@nntp1.jpl.nasa.gov>
Source record: 37789

Danny Richardson wrote:
> On Mon, 30 Jul 2007 13:10:36 -0700, nm5k@wt.net wrote:
>
>
>>Sounds like that particular antenna system is not very well decoupled
>>if you are having noise ingress problems of that level.
>>I have a 21 inch CRT sitting right next to my ungrounded radio and
>>have no noise problems at all.
>
>
> Not all common mode problems can be fixed by transmission line/antenna
> decoupling. Noise can be coupled to the transmission line or other
> station equipment (as in my example). It would have made no difference
> had I the world's best decoupling choke installed at the transmission
> line to antenna transition point the noise would still be there.
>
> Secondly I have never been able to find any broadband balun or choke
> (80-10 meters) that is effective on all bands. Indeed, I have measured
> the common mode impedance of some commercially made broadband baluns
> that have had as little as 100 ohms on some bands while very high on
> others. Common mode current will always be with you the only questions
> are what is the source and how much. It may be very little and no
> consequence while on other bands - particularly in a multi-band
> antenna system - it can be substantial.
>
> I have no doubt that your CRT monitor didn't give you any problems
> but, then again you weren't using mine. So you are not comparing
> apples to apples.
>
> Additionally, you can also have common mode problems via electrical
> wiring system. And no matter what you do to decouple the antenna will
> have any effect on that but, utilizing a good ground could reduce it
> substantially, although, additional filter may be required.
>
> It boils down that a good single point station RF ground system can't
> hurt - it can only help. It just an additional protective measure. One
> I would not be without.
>
> Danny, K6MHE
>
>
>
>
See http://www.audiosystemsgroup.com/RFI-Ham.pdf from Jim Brown. K9YC

An excellent discussion of RFI, interference, chokes, baluns, grounding
with test data and recommendations.

4079. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 15:50:13 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <VSIri.46499$YL5.28192@newssvr29.news.prodigy.net>
Source record: 37788

Wayne wrote:
> I found this very interesting:
> http://www.w5dxp.com/notuner.htm
> and has the advantage that the switching is not in the antenna elements.

Here's another idea for a 80/40 dual band dipole.

http://www.w5dxp.com/HEDZ.htm
--
73, Cecil http://www.w5dxp.com

4080. Off-center fed dipole, fed with ladder line?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 16:07:43 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.31.16.07.42.459195@from.qrz.com>
Source record: 37790

On page 7-10 of the ARRL Antenna Book 20th Edition, there is a discussion of "Off-Center-Fed Dipoles". It shows a dipole 130 feet long, fed 45.3 feet (a bit over 1/3 wavelength) from one end with a 4:1 balun, then coax to the shack, and used on 80 thru 20.

I'm wondering if I can feed that with ladder line instead of coax and balun.

It's not a "balanced" antenna (if there even is such a thing in the real world) so maybe ladder line isn't a good choice here, but it would make the installation a bit easier...

4081. Need Copy of Manual for Dymek DA-9 and Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 16:48:13 UTC
From: jvcactus@yahoo.com
Message-ID: <57bc9$46af67d0$97d5bd68$13617@ALLTEL.NET>
Source record: 37791
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.swap

> I am still looking for a copy of the manuals for the McKay Dymek DA9
> Active
> antennas and the 5 Antennas modules. If you have any of these I will pay
> for a copy and postage. If you know of a source please email me at
>
> wn5a@sbcglobal.net
> Thanks
> Jack

2nd request for heilp.
Thanks
Jack WN5A

4082. Re: Off-center fed dipole, fed with ladder line?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 16:53:51 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1185900831.002257.219170@19g2000hsx.googlegroups.com>
Source record: 37792

On 31 jul, 18:07, "Rick (W-A-one-R-K-T)" <get.my.em...@from.qrz.com>
wrote:
> On page 7-10 of the ARRL Antenna Book 20th Edition, there is a discussion
> of "Off-Center-Fed Dipoles". It shows a dipole 130 feet long, fed 45.3
> feet (a bit over 1/3 wavelength) from one end with a 4:1 balun, then coax
> to the shack, and used on 80 thru 20.
>
> I'm wondering if I can feed that with ladder line instead of coax and
> balun.
>
> It's not a "balanced" antenna (if there even is such a thing in the real
> world) so maybe ladder line isn't a good choice here, but it would make
> the installation a bit easier...

Hi Rick,

With respect to radiated power and SWR, basically you can. There are
many "but","however", etc.

As you mentioned, the antenna is fed off-center, hence there will be
reasonable common mode voltage at the feed point. This results in
unequal current in both conductors of the ladder line (result is
radiation). You should evaluate whether this is desired in your
situation. When the low end of the ladder line radiates, it will also
pick up noise (from your PC display for example).

I think it will be difficult to make a small current mode choke for
your balanced line to suppress the common mode component (as is done
many times for the unbalanced situation). The reason is that because
of the separation of the ladder line conductors, the wanted fields
extend somewhat around the line. These will interact with the
ferrite. Maybe someone built a common mode filter (and have
experience with it) for twin lead and can advise you.

I don't know the type of tuner you have, but it is very likely that
you need to a make reasonable ground to connect to the tuner. With
"ground" I do not mean just the safety or lightning ground, but a
ground that is low impedant for the RF operating frequency (multiple
wires or wire mesh).

Another option is to add a differential coil (center tapped coil)
between the ladder line at some point where you have a good ground.
The center tap of the coil is connected to that ground. From there you
can go to your tuner (with ladder line) without the need for a good RF
ground. This doesn't solve the radiation problem, but the ladder line
between the differential coil and your tuner will not radiate

significantly.

Hope this will help you a bit.

Best regards,

Wim
PA3DJS
www.tetech.nl

4083. Near field vs Far field measurements at 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 17:33:02 UTC
From: Steve Reinhardt <stevereinhardt@noearthspamlink.net>
Message-ID: <koKri.22$sM.0@newsfe03.lga>
Source record: 37793

Gentlemen,

If a man was of a mind to try to get some approximate antenna gain comparisons, how many wavelengths distant might you like to separate the antennas?

The proposed scenario is this: make a pair of 2M dipoles, one for reference, one for receive. I was planning on using the local high school football field, which is on the order of 50 wl, give or take. Transmit a few mW at the design frequency, measure the signal strength, then repeat with an alternate antenna, say a j-pole, collinear, or something else.

Now, this leaves out a whole bunch of useful information, that would be tough for me to measure, like spherical gain distribution, etc. I'm hoping for a figure of merit for the actual implementation of the tested antenna. (Which, as you can imagine, I could model and save myself the aggravation.)

I was pondering all this, when it occurred to me that I could not easily determine when I get to the point where the square law behavior dominates. I've seen a couple of equations relating the antenna dimension to wavelength, but I must be really stupid today, because it's just not sinking in.

Anyone care to comment?

73,
Steve
W1KF

4084. Re: What is the BEST ladder line tuner?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 17:58:46 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-8467CF.13584631072007@nntp.aioe.org>
Source record: 37794

In article <pan.2007.07.31.14.42.20.548967@from.qrz.com>,
"Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com> wrote:

> Looking for opinions on the BEST manual ladder line tuner with 50-ohm coax
> connection to rig (built-in balun).

Rick-

Look for one of the old Johnson Kilowatt Matchboxes. They have a true
balanced output. There is no "balun" with a ferrite core to soak up
energy.

Fred
K4DII

4085. Re: Need Copy of Manual for Dymek DA-9 and Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 17:59:42 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185904782.042607.88350@x35g2000prf.googlegroups.com>
Source record: 37795
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.swap

On Jul 31, 9:48 am, jvcac...@yahoo.com wrote:
> > I am still looking for a copy of the manuals for the McKay Dymek DA9
> > Active
> > antennas and the 5 Antennas modules. If you have any of these I will pay
> > for a copy and postage. If you know of a source please email me at
>
> > w...@sbcglobal.net
> > Thanks
> > Jack
>
> 2nd request for heilp.
> Thanks
> Jack WN5A

Jack [WN5A],

These guys still claim to have the
McKAY DYMEK DA 9 AMPLIFIED DIRECTIONAL AM ANTENNA
"Still available after 25 years"
GOTO => http://www.esotericsound.com/elect.htm
Price: $319.00 (IL Res. add 7.25% IST) + $9.00 shipping

You may be able to contact them
and buy a Copy of the Manual ~ RHF
.
.
. .

4086. Re: Need Copy of Manual for Dymek DA-9 and Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 18:02:46 UTC
From: Roadie <hjsjms@cs.com>
Message-ID: <1185904966.166417.221050@w3g2000hsg.googlegroups.com>
Source record: 37797
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.swap

On Jul 31, 12:48 pm, jvcac...@yahoo.com wrote:
> > I am still looking for a copy of the manuals for the McKay Dymek DA9
> > Active
> > antennas and the 5 Antennas modules. If you have any of these I will pay
> > for a copy and postage. If you know of a source please email me at
>
> > w...@sbcglobal.net
> > Thanks
> > Jack
>
> 2nd request for heilp.
> Thanks
> Jack WN5A

You might check with Fred Osterman at Universal Radio. At one time he
had quite a collection of manuals and technical books for a lot of
radio equipment.

4087. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 18:02:47 UTC
From: You <You@shadow.orgs>
Message-ID: <You-AA9F2C.10031431072007@netnews.worldnet.att.net>
Source record: 37796

In article <13asm6a9vsn388c@corp.supernews.com>,
Roy Lewallen <w7el@eznec.com> wrote:

> An antenna radiates at all elevation angles. It does not "put out" at
> any single angle. Likewise, it receives signals from all elevation
> angles, not just a single one.
>
> Roy Lewallen, W7EL

Roy, You know better than to make the above "Statement". It is way to
"General" in nature. Certainlky there are a whole raft of "Antennas"
that have both Horozontal and Vertical Beamwidths, that are NOT
Omnidirectional. The OP didn't specify the Frequency at which the
"antenna" was being used at, and the "Higher" the frequency the more
likely the antenna will NOT be OmniDirectional, and will have Horozontal
and Vertical Beamwidths.......

4088. Re: Need Copy of Manual for Dymek DA-9 and Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 18:15:31 UTC
From: RHF <rhf-newsgroups@pacbell.net>
Message-ID: <1185905731.883112.255100@i38g2000prf.googlegroups.com>
Source record: 37798
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.swap

On Jul 31, 10:59 am, RHF <rhf-newsgro...@pacbell.net> wrote:
> On Jul 31, 9:48 am, jvcac...@yahoo.com wrote:
>
> > > I am still looking for a copy of the manuals for the McKay Dymek DA9
> > > Active
> > > antennas and the 5 Antennas modules. If you have any of these I will pay
> > > for a copy and postage. If you know of a source please email me at
>
> > > w...@sbcglobal.net
> > > Thanks
> > > Jack
>
> > 2nd request for heilp.
> > Thanks
> > Jack WN5A
>
> Jack [WN5A],
>
> These guys still claim to have the
> McKAY DYMEK DA 9 AMPLIFIED DIRECTIONAL AM ANTENNA
> "Still available after 25 years"
> GOTO =>http://www.esotericsound.com/elect.htm
> Price: $319.00 (IL Res. add 7.25% IST) + $9.00 shipping
>
> You may be able to contact them
> and buy a Copy of the Manual ~ RHF
> .
> .
> . .

Jack [WN5A],

You may wish to contact Gerry Thomas [KB4JFM]
who makes the Quantum QX Loop Antennas.

He may have some 'research' Info gained over the years.

DXTools.Com and Radios Plus+ Electronics
http://dxtools.com/AboutR+.htm
GOTO => http://dxtools.com/Order.htm

~ RHF
.
.
. .

4089. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 18:57:01 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8o0lv$4ta$1@nntp1.jpl.nasa.gov>
Source record: 37802

Roy Lewallen wrote:
> Calculating, or even defining, power density in the near field is a bit
> dicey to say the least. But the field strength (E or H, which aren't
> necessarily in phase or oriented at right angles in this vicinity) can
> readily be determined. Here are some values for the E field as a
> function of distance from the center of an octagonal loop about 3 feet
> in diameter at 7 MHz, with 100 watts of applied power, compared to the E
> field calculated using the proposed simple spherical method (and further
> assuming, incorrectly, that the wave impedance is 377 ohms resistive):
>
> Dist m E V/m E sph apx V/m
> 1 683 54.8
> 2 133 27.4
> 4 34.2 13.7
> 8 11.1 6.85
> 16 4.58 3.42
> 32 2.15 1.71
> 64 1.06 0.856
> 1000 0.0548 0.0673
>
> As you can see, the approximation might be adequate at some distances
> and for some purposes but not for others.
>
> Roy Lewallen, W7EL

Did that calculation assume it's in a tuned circuit with circulating
energy, or just on the basis of 100W radiated power?

For reference, the Maximum permissible exposure (MPE) for 7 MHz is 263
V/m and 0.698 A/m (controlled environment, 6 minute averaging), so based
on the above numbers, the E field would bust the limit somewhere inside
1.5 meters. In practice, because nobody puts the brick on a key for 6
minutes, you could be quite close and not have a problem with the E
field limit at 7 MHz..

Of more interest is actually the H field, since that's where most of the
stored energy that someone might be exposed to is. And, since you're in
the near field, by definition, E/H isn't 377 ohms, so you can't use the
E field (either calculated or measured) to figure out H.

The worst case for H field is on the centerline of the axis of the loop,
and the field is:

H = I * R^2 / (2 * (R^2+d^2)^1.5)
I is current in loop
R is radius of loop

d is distance from loop along centerline.
For R = 0.5 meters and 1 amp

d Hnear (A/m)
0 1
1 0.089442719
2 0.014266801
4 0.001908227
8 0.000242717
16 3.04729E-05
32 3.8133E-06
64 4.76794E-07
1000 1.25E-10

Using numbers from the ARRL antenna book for small loops (page 5-14 in 20th ed).. they don't give a 7MHz number for a small loop, but let's take the 10 MHz number for a 32.4" loop..3/4" pipe, octagon, 32.4" across.

They give 145 pF to resonate and 23 kV on the capacitor. Since we know f=1/(2*pi*sqrt(LC)) we can figure out L = 1/(10.1E6*2*pi)^2 * 1/C = 1.71 uH.
Once we know that, we can figure out the current by L*I^2/2 = C*V^2/2, or, I =V* sqrt(C/L) = 212 Amps...

Now, this is at 1500W, so we need to scale it for, say, 100W.. The current goes as the square root of the power, so we divide 147 by sqrt(1500/147), giving about 55 Amps..

So, multiply all the numbers in that table above by 55, and then start comparing to the field strength limit of 0.489 A/m (for 10MHz, controlled enviroment, Max permissible exposure, 100% duty factor). The actual power density limit is 9 mW/cm^2 at 10MHz

4090. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 18:59:41 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8o0qt$4ta$2@nntp1.jpl.nasa.gov>
Source record: 37803

wizard12342002@yahoo.com wrote:
> Thanks all.
>
> Roy, I was not implying that I believe one can assume that the power
> is from a point source and one can consider the power density passing
> through a sphere to determine RF safety. I was looking for some
> guidance as to how to determine a "safe" distance from a small tuned
> loop assuming a particular frequency and power.
>
> It appears that the simple sphere approach works reasonably well
> beyond a wavelength or so, and may be an acceptable first-order
> approximation at 1/2 wavelength [from a small loop].

One should differentiate here between a "rule of thumb" and the actual
analysis required by the FCC regulations for an amateur station.

The Amateur Radio rules allow for an evaluation using an approximation,
but you need to have some theoretical backup for that approximation.

4091. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 19:19:59 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f8o20v$1koa$1@f04n12.cac.psu.edu>
Source record: 37799

Jim Lux wrote:

> The big problem is this: a small loop stores a lot of energy in the
> fields around the loop (if the loop has a Q of, say, 100), and you're
> radiating 100 Watts, that implies that there is 10kW circulating in the
> loop between the loop itself and the tuning capacitor. The energy
> moves between the magnetic field of the loop and the E field of the
> capacitor every 1/4 cycle.

Jim, are you really saying that there is 10KW in the loop? Who needs
zero point energy if that is so? Or did you mean 10KV?

- 73 de Mike KB3EIA -

4092. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 19:26:30 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f8o2d6$1koc$1@f04n12.cac.psu.edu>
Source record: 37800

Richard Clark wrote:
> On Mon, 30 Jul 2007 18:51:07 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>> Use or even knowledge of mismatch loss isn't necessary. In fact,
>> attempting to apply it to the problem at hand will very likely lead to
>> incorrect conclusions.
>
> Hi Roy,
>
> Well, I suppose offering a palliative often suits both sides of the
> podium.

Just make sure to practice catch and release, Richard...

- 73 de Mike KB3EIA -

4093. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 19:32:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <te3va39enps14dt089v50dihpp88tl0kit@4ax.com>
Source record: 37801

On Tue, 31 Jul 2007 15:26:30 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Richard Clark wrote:
>> On Mon, 30 Jul 2007 18:51:07 -0700, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>> Use or even knowledge of mismatch loss isn't necessary. In fact,
>>> attempting to apply it to the problem at hand will very likely lead to
>>> incorrect conclusions.
>>
>> Hi Roy,
>>
>> Well, I suppose offering a palliative often suits both sides of the
>> podium.
>
>
> Just make sure to practice catch and release, Richard...
>
>
> - 73 de Mike KB3EIA -

Hi Mike,

For those poor fish with rubber crutches, I use rubber hooks.

73's
Richard Clark, KB7QHC

4094. Re: Wants to poke out strong signal

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 19:45:19 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <f8o3gn$1fga$1@f04n12.cac.psu.edu>
Source record: 37804

You wrote:
> In article <13asm6a9vsn388c@corp.supernews.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
>
>> An antenna radiates at all elevation angles. It does not "put out" at
>> any single angle. Likewise, it receives signals from all elevation
>> angles, not just a single one.
>>
>> Roy Lewallen, W7EL
>
> Roy, You know better than to make the above "Statement". It is way to
> "General" in nature. Certainlky there are a whole raft of "Antennas"
> that have both Horozontal and Vertical Beamwidths, that are NOT
> Omnidirectional. The OP didn't specify the Frequency at which the
> "antenna" was being used at, and the "Higher" the frequency the more
> likely the antenna will NOT be OmniDirectional, and will have Horozontal
> and Vertical Beamwidths.......

I tend to agree with Roy. Omni or not, Every antenna radiates in every direction. Maybe not as much in one as the other, but radiate they do.

So many folks look at the Take off angle as some sort of blob that leaps off the antenna at a particular angle, and if it isn't at that "correct" angle, then heaven help you i you are trying to operate NVIS or DX or whatever.

Some time back, at Roy's suggestion, I conducted some experiments with my dipole and vertical antennas to see which one "worked best". Using a attenuation pad, it really wasn't as trivial as I thought it would be. But I learned a lot. Dipole at the time was an OCF, and vertical was a Butternut HF6V.

What I did learn was that at any given moment, either the vertical or the horizontal antenna was "the best". While some generalizations could be made for distance and the angle the signal was likely coming in at, there was a lot of variation within it. The difference could vary over time also.

That being the case, I questioned if assuming that the angle for best reception is also the angle for best transmission, especially with what appears to be a change over time.

- 73 de Mike KB3EIA -

4095. Re: What is the BEST ladder line tuner?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 20:00:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <13av57g730b892f@corp.supernews.com>
Source record: 37805

Fred McKenzie wrote:
>
> Look for one of the old Johnson Kilowatt Matchboxes. They have a true
> balanced output. There is no "balun" with a ferrite core to soak up
> energy.
>
> Fred
> K4DII

Ferrite core baluns soak up energy? Tell me more.

Roy Lewallen, W7EL

4096. Re: Near field vs Far field measurements at 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 20:04:49 UTC
From: Wimpie <wimtel@tetech.nl>
Message-ID: <1185912289.295094.30550@k79g2000hse.googlegroups.com>
Source record: 37806

On 31 jul, 19:33, Steve Reinhardt <stevereinha...@noearthspamlink.net>
wrote:
> Gentlemen,
>
> If a man was of a mind to try to get some approximate antenna gain
> comparisons, how many wavelengths distant might you like to separate the
> antennas?
>
> The proposed scenario is this: make a pair of 2M dipoles, one for
> reference, one for receive. I was planning on using the local high
> school football field, which is on the order of 50 wl, give or take.
> Transmit a few mW at the design frequency, measure the signal strength,
> then repeat with an alternate antenna, say a j-pole, collinear, or
> something else.
>
> Now, this leaves out a whole bunch of useful information, that would be
> tough for me to measure, like spherical gain distribution, etc. I'm
> hoping for a figure of merit for the actual implementation of the tested
> antenna. (Which, as you can imagine, I could model and save myself the
> aggravation.)
>
> I was pondering all this, when it occurred to me that I could not
> easily determine when I get to the point where the square law behavior
> dominates. I've seen a couple of equations relating the antenna
> dimension to wavelength, but I must be really stupid today, because it's
> just not sinking in.
>
> Anyone care to comment?
>
> 73,
> Steve
> W1KF

Hello Steve,

When your "Antennas Under Test" are moderate gain devices, I would go
for several wavelengths. For low to moderate gain (up to 10 dBi), you
are in the far field within about 4 WL.

The reason for the short distance is that the direct signal is strong,
hence influence of reflections is less. You can reduce the effect of
reflections by taking a receive antenna with some directivity.

You can be sure that you are in the far field distance when
D > 2*B^2/lambda, where B = overall size of the antenna (from one

extremity to another). For several antenna types (like yagis), you can halve this distance when you are interested in main beam gain only.

Best regards,

Wim
PA3DJS
www.tetech.nl

4097. Re: 80+40 MTR Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 20:28:21 UTC
From: charlie <wehatespam@wymsey.co.uk>
Message-ID: <lZednTlAeP74BjLbnZ2dnUVZ8qOtnZ2d@pipex.net>
Source record: 37807

Howard Kowall wrote:
> so how much distance between the 80 and 40 is 3" enough
> thanx
> howard
>
> "Ron in Radio Heaven" <kc4yoy@Xcarolina.rr.com> wrote in message
> news:46ae6566$0$8934$4c368faf@roadrunner.com...
>> If you cut resonate dipoles for 40 and 80 meters,
>> attach them to the same center insulator and
>> feed with coax,all you have to do is either have
>> the 40 meter wires angled down more under the 80 meter
>> wires, or pulled off at an angle.
>> It won't bee very wide banded, but it'll
>> work without a tuner.
>> This type works great for AM since most AM activity
>> is near the same frequency on each band.
>>
>>
>> 73, Ron kc4oy
>
>

When tuning the dipoles start with the lowest band first. I have a
set of dipoles as suggested but mine are for 40m through to 6m.

Charlie.

--
M0WYM
www.radiowymsey.org

4098. Re: Near field vs Far field measurements at 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 20:51:43 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8o7cv$8iu$1@nntp1.jpl.nasa.gov>
Source record: 37809

Wimpie wrote:
> On 31 jul, 19:33, Steve Reinhardt <stevereinha...@noearthspamlink.net>
> wrote:
>
>>Gentlemen,
>>
>> If a man was of a mind to try to get some approximate antenna gain
>>comparisons, how many wavelengths distant might you like to separate the
>>antennas?
>>
>> The proposed scenario is this: make a pair of 2M dipoles, one for
>>reference, one for receive. I was planning on using the local high
>>school football field, which is on the order of 50 wl, give or take.
>>Transmit a few mW at the design frequency, measure the signal strength,
>>then repeat with an alternate antenna, say a j-pole, collinear, or
>>something else.
>>
>> Now, this leaves out a whole bunch of useful information, that would be
>>tough for me to measure, like spherical gain distribution, etc. I'm
>>hoping for a figure of merit for the actual implementation of the tested
>>antenna. (Which, as you can imagine, I could model and save myself the
>>aggravation.)
>>
>> I was pondering all this, when it occurred to me that I could not
>>easily determine when I get to the point where the square law behavior
>>dominates. I've seen a couple of equations relating the antenna
>>dimension to wavelength, but I must be really stupid today, because it's
>>just not sinking in.
>>
>> Anyone care to comment?
>>
>>73,
>>Steve
>>W1KF
>
>
> Hello Steve,
>
> When your "Antennas Under Test" are moderate gain devices, I would go
> for several wavelengths. For low to moderate gain (up to 10 dBi), you
> are in the far field within about 4 WL.
>
> The reason for the short distance is that the direct signal is strong,
> hence influence of reflections is less. You can reduce the effect of

> reflections by taking a receive antenna with some directivity.
>
> You can be sure that you are in the far field distance when
> D > 2*B^2/lambda, where B = overall size of the antenna (from one
> extremity to another). For several antenna types (like yagis), you can
> halve this distance when you are interested in main beam gain only.

This formula is actually an embodiment of the venerable Rayleigh limit,

It actually says that wavefront is flat to within a fraction of a
wavelength (about 1/13th or 22 degrees). The implications for gain
measurement is that the gain you measure at 2*b^2/lambda distance will
be the same as you'd measure if you were truly in the far field, to
within about a reasonable degree of accuracy (1% or there abouts).

The derivation is this:
distance to center of antenna = D
distance to edge of antenna Dedge = sqrt(D^2+(B/2)^2) {Pythagorean formula}

phase error = (D-Dedge)/lambda {wavelengths}

etc.

if you start getting lambda close to B, then the relative path length
difference gets quite large, and you have to start worrying about the
current distribution or illumination non-uniformity.

4099. Re: RF Exposure from Small Transmitting Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 20:59:43 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <f8o7s0$8t9$1@nntp1.jpl.nasa.gov>
Source record: 37811

Michael Coslo wrote:
> Jim Lux wrote:
>
>> The big problem is this: a small loop stores a lot of energy in the
>> fields around the loop (if the loop has a Q of, say, 100), and you're
>> radiating 100 Watts, that implies that there is 10kW circulating in
>> the loop between the loop itself and the tuning capacitor. The
>> energy moves between the magnetic field of the loop and the E field of
>> the capacitor every 1/4 cycle.
>
>
>
> Jim, are you really saying that there is 10KW in the loop? Who needs
> zero point energy if that is so? Or did you mean 10KV?

technically 10kVA.. it's reactive power circulating between the L of the loop and the C that tunes it.

The very definition of Q is the ratio of stored energy to that lost per cycle. In the case of the antenna, assuming it's lossless, the lost energy is that radiated away, and presumably replaced by the transmitter (assuming a steady state sort of system). If you have X Joules radiating away each cycle, there has to be Q*X Joules stored in the system, and X Joules added to the system.

In a lossy antenna (which these loops will inevitably be, barring superconductors, etc.), some of the energy is lost to heat, but, again, if you measure the Q, that's rolled in. (The Q of a lossless resonant loop 1 meter in diameter at 7MHz would be spectacularly high, since the radiation resistance is tiny compared to the reactance of the loop)

This is why small loops need HV capacitors and low resistance loops.

For what it's worth, the same sort of problems with near fields crop up in superdirective arrays, because there's a lot of reactive power stored in the near field that circulates among the elements. Fortunately from the RF exposure standpoint, most amateur superdirective arrays (i.e. Yagis) are mounted several array sizes away from people, and in these arrays, the high energy density is almost entirely within the volume of the array. Take a look at the cover of one of the Antenna Compendiums (#3?) for a picture of this.

jim, W6RMK

4100. Re: What is the BEST ladder line tuner?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 21:00:19 UTC
From: "Rick (W-A-one-R-K-T)" <get.my.email@from.qrz.com>
Message-ID: <pan.2007.07.31.21.00.19.959678@from.qrz.com>
Source record: 37808

On Tue, 31 Jul 2007 13:58:46 -0400, Fred McKenzie wrote:

> Look for one of the old Johnson Kilowatt Matchboxes. They have a true
> balanced output. There is no "balun" with a ferrite core to soak up
> energy.

Good afternoon, Fred.

Yeah, I had one of those, sold it several years ago for $300, needed the money at the time but probably should have hung on to it... :-(

4101. Re: Some Teen Porn to keep the board entertained!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 21:39:33 UTC
From: FUBAR <FUBAR@anonymous.fi>
Message-ID: <f8oa2ndpr1@aioe.org>
Source record: 37810

John Doe wrote:

> WHY DON'T YOU TAKE THIS CRAP TO REC.RADIO.AMATEUR.POLICY & REC.RADIO.CB,
> WHERE THEY ENJOY THIS JUNK??
>
Because THIS is the reaction they are looking for. best to killfile them and
move on.

4102. Re: Request EZNEC computation

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 23:03:43 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1185923023.153887.51620@k79g2000hse.googlegroups.com>
Source record: 37812

Owen Duffy wrote:
>
> BTW, someone suggested a vertical. Vertical's have very low gain at high
> angles, so relatively unsuited to NVIS.
>
> Owen

This would explain why the vertical would work into GA,Fl, VA, from NC
but not into a station in SC less than 100 miles away.

Jimmie

4103. Re: OT Message: My Disability

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 23:35:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1185924937.054614.153690@l70g2000hse.googlegroups.com>
Source record: 37813
Cross-posted to: comp.sys.ibm.pc.hardware.chips,misc.survivalism,alt.survival,rec.radio.amateur.antenna,rec.radio.shortwave

kb9rqz@hotmail.com wrote:
> On Jul 29, 10:18 am, hot-ham-and-che...@hotmail.com wrote:
> > On Jul 28, 11:35 pm, Frank Gilliland <wïrenut@NOSPAMïcehouse.net>
> > wrote:
> >
> >
> >
> >
> >
> > > On Sat, 28 Jul 2007 21:08:41 -0500, Stuart Grey
> > > <stuart.g...@comcast.net> wrote in
> > > <BrqdnTzdKuw0azbbnZ2dnUVZ_gadn...@comcast.com>:
> >
> > > >On Sat, 28 Jul 2007 12:07:49 -0700, Radium wrote:
> >
> > > >> Hi Everyone:
> >
> > > >> I have a neurological disability called Asperger's Syndrome.
> >
> > > >> I would like to give you some information about my disability. The
> > > >> reason I am posting this message about Asperger's is to help avoid any
> > > >> potential misunderstandings [though it's probably too late].
> >
> > > >> I have been diagnosed with Asperger's Syndrome (AS). AS is a
> > > >> neurological condition that causes significant impairment in social
> > > >> interactions. People with AS see the world differently and this can
> > > >> often bring them in conflict with conventional ways of thinking. They
> > > >> have difficulty in reading body language, and interpreting subtle
> > > >> cues. In my situation, I have significant difficulty with natural
> > > >> conversation, reading social cues, and maintaining eye contact. This
> > > >> can lead to a great deal of misunderstanding about my intent or my
> > > >> behavior. For example, I may not always know what to say in social
> > > >> situations, so I may look away or may not say anything. I also may not
> > > >> always respond quickly when asked direct questions, but if given time
> > > >> I am able express my ideas.
> >
> > > >> On Usenet, the text-equivalent of my disability is probably noticed. I
> > > >> do apologize profusely, for any inconvenience it causes.
> >
> > > >> Thank you very much in advance for your understanding, cooperation,
> > > >> and assistance.
> >
> > > >> Regards,

> >
> > > >> Radium
> >
> > > >So? Why mention it?
> >
> > > Because ever since King George got into the White House, a lot of
> > > people learned that they can set higher goals in spite of their
> > > autism!
> >
> > Finally someone has noted that Asperger's Syndrome is one form of
> > autism.
> interesting I was unawar e of that myself BB
>
> >If you visit your local schools you will find whole
> > classrooms full of autistic kids - almost entirely boys. It's an
> > epidemic!
>
> in many areas in some areas they are dumped around and trated badly
>
> >
> > For Radium to be able to post his message places him in the "high-
> > functioning" category. Many are not high-functioning
>
> nice to see you BB

I remeber back in the 60s my sister in law did a survey of autistic kids in our school sytem. The elementatry grades hade about 650 students and there were six autistic kids. Numbers sound about the same now aas then.

4104. Re: What is the BEST ladder line tuner?

Newsgroup: rec.radio.amateur.antenna
Date: 2007-07-31 23:42:40 UTC
From: Bob Miller <NOSPAM@neosoft.com>
Message-ID: <7phva35h1a7e48kskhmpmu6lp163pd21ap@4ax.com>
Source record: 37814

On Tue, 31 Jul 2007 17:00:19 -0400, "Rick (W-A-one-R-K-T)"
<get.my.email@from.qrz.com> wrote:

>On Tue, 31 Jul 2007 13:58:46 -0400, Fred McKenzie wrote:
>
>> Look for one of the old Johnson Kilowatt Matchboxes. They have a true
>> balanced output. There is no "balun" with a ferrite core to soak up
>> energy.
>
>Good afternoon, Fred.
>
>Yeah, I had one of those, sold it several years ago for $300, needed the
>money at the time but probably should have hung on to it... :-(

Palstar is probably the best in parts quality, but pricey. Ten Tec has
an L-circuit design. I sent my last MFJ tuner back, a 989d, real iffy
in quality.

Another way to go would be to do a search on eBay; the old Heathkit
2040 tuners still auction at reasonable prices.

bob
k5qwg